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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

Genius and Statistics
Dept. of Agriculture Dec 31, 10

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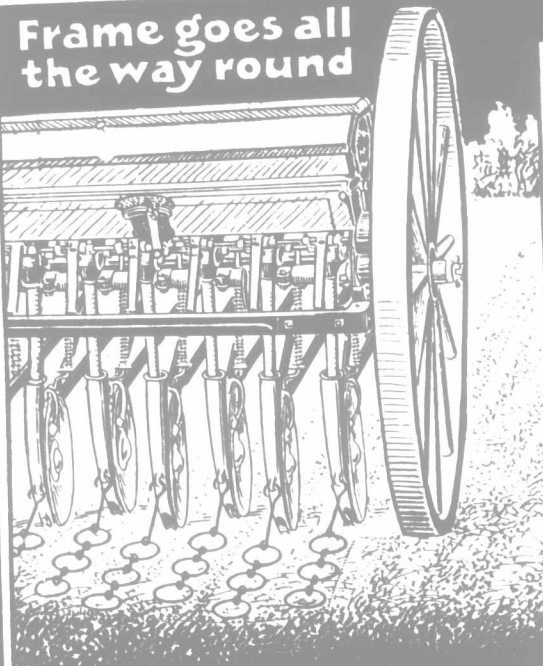
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Vol. XLVI.

LONDON, ONTARIO, JANUARY 5, 1911.

No. 954

Frame goes all the way round

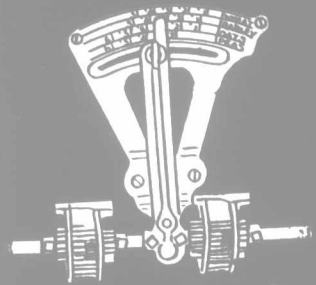


Sows accurately in dirty fields. Runs easily. Dust-proof hubs.

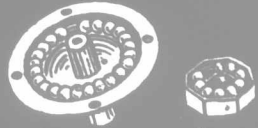
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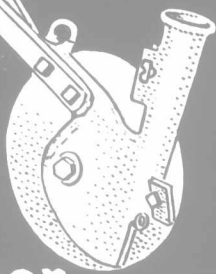


Grain Index



Ball Bearings in Disc Hub

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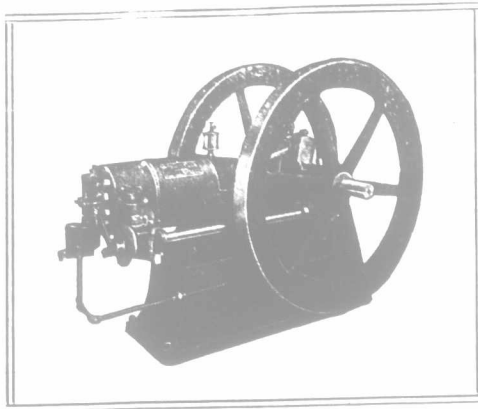
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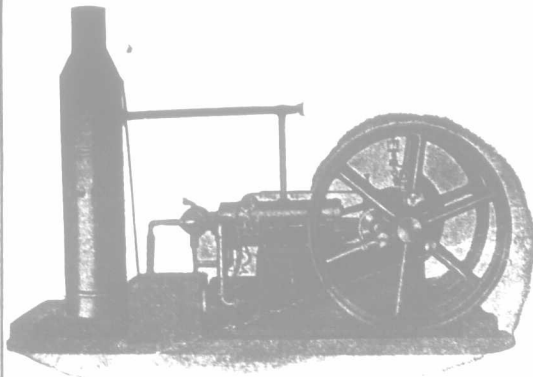
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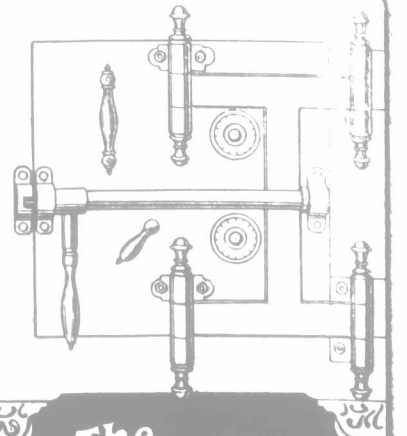
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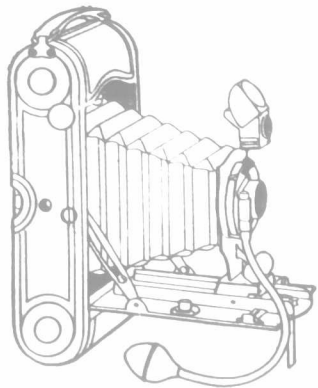
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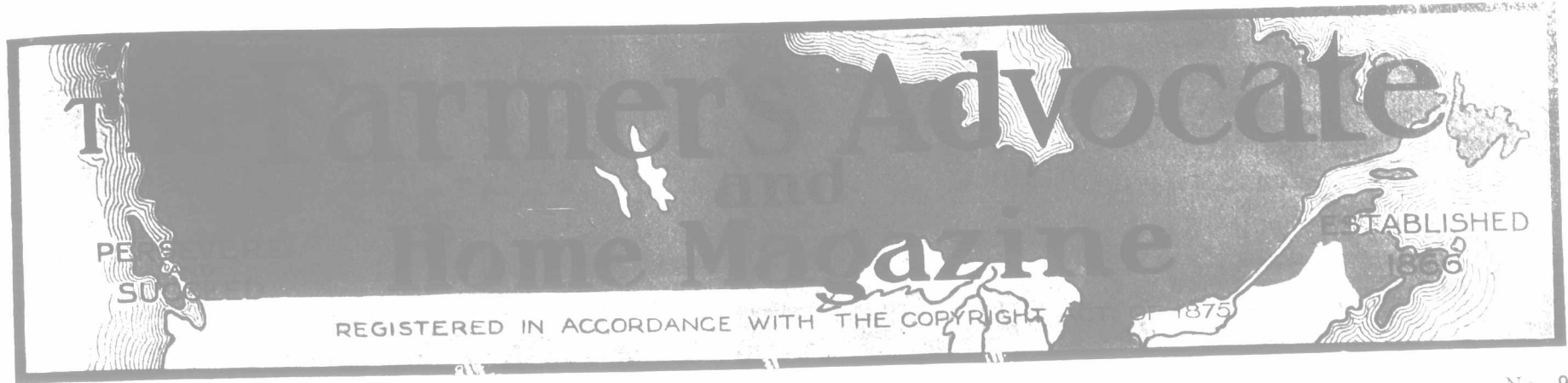
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Vol. XLVI.

LONDON, ONTARIO, JANUARY 5, 1911

No. 954

EDITORIAL.

January—the best time to start keeping books.

Engraved upon a granite tablet in the great stone gateway to Cornell University the student reads this admonition: "So enter that daily thou mayest become more learned and thoughtful; so depart that daily thou mayest become more useful to thy country and to mankind."

On Canadian railroads last year one trainman in every 199 was killed, and one in every 33 was injured. The average wage received by railroad employees of all classes was \$542.69. And yet farm boys keep writing us every little while, asking to whom they should apply for jobs as brakemen, locomotive firemen, etc. Surely these lads know not when they are well off!

A diary is an excellent thing on a farm. Besides embodying a record of business transactions, it contains many facts that will some day be interesting and profitable to have for reference, such as the weather, dates of seeding and harvesting, quantities of seed used in particular seasons, with results in yield, and a hundred and one other things useful to a person who appreciates the importance of accurate records. Memory is treacherous, and guesswork doesn't pay. A diary is easy to keep, and will prove a source of great satisfaction.

Half a million Christmas-trees from Canada are coming to New York, where they will be turned into the best kind of dressed lumber.—*[New York American.]*

Were they? There are two sides to this Christmas-tree custom. Against the delight of the child, we must set the ravishing of the forests. It is all right enough if the young trees are chosen properly, but often they are not. Thoughtless Christmas-tree speculators despoil many a fine acre of young woods. In the neighborhood of London not a few farmers have been complaining this year of the vandalism practiced in their wood-lots by Christmas-tree hunters. There should be strict law enforced against such offenders. Use the thinnings from overcrowded thickets, and cut them with care.

The construction of the 20-foot barge canal across New York State continues to drag its slow length along. A recent Governor's message asked for a special report on the progress of the work, the conditions arising out of divided authority, and the cost, which it is now believed will exceed the original \$101,000,000 appropriation, largely because of disputes and litigation resulting from expropriations and damages to lands. At every turn there seems to be a general disposition to "make a haul" out of the project. The opinion is very generally expressed that the transportation problem would have been far more effectually solved by the construction of a double-track freight railway from Buffalo to New York City, owned and operated by the State, which would then have held for all time the key of the situation, affording a swift and all-the-year-round transport, particularly desirable in respect to the foods of the people.

A Good New Year's Resolution.

Start the New Year by keeping farm accounts. Keep a capital account, and take an inventory each year, so as to know exactly where you stand. Keep also a cash account, so as to have a record of every business transaction. It may save vexatious disputes and the danger of paying a debt twice. In a legal dispute, the odds are heavily in favor of the man who keeps books. Do this much for a beginning, anyway. To those who can be induced to go further, we would say, keep a separate account (debit and credit) of every important department of farm work, cows, beef cattle, pigs, chickens, sheep, orchard, poultry, grain, and hay. For example, with the cows, charge up to them, month by month, every dollar's worth of feed eaten, a fair estimate of every hour's labor spent on them, service fees, stabling, interest and depreciation, etc. Credit them with cream or milk proceeds, skim milk or whey, as well as calves dropped, not forgetting to enter a liberal credit for the manure. Do likewise with every class of stock. Have a set of scales, and weigh out the amount of feed taken to the pigpen from time to time. So with the grain. Charge the fields with seed, labor, manure and other expenses, crediting them with grain and straw. There may be some conflict in the accounts as first kept, but these inconsistencies will be gradually eliminated, and in rectifying them the owner will receive an invaluable education, together with a powerful stimulus to improve weak features in his practice. Book-keeping opens one's eyes. Start to-day.

And let those who have systems of farm accounts in operation not forget to enter them in the competition editorially announced in "The Farmer's Advocate" of December 22nd.

Agricultural College Alumni Association.

Next to the undergraduate students, the graduates of a college should be its most valuable asset. Most universities and Liberal Arts institutions, fully appreciating their impotency without a vigorous graduate body, have well-organized alumni associations, whose power is felt in financing the institution, in determining its policies, and in presenting its usefulness to the people. Agricultural colleges, perhaps because they are Governmental institutions, have been somewhat slower in bulwarking themselves. Yet, in most of these "land grant" colleges, as they are familiarly known in the United States, there are now well-organized, active, influential alumni associations.

Canadian agricultural colleges and college graduates might do worse than follow the example of American institutions in this regard. In the newer colleges these will be easier formed than in the older, but, conversely, they will not be immediately of as great value. Through such an organization, the Ontario Agricultural College could maintain in its graduates that loyalty so pronounced in its student body; it could have a student-getting and an advertising power hard to be equalled; it could obtain an influence with the people and the people's representatives such as no inner relationship ever can wield. Through such an organization the graduates would be more closely bound together than they now are by mere class ties; they could exercise an influence upon the policies and standards of their alma mater which would make them as zealous for her continued progress and high standing at home and abroad as they were in student days. There is practically everything to be said in favor of, and

nothing against, an alumni association. Its formation in connection with all our agricultural colleges, and especially our oldest, both from the standpoint of the graduate's interest in his alma mater, and the college's interest in its graduate and in its own best welfare, should stimulate someone to the task of properly organizing such an association of O. A. C. graduates and of the other college graduates in connection with the other agricultural colleges. The Experimental Union in Ontario must not be confused with an alumni association. Its use is apart; it is a splendid organization for co-operative experimentation, but its purposes are entirely different from those of an alumni association. There is room and need for both bodies.

Dividends on Swamps.

If the Dominion Railway Commission had done nothing else to justify its existence, its thoroughgoing treatment of the express-company business would abundantly vindicate its aggregate cost to date. The root of the evil in this case, as in so many others, is grossly "dropsical" overcapitalization of a business whose principal asset consists in its franchise—which is to say, its privilege of levying tolls on legitimate enterprise. Here is the situation: So far as the Board of Railway Commissioners could learn in a fairly exhaustive inquiry, the actual assets of our two principal express companies, viz., the Dominion, operating on the C. P. R., and the Canadian, on the G. T. R., are worth only about \$800,000, yet they are capitalized at \$5,000,000. And express rates have been based upon the assumed necessity of earning dividends on this five million dollars' worth of stock, of which the great bulk is water; this, too, after heavy payments to the railroads for transportation service. In fact, it is difficult to escape the conclusion that our express companies exist for the purpose of screening the fatness of railroad earnings in a certain lucrative branch of the carrying business. The public are to be congratulated upon having a body like the Railway Commission to ferret out facts so cleverly concealed, and demand reduction of rates to a reasonable basis. If a company chooses to irrigate its stock to the extent of eighty or ninety per cent., it is welcome to do so, but it is hardly fair to expect the people who use such public utilities to pay rates calculated to earn dividends upon six or eight times the capital actually invested.

Moreover, we dissent most emphatically from the view that because watered stock changes hands once or twice at a price fixed by its then present earning power, the new owners should be allowed to mulct the public indefinitely to the old tune. If a farmer buys a section in the West, and nine-tenths of it turns out to be slough, that is no reason for artificially raising the price of wheat so that the deluded purchaser can let himself out by reason of inflated earnings on the ten per cent. of arable soil. If a man buys swamp for wheat land, he must suffer the consequences. If a stock investor buys water for bona-fide stock, he should do likewise. The lesson may be painful, but it is the only one that will make investors careful what they buy. The day has passed when public-service corporations may be allowed to charge what the traffic will bear. The quasi-monopolistic nature of their franchises, not to mention the heavy subventions they have received, supply ample grounds for demanding that they show their rates to be reasonable and fair. This presupposes that they are based upon an honest capitalization.

THE FARMER'S ADVOCATE

AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL
IN THE DOMINION.

PUBLISHED WEEKLY BY
THE WILLIAM WELD COMPANY (LIMITED).

JOHN WELD, MANAGER.

Agents for "The Farmer's Advocate and Home Journal,"
Winnipeg, Man.

1. THE FARMER'S ADVOCATE AND HOME MAGAZINE is published every Thursday. It is impartial and independent of all cliques or parties, handsomely illustrated with original engravings, and furnishes the most practical, reliable and profitable information for farmers, dairymen, gardeners, stockmen and home-makers, of any publication in Canada.
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RENEWAL OFFER EXTENDED!

Thousands of our subscribers have taken advantage of this Special Renewal Offer, but some have written asking us to extend the date for a short time, so they will be able to secure the new subscriber.

We have decided to do this, and will make the offer good till Jan. 15th, 1911.

It is as follows:

For one new yearly subscription and your own renewal for 12 months, we will accept \$2.00. For each new name in addition to the first one we will accept from you \$1.00, the balance of 50 cents being retained by you as a commission. Or, if preferred, you may send in the new names, accompanied by the full subscription price of \$1.50 each (United States subscriptions \$2.50 per year), and take your choice of one of our splendid premiums. These, like the paper, are astonishingly good value.

NOTE.—This is a special offer, good only till Jan. 15, 1911. Speak to your neighbor to-day. Get his name before he has signed for other papers. Roll in the new names now.

From an official press abstract of railway statistics we glean the staggering fact that Federal, Provincial and municipal cash subsidies paid to our railroads by Canadian taxpayers up to date amount to \$200,753,063. In addition, valuable grants of 55,292,321 acres of land, of which 32,040,378 acres were alienated to the Dominion. In addition, the agricultural mileage 30th amounted to 8127,336,357. The total mileage of the Dominion in 1910 was 1,000,000, 731 miles, not counting the Grand Trunk Pacific, which is officially regarded as a water carrier.

tion." Figuring the cash subsidies on this basis, it works out to an average of \$8,117 a mile. Add to this the land grants, worth possibly as much more, and the value of the country's credit pledged in security of bond issues, not to mention the franchises freely given, and it will be seen that we have been pretty liberal with our carrying corporations. Is it not about time we ceased handing railroads to hand over for corporations to own and administer?

Risks of Commercial Seed Oats.

In the report of a case under the Seed Control Act, at Sherbrooke, Quebec, Seed Commissioner G. H. Clark shows the risk run by farmers in buying commercial grain for seed purposes. In this case, an Alberta firm advertised on a printed form, in red typewriter type, oats "for seed, English Abundance, Early Swede, Banner," at 15 cents per bushel, f. o. b., Fort William. A local seed dealer in Sherbrooke, on this representation, ordered by telegram 1,200 bushels English Abundance seed oats. In due time the oats were delivered, the invoice reading, in part, "40,800 pounds seed oats, Abundance." Investigation revealed the information, from the records of the grain inspection at Fort William, that this car lot of so-called seed oats had been loaded out on the order of a prominent Winnipeg grain merchant, who put in a warehouse receipt to the Consolidated Elevator for 1 C. W. oats, to be shipped to the order of the Alberta company at the Quebec address. This car was taken from an ordinary bin of 1 C. W. oats, and specially cleaned by the usual screen of the Consolidated Elevator. The grain inspectors had no knowledge that it was wanted for seed, neither was anything said about its being English Abundance seed oats. Commercial grain contained in elevator bins at Fort William consists of mixtures of many kinds and varieties, and are often contaminated with noxious weed seeds. If grain for seeding is to be procured, it is not wise to defer purchasing until the last minute, and, for so all-important a purpose, improved and carefully-selected seed should be chosen, not ordinary commercial grain.

Home for the Holidays!

Home for the Christmas holidays! Not all our readers can appreciate the well-springs of meaning in that phrase. Many of them live at home, some on the ancestral steadings, others in the same or the next neighborhood. The majority have never dwelt for any length of time among strangers far from the family circle and the scenes of childhood's tribulations and joys. To them the ties of blood and early associations are all but unconscious, because so seldom tugged in the matter of course familiarity of every-day intercourse. Birth, marriage, sickness and death are about the only events which really discover to them the bonds of interest which knit one to another, and to the environment in which he was born and reared.

With the wanderer it is different. On him the cords of sentiment, slackened, perhaps, by long dissociation, draw strongly as he approaches home. What a wealth of color, variety and interest there is in any neighborhood when viewed with appreciative, and especially with reminiscent, eyes? Here is the old frame schoolhouse, with three high steps across the front, three windows on each side, a belfry on the roof at one end, and a chimney near the other. Out in front stand the old pair of willow trees, but they warp in the back yard has been levelled up. They are talking of having a school garden here next year. Already a row of trees has been planted along the front, and inside the school, it is said, new desks have been provided, new maps, and a school library. The old is being tinctured with the new, outside, the big pine stump on the knoll, where the baseball players reclined awaiting their turn at the bat, has been pulled or blasted out. The grounds have been improved, but, well, no doubt, the present generation of children like it better so, though it is hard to see how there could be any fun playing jump pump-pull away on these "modern, well kept" grounds.

Further on is the church. "Do you remember," says the Priest to his brother, who has come to see the station for him, "how we used to have to go to church with our mud-soaked, new top hats?" "I would not say anything to father, he would surely not be angry by us, by telling how, when he was a boy, he had to go in homespun, it was hard to make father see that times had changed." Perhaps he is right, but he never let us. For us, it was the best of our fathers' shoes in

winter, and bare feet in summer." "Yes, I remember," replies the one who has stayed at home, "and what bothered me more than that was Brother Dixon's prayers, and Isaac Marcossion's long testimony in class-meeting. He used to untold himself like one of those two-foot rulers, and as he was stretching out the last section, raising his head almost to the ceiling, he would draw out, 'Wa-a-a-I, I don't like to see the time wa-as-ted,' and then he would proceed to waste half an hour or so, while we boys sat back with gnawing stomachs, wondering how much longer it would be before he sat down. But times have changed. I don't know whether we're any less pious or not, but the sermons don't have so many 'fiftihs' and 'sixthys', the prayers are shorter, and the class-meeting testimony seems to be more to the point. We're getting ready to build a new church. They're trying to raise ten thousand dollars, and the choir are agitating for a pipe-organ. If the price of cream keeps up, I guess we'll stand it."

"Hello, there's McPherson's new house. The only way we used to tell the house from the barn was the chimney. There's some style about this. And if they aren't trying to grow trees around it. Well, well, there's hope for the cause of forestry in this country yet. But it's a pity they planted them in rectangles and straight rows. Why couldn't they scatter them a little, and give things a natural effect, with vistas opening out between? Say, that's quite a barn they have, too. Farming's the job, after all. Here we poor fellows in the city have been slaving away making twenty-five hundred a year, and spending twenty-six. And here's Alex. McPherson sticking to the farm and clearing more in a year than I'm earning. Pshaw, what's the use? I guess I'll get hold of a few acres of land and raise fruit and chickens." Of course, he won't, but the inclination is wholesome.

So goes the conversation about this one who has prospered, that one who has married, and the other who has died, till the cutter pulls up at a brand-new residence that could give points on architecture to many a city house.

"Phew," he half whistles, half ejaculates. That's some change from what we used to have when I was home. I don't believe you could build a house like that in the city for three thousand, say nothing about the lot. By George, there must be a view from those south upstairs windows. I always admired that landscape, but I never could get a proper perspective past those trees, except when I was up shutting the small doors in the hay mow. My, what wouldn't a city man pay for a lot with a view like that?"

"Hello! Merry Christmas!" from several voices in unison at the door. "Just in good time for dinner. The turkey's almost done." Such a turkey, and such dressing, and such mashed potatoes, and such cherry pie! If some city boarding-house keeper with a little gumption would only learn to cook things with one-quarter the flavor of these, her fortune would be made!

The inner man satisfied, the outer person has time to investigate further. "That's a fine grain paper," he remarks, approvingly, "and that border just sets it off right. Florence, I guess that course at Macdonald Institute did you good. These rooms look like an interior illustration from 'House Beautiful.'"

"We wanted a cheaper paper," mother confesses amiably, "but Florence would have this. They do have such fine schemes of decoration nowadays. The beauty of it is its simplicity. We had a great time here building this summer, and it has cost us more than we bargained on, but we do enjoy the house, now it's done. These polished floors, with the rugs in the center, are so easy to keep clean. You can take up the rugs whenever you like. But I think we enjoy the bath more than anything else. It is such a luxury, when you're dirty and tired, to get into a bath in a comfortable room, and turn on the hot water tap. I don't know what we'd do now without it." So it is all through the house. Talk about city conveniences. The city will be coming to the country for its models pretty soon. Think of it! Hot and cold soft water; drinking water on tap, supplied by a windmill; bathroom, closet, sewing room, library, furnace, polished floors, rugs, piano, telephone, cream separator, kitchen cabinet, shelves between dining room and kitchen; furnace and the whole built and furnished for \$3,000—not counting lumber and furnishings from the old house. A home like that in the city would cost at least six thousand, and a lawn like this front yard another thousand, easily. H'm!

At the barn it was the same story. A fine, well-lighted and partially ventilated cement block basement houses a fine herd of high grade and pure-bred Holsteins, some of which, according to the cow records, can ten thousand pounds of milk a year. Corn silage, with alfalfa and clover hay, have been substituted for the old-time diet of corn stalks and oat straw. There must be money in carrying on this plan. The pigs have not been very well stocked, but are beginning to fill again in anticipation of another period of low prices. The sheep barn has for years past been

used as an implement shed. "It may be a mistake not to keep sheep any more," father observes apologetically, "but they don't seem to fit in well with dairying." The poultry house has been remodelled, fitted with a glass and curtain front, and the White Wyandottes are busy scratching in chaffy litter, except those which are on the nests depositing that once rare product, December eggs. Winding up at the horse-stable, the visitor looks in vain for a familiar form among the Clydesdales and Standard-breds. But no, this one looks rather familiar. Sure enough, it is the last foal raised by old Jess. "Looks something like her, too, but heavier."

"Well, father, you and Jim seem to be making it go pretty well. How much are you making a year?"

"Oh, I dunno. We don't keep books exactly, though we try to keep the run of things in our heads. We built that house out of the savings of a little better than three years. Besides, we've built a second silo, and have done some underdraining. Farming, you know, has its ups and downs. It's been pretty good the last few years. The times have changed considerably since you were here. We plow with three horses now, and sometimes four. Farming is more of a business than it used to be."

"One thing I wish," said the visitor, ruefully.

"What's that?" asked his father, kindly.

"I wish I had enough money to buy a farm."

DOX.

The Journal for Every Farmer.

I would not be without "The Farmer's Advocate," even if it were a great many times the present price. It should be in every farmer's home.

W. BLACK.

Huron Co., Ont.

HORSES.

To confine animals to one or two kinds of food is to diminish their possibilities. Horses kept in cities, and confined to the oat and timothy hay diet do well for a time, but when they get "run down," as the city men call it, the remedy is to get them out on the farm, where they can have a greater range of feed. Instances are common where horses had seemed to have run their course, seemed worn out, were taken out on the farm, became rejuvenated, and were useful servants for a long period of years.

The report of the Department of Agriculture of Manitoba for 1909 contains the following information regarding the stallions in use in the Province. Total number, 724, of which 324 are Clydesdales, 191 grades, 71 Percherons, 49 Standard-breds, 34 Shires, 23 Hackneys, 8 Suffolks, 7 Coach, 7 Thoroughbreds, and 6 drafts. Of the 530 pure-bred stallions on the rolls, 521, or 98.3 per cent., are certified as free from the diseases and unsoundnesses named as disqualifying under the terms of Manitoba Horse-breeders' Ordinance.

Trotting or Pacing Bred.

The question was asked through "The Farmer's Advocate" not long ago, whether a filly with three crosses by Standard pacing sires, and one cross by a trotting sire would be eligible for registration in the Canadian Standard-bred Record. The answer, very properly given, was that she would not be eligible, as a mare must have four crosses of trotting-bred sires to be eligible in the trotting standard, and four crosses of pacing-bred sires, to be eligible in the pacing standard.

Breeders, therefore, who are grading up with a view to qualifying the progeny of their present stock for Standard registration should be careful about mixing the crosses of pacing and trotting sires. Nor is it sufficient to know merely whether the sire one breeds to is a pacer or a trotter. It is necessary to make certain how the horse is recorded. There are horses with the pacing gait recorded in the American Trotting Register as trotters. Some of these have ancestors that were pacers. Under the rules of either the American Trotting Register or the Canadian Standard-bred Record an animal will be recorded as he is bred. If he is bred of a line of stock recorded in the trotting division, he himself must be recorded, if at all, in the trotting division, and vice versa.

The Eel and Lloyd Bell are two notable examples of pacers that are trotting bred and recorded in the trotting division of the register. In grading up, therefore, to either the pacing or trotting standard, look to the registration, rather than the gait of the sire you use.

You may have a handsome forty-piece Austrian Vienna Teaset for sending in only four new yearly subscriptions to "The Farmer's Advocate" and Home Magazine. Turn to our announcement on page 35 and read about this and other premiums. They are all the best of value.

Horse-breeding.

Geo. M. Rommel, Chief of the Animal Husbandry Division of the Department of Agriculture, Washington, D. C., speaking on "Horse-breeding," recently, said:

"The breeding of horses in this country is improving. It's got to, because the market won't have anything to do with a horse that is not good. Our farmers have gone very largely into breeding draft horses, especially in the more level parts of the country, where there is no hill work. The cheap, light horse of 1,200 pounds or under is not wanted any more, but there is just as much demand for a good light horse as ever. The farmer has got to breed either a draft horse or a light horse, and whichever he breeds, he has got to insure a good one. There is a market only for good horses. If the farmer mixes a light and a heavy animal, he gets a lot of pluggy animals that he cannot sell. If he breeds a good big, sound draft horse of 1,600 pounds, he has no difficulty in selling him. On the other hand, if he breeds light horses, and is careful to see that they have good conformation, style and action, he has also got a salable horse for carriage and saddle purposes."

"It is harder to breed light horses. Let a carriage horse have a biemish or a scratch, and he will be turned down by the big dealers. What made the Americans go into the breeding of big draft horses was largely the increase in the size of farming implements and machinery. The farmer is using bigger plows. Where he used to use a single plow, he now uses a double one, and where he used to employ a walking plow, he now rides. Then, he has taken to big, three-horse plows. Besides, pulling conditions in the cities have created a demand for the big draft horses produced on the farm."

of horses made since then are not accepted unless provided with registration papers.

The imputations cast upon each other's records by these rival Percheron record associations placed the United States Bureau of Animal Industry in a very delicate position, as it was very difficult to decide what records were entitled to recognition. It is said that the result of this quarrel was to cause the United States Government, in issuing its new regulations, not to recognize registration in any of the American books of record for any class of stock as qualifying an animal for an import certificate. It should perhaps be added, in connection with the criticisms of the pedigrees in the American Percheron Studbook, that in the newly-established Canadian Percheron Record no horse has been recorded without an investigation of its pedigree, so that our Percheron record is in good standing.

LIVE STOCK.

Snapshots from Rural Australia.

The feat of Dan Cooper, of shearing 316 sheep in a Queensland shed in a little over eight hours, has again aroused the question as to who is the world's swiftest cutter.

Horse certification is making headway in Australia. The Sydney Royal Show committee have decided to admit only certificated mares to the show-ring, as well as stallions. But the South Australian Agricultural Bureau have asked that the Government make certification compulsory for all horse offerings to the public. At present the qualification is only required in the show-ring, and horses known to be unsound are kept out.

Thus, the unfit stallions are not reduced in numbers, though they may be in prestige.

The hog industry has received a great impetus in Australia and New Zealand through the demand by Great Britain for pork and bacon. Agents who are buying are promising an almost unlimited demand. During the past few years the industry had gone out of fashion, because it paid the dairymen better to rear calves than pigs, but the increased price is a temptation.

Most of the Australian States have in practice now a very complete system of agricultural education. In the public instruction department there are four grades, all working independent of each other. In the ordinary day schools, the children conduct both indoor and outdoor experiments in the germination of seeds, keep records of results, and also receive lessons on the culture of crops. The second stage is the agricultural High Schools. Their object is not to turn out accomplished farmers, but to train students to think and act. The mind is broadened, so that the youth is able to take an intelligent interest in the raising and marketing of products. The work comprises chemistry, physics, carpentering, plowing, subsoiling, tile-draining and building concrete. The next step takes the pupil to the colleges. Here he is taught the practical side of all the land industries, and those displaying a taste for scientific branches are specially trained. At the universities, there are Chairs of Agriculture and Veterinary Science. On the other hand, the farmers have the instruction and advice offered by the State farms, situated in typical districts, so as to cover the various climates and altitudes; and, in addition, farmers' bureaus are being founded, so that the practical producers may meet, for their mutual benefit. In New South Wales and South Australia these bureaus are subsidized by the Central Government to organize lectures and demonstrations. The experts, too, are always at the command of any farmer who has a problem to solve, a silo to build, or wants advice about the class of products his land is fitted to produce.

In order to beat the peach aphid, an officer in the Department of Agriculture in Victoria has patented a device. It consists of two metal flanges, to be placed around the tree and clasped together. The space between the tree and the flanges is filled with some easily removable composition, and around the surface rim is a reservoir for water and kerosene. The aphides, of course, spend the winter below ground, and climb to carry on their campaign of destruction at the first sign of spring. The device keeps them off



The Spring Foal.

American Percheron Registration

As readers of "The Farmer's Advocate" are already aware, the new United States import regulations, that come into force January 1st, 1911, authorize the Bureau of Animal Industry to issue import certificates to pure-bred animals on the strength of registration in specified European and Canadian records, but not on the strength of registration in the several books kept by the various American Registry Associations.

An illuminating side-light on the reason for this apparently anomalous action is afforded by certain history that has transpired in connection with the relations of two of the Percheron registry associations in the United States. The American Percheron Studbook, which is the only one of the several American Percheron books recognized by the Canadian National Records, has contained a number of inferior pedigrees—pedigrees with duplicate numbers and other errors. As the result of an attack upon the Society which controls this record by the Percheron Registry Company, of Columbus, Ohio, which is said to be owned by the McLaughlins, the American Percheron Society began to clean up its records, submitting to the French Secretary two successive lists of doubtful pedigrees. Volume 12 of the American Percheron Studbook will have, it is said, three lists of pedigrees. First, a clean list; second, a cancelled list, and third, a list of suspended pedigrees, which will be restored to the clean list on proof being supplied as to their validity.

In re-issuing its records, the American Society has gone on the assumption that all the horses which came from the district of Perche, in France, prior to 1885, were pure-bred, but importations

the tree, and a little spraying accounts for any that might be blown onto the branches.

At the New South Wales State Farm, it has been demonstrated that buttermilk will cure scours in calves. The plan is to reduce the quantity of skim milk while the calves are affected, and as they improve under the influence of the lactic-acid germ, the milk supply is gradually increased.

The Melbourne Royal Show adopted the single-judge system for the first time this year, and results declared it to be a success. All the leading societies in Australia have now thrown aside the jury system.

The most powerful political body in Australia is the Australian Workers' Union, composed entirely of men engaged as shearers and shed hands. Since 1886 they have spent £259,000 in organization work.

After fifteen years, the British Board of Agriculture has revoked the order which prohibited any live cattle from Australasia entering the country. The breeders in New Zealand and Australia are jubilant, as they can now send stock to the English shows and sales.

The extent of Australia in which the very fine wools are raised is very limited. The breeding for the heavier returns from coarser fleeces and the carcass are so attractive that even in those parts the finer Merinos are going out of fashion.

The New Zealand Government has threatened, if the Beef Trust puts in an appearance in that country, to at once nationalize the beef trade, wholesale and retail. Nothing further has been heard of the Trust's intentions to invade Australia.

The date of our special correspondence was extended to January, 15th. By this date we have ready taken advantage of the opportunity mentioned on page 35 of this issue, and have secured information once. Thousands have been benefited.

Smithfield Daily Gains.

The following summarized account of the average daily gains made by the live stock exhibited at Smithfield Show, 1910, will be of interest to our readers. They are specially compiled by W. W. Chapman, 4, Mowbray House, Norfolk Street, Strand, London, from the tables which he annually prepares, showing the individual average daily gain of each separate animal exhibited at Smithfield.

The tables are divided into: Cattle not exceeding two years of age, this section including one class of heifers, i.e., cross-bred heifers, the remainder being steers; steers above 2 and not exceeding 3 years of age, this section including one class of steers and one class of heifers; heifers above 2 and not exceeding three years of age.

CATTLE.

NOT EXCEEDING 2 YEARS.

Table with columns: Breed, No. of Exhibitors, Class, Highest, Lowest, Average Daily Gain (Lbs. Oz.), Aggregate Weight (Lbs.), and Aggregate Age in Days. Includes breeds like Devon, Hereford, Shorthorn, etc.

OVER 2 AND NOT EXCEEDING 3 YEARS.

Table with columns: Breed, No. of Exhibitors, Class, Highest, Lowest, Average Daily Gain (Lbs. Oz.), Aggregate Weight (Lbs.), and Aggregate Age in Days. Includes breeds like Devon, South Devon, Hereford, etc.

ABOVE 3 YEARS.

Table with columns: Breed, No. of Exhibitors, Class, Highest, Lowest, Average Daily Gain (Lbs. Oz.), Aggregate Weight (Lbs.), and Aggregate Age in Days. Includes Highland Steers, Highland Heifers, etc.

HEIFERS NOT EXCEEDING 3 YEARS.

Table with columns: Breed, No. of Exhibitors, Class, Highest, Lowest, Average Daily Gain (Lbs. Oz.), Aggregate Weight (Lbs.), and Aggregate Age in Days. Includes Devon, Hereford, Shorthorn, etc.

SHEEP.

The sheep section is divided into four: The Long woolled Lambs, which number seven classes; the Short woolled Lambs, which number ten classes; the Long woolled Wethers, which number eight classes; and the Short woolled Wethers, which number nine classes.

LAMBS.

Table with columns: Breed, No. of Exhibitors, Class, Highest, Lowest, Average Daily Gain (Lbs. Oz.), Aggregate Weight (Lbs.), and Aggregate Age in Days. Includes Leicesters, Lincoln, Cheviots, etc.

The total number of lambs exhibited was 86. These gave a general average daily gain of 9.66 ounces.

WETHERS.

Table with columns: Breed, No. of Exhibitors, Class, Highest, Lowest, Average Daily Gain (Lbs. Oz.), Aggregate Weight (Lbs.), and Aggregate Age in Days. Includes Leicesters, Lincoln, Cheviots, etc.

Total number exhib'd 46 5.94 29900 11103. The total number of wethers of all breeds exhibited was 77. These gave an average daily gain of 5.87 ounces.

PIGS.

The first table gives the average daily gain of each of the several separate breeds of pigs not exceeding 9 months of age, and the second, those exceeding 9 months, and not exceeding 12 months.

NOT EXCEEDING 9 MONTHS.

Table with columns: Breed, No. of Exhibitors, Class, Highest, Lowest, Average Daily Gain (Lbs. Oz.), Aggregate Weight (Lbs.), and Aggregate Age in Days. Includes Middle White, Large White, etc.

PIGS ABOVE 9 AND NOT EXCEEDING 12 MONTHS.

Table with columns: Breed, No. of Exhibitors, Class, Highest, Lowest, Average Daily Gain (Lbs. Oz.), Aggregate Weight (Lbs.), and Aggregate Age in Days. Includes Middle White, Large White, etc.

The total number of pigs exhibited was 134. These gave a general average gain of 1 pound 4.47 ounces.

Poland-China Hogs.

Editor "The Farmer's Advocate":

Regarding a recent question in "The Farmer's Advocate," asking for Poland-China hogs, I may say that they are quite numerous in the corn belt of Ontario, and in this county are the most numerous and popular of the breeds. Most recent importations have been from the more Western States, where a larger, longer, more prolific kind is raised, hence the type found here is somewhat different from the short chunks of former years.

In view of the short editorial published in "The Farmer's Advocate," not long since, urging more care, attention and promptness in the matter of answering correspondence, it is worth noting that the Accountant of the Canadian National Live-stock Records tells us that 75 per cent. of the applications that come in to the Records office have to be sent back to the applicants, in order to be filled out properly, so few farmers pay strict attention to every requirement.

Comparative Feeding Value of Clover and Timothy Hay.

Prof. Ralph Hoagland, of the Division of Agricultural Chemistry, Minnesota University Farm, has recently tabulated the results of numerous analyses of red clover and timothy hay, made to determine their comparative feeding value in the fattening of live stock. The figures below show the number of digestible nutrients in one ton each of clover and timothy, respectively:

Nutrients.	Clover.	Timothy.	Difference
			in favor of
Ash	89.9	72.9	+17.0
Fat	38.0	24.5	+13.5
Protein	150.2	65.9	+84.3
Crude Fiber	290.7	418.6	-127.9
Carbohydrates	552.6	462.5	+90.1

The results here presented show conclusively the superiority of clover in feeding value. Clover contains over twice as much digestible protein, and considerably more digestible fat and carbohydrates, than timothy hay.

Clover is especially suited for young stock and milch cows, while timothy is more used as a feed for horses. Its market value for this last purpose is so high as to preclude its profitable use for general stock-feeding, since the same amount of nutrients can be purchased in other feeds for less money.

It should be remembered, in this connection, that the value of clover hay depends largely upon the stage at which it is cut, and the condition in which cured. As commonly made, its value is often disappointingly less than theoretical calculations indicate.

Pigs that Paid.

Editor "The Farmer's Advocate":

I will give my experience in a small way in pork production the past year. Last winter we fed a litter of pigs that weighed 240 pounds each at six and one-half months, that were sold for \$9.50 per hundred. They were fed pulped roots and barley chop, about equal parts by measure. I do not know what amount they consumed, but they did well, and were very profitable. In March a young sow farrowed five pigs. They were fed a fair amount of milk from the time they were one month old until they were three months old. They were fed 2,600 pounds barley, chopped fine, and two small loads of peas on the straw in the barnyard (about 15 bushels). I do not know what amount of peas the pigs would get, as there were over one hundred hens with the liberty of the same yard. They were sold on the 3rd of October, at an average weight of 276 pounds, at \$8.40 per hundred, or \$115.90 for the five pigs when just five days over six months old. They would have been profitable at one-half the money. We are at present feeding a litter of eight. At three months, or 91 days, they weigh 95 pounds, and have made a gain of 42 pounds each the last thirty days.

Young pigs must have some milk before and after weaning to start them on the road to profit. These pigs have not been fed much milk, as we have only had two cows milking, and have raised both calves. Pulped mangels and fine-chopped barley, mixed with hot water, but not sloppy, is our winter feed. Young pigs want an hour or two exercise every day, if the weather is suitable summer and winter, but should not run around all day.

WM. JAMIESON.

A Veteran Herdsman.

Born in 1861, in the Village of Sussworth, on the River Trent, in Lincolnshire, England, Fred Norton, the subject of accompanying photograph, emigrated to Canada in 1883, at the age of twenty-two years, and made his first engagement in this country as herdsman with the late Hon. M. H. Cochrane, whose beautiful Hillhurst Stock Farm, at Compton, Quebec, was at that time the Mecca of stock-breeders from all parts of the American continent. Here for seven years Norton had charge of the famous herd of Short-horns, some of which were sold for prices well up in the thousands of dollars each. Later, at Hillhurst, he had the care of the grand herd of Herefords, headed by the peerless son of the noted Grove 3rd, Imported Cassio, considered by the writer the most perfect beef-type bull of any breed that has ever figured in Canadian show-rings, with a width, depth, thickness and smoothness rarely equalled in any country. He was also a sire of exceptional prepotency, his progeny winning widely at Provincial Fairs for years, prominent among which was his champion daughter, Vanity 3rd, a model in type and quality, while on more than one occasion Cassio and four of his daughters of graded ages made up the first-prize herd at Provincial Fairs in the late eighties.

A magnificent herd of Aberdeen-Angus cattle was also founded at Hillhurst by importation and breeding, headed by the splendid son of the noted Paris 3rd, Lord Hillhurst, which, with his four

charming daughters, "black, but comely," made up the first-prize herd at Toronto in 1890. These also were fed and fitted by herdsman Norton, and after their dispersion he engaged with Mr. Cochrane's neighbor, H. Dudley Smith, founder of the noted Ingleside herd of Herefords now at Hamilton, Ont., with whom he has remained steadily for twenty years, making a splendid record in prize-winning, with such noted animals as the champion bulls, Sir Horace, Mark Hanna, Amos, and Bourton of Ingleside, the latter bred on the farm; also the champion cows, Lady Bountiful and

Corn as a Food for Stock.

Address by Prof. G. E. Day, at Ontario winter meeting.

There are two well-known types of corn, viz., dent and flint. The grain of corn may be either white or yellow in color, but my attention shows that there is no relation between the color and the feeding value of corn. The grain of flint corn contains a little more protein, as a rule, than that of dent corn, but it is a little lower in carbohydrates or starchy matter. The difference between feeding values of flint and dent corn is not material.

Corn grain contains a high per cent. of starch and a rather low per cent. of protein and ash. It also contains a high per cent. of oil or fat. Since carbohydrates and fat are mainly useful for forming fat in the animal body and supplying the animal with energy, it follows that corn has a very high fattening value. Protein is useful in the animal body for the formation of muscle, and the ash of the food goes to build up the bone of the animal. From its composition, therefore, it will be noted that corn is not a good bone and muscle former, but is a most excellent fattening food. Practical experience also proves this to be the case, and corn must be understood in order to be fed to the best advantage.

For fattening comparatively-matured animals, no cereal grain equals corn; but, in the case of very young animals which are rapidly building up the muscles and bones of their bodies, corn should always be fed with some other food which will make up for the deficiency of corn as a bone and muscle former.

There are several important by-products from the corn grain. One of the most common of these is gluten feed, which is composed of the gluten of the corn and the bran or outside skin of the grain ground together. This by-product occurs in the manufacture of starch from corn. Another by-product of the starch factory is gluten meal, which consists of the gluten of the corn, but does not contain any of the bran. Another by-product is hominy feed, which is a by-product in the manufacture of hominy, and consists of the bran or hull of the corn, together with some of the starchy matter.

Unfortunately, the terms gluten meal and gluten feed are often confused. The names are very much alike, and yet there is quite a wide difference in the composition of the two products. Gluten meal is very much richer in protein and fat than gluten feed, whereas gluten feed is considerably higher in carbohydrates than gluten meal. Gluten feed, however, has a high percentage of protein, and is an exceedingly valuable food for dairy cows when it is desired to increase the proportion of protein in the ration. Gluten meal would, of course, be more effective than gluten feed, but it is an exceedingly heavy meal, and a little more care would be necessary in its use. Hominy feed is low in protein, but fairly high in carbohydrates, and very high in fat. It is a palatable food, and has a very considerable value for either dairy or beef cattle, but would be more valuable for fattening than for milk production.

The following table shows the dry matter and the digestible nutrients in 100 pounds of the corn grain and its leading by-products:

	Dry matter in 100 pounds.	Digestible nutrients in 100 pounds.		
		Crude protein.	Carbohydrates.	Fat.
	Lbs.	Lbs.	Lbs.	Lbs.
Dent corn	89.4	7.8	66.8	4.3
Flint corn	88.7	8.0	66.2	4.3
Gluten meal	90.5	29.7	42.5	6.1
Gluten Feed	90.8	21.3	52.8	2.9
Hominy Feed	90.4	6.8	60.5	7.4

As to the corn plant as a whole, we find that it produces a large amount of bulky fodder per acre. Of the dried product of the corn plant, we have corn fodder and stover. By corn fodder is meant the whole corn plant, including the ears, whereas stover refers to the corn plant with the ears removed. The following table shows the



Darlington Cranford 21st.

Shorthorn dairy heifer. First in class and champion, Royal Show, England.

Lady Tushingham, the latter a winner at the Columbian Exposition at Chicago, in 1893, weighing 2,000 pounds. In later years, the Ingleside herd has made an excellent record in prizewinning at leading Eastern Canada exhibitions, including the first herd prize and male and female championships at the Western Fair, London, and the male championship at Toronto, this year, with the capital yearling bull, Bonnie Brae 21st.

Handicapped by the loss of his left hand, taken off by a straw-cutter twenty-one years ago, Norton's career has been an exceedingly creditable



Fred Norton.

A veteran Herdsman.

one, and his holding his position for so long a period is a fine example of satisfactory relations between employer and employee, each exhibiting a proper interest in the welfare of the other.

Careful, constant and courteous, faithful to duty, and competent in his calling, the veteran herdsman is not without a sense of humor, as evidenced on the occasion of his handing to the editor, by request, a copy of his photograph, with the remark, "If you keep it in your house, you'll never be troubled with rats."

dry matter and digestible nutrients in 100 pounds of fodder corn, corn stover, together with timothy hay and oat straw, for purposes of comparison.

	Dry matter in 100 lbs.	Digestible nutrients in 100 pounds.		
		Crude protein. Lbs.	Carbo-hydrates. Lbs.	Fat. Lbs.
Fodder corn	57.8	2.5	34.6	1.2
Corn stover	59.5	1.4	31.2	0.7
Timothy hay	86.8	2.8	42.4	1.3
Oat straw	90.8	1.3	39.5	0.8

It will be noted that there is more or less similarity between the composition of fodder corn and timothy hay, the timothy, however, possessing some advantage. There is also a similarity between corn stover and oat straw, with the advantage in favor of oat straw. When we consider, however, the immensely greater yield per acre of fodder corn than of timothy hay, we can realize something of the possibilities of this crop as a means of supplying a cheap, bulky fodder for stock.

The value of corn as a silage crop has been known for a long time in this Province, and the number of silos throughout the Province is increasing every year. It is an interesting fact that the largest milk-condensing plant in the United States prohibits the feeding of silage; on the other hand, there are many other condensing factories which favor its use, and which are encouraging farmers to erect silos. Everything considered, therefore, we may safely say that silage has no injurious effect upon milk. Corn silage is especially valuable for dairy cattle, but it can also be used to good advantage in the case of fattening cattle, and a moderate amount may be fed even to horses or sheep, though many good sheepmen do not favor its use. As in the case of corn grain, silage must be understood in order to be used to advantage. It is a bulky, succulent food, which gives a cheap and palatable bulky fodder; but it is poor in protein, and this defect must be supplied by the judicious use of other foods in order to get the best results. Its succulent nature is beneficial to animals which are receiving a large amount of dry food, and it is especially valuable when roots are not used in the ration.

Many discussions have arisen regarding the relative value of silage and dry corn fodder, some maintaining that the losses incurred in the making of silage more than offset the advantages which the succulent silage possesses over dry fodder. Extensive investigations at different experiment stations go to show that the losses incurred in the field-curing of fodder corn and in the process of fermentation which corn undergoes in the silo, are not materially different. In some cases larger losses have been found in the field-cured fodder than in the silo. As to feeding results, it has been found that there is not a very large difference between the milk produced from an acre of corn fed in the form of dry corn fodder and an acre of corn fed in the form of silage. At the Vermont Experiment Station, silage produced 11 per cent. more milk than the dry corn fodder from an equal area. At the Wisconsin Experiment Station silage produced 5 per cent. more milk and nearly 7 per cent. more fat than the dry fodder from an equal area. Apparently, the acceptability of a succulent ration, such as silage, has an influence upon the milk yield of the cow.

Silage is also attracting attention as a food for tiding cattle over periods of short pasture during the summer, and a summer silo is a very valuable asset to the dairy farmer.

In another place, reference has been made to the immense yield of fodder per acre from the corn plant. This may be illustrated in another way. It does not take a particularly heavy crop of corn to produce twelve tons of silage per acre. Twelve tons of corn silage contain, approximately, 336 pounds of digestible protein, which is equal to the digestible protein contained in 90 bushels of oats, 83 bushels of barley, or 560 bushels of turnips. Twelve tons of corn silage also contain 3,408 pounds of digestible carbohydrates, which is equal to the digestible carbohydrates contained in 199 bushels of oats, 109 bushels of barley, or 7,012 bushels of turnips. It will be noticed from these comparisons that the great value of the corn plant lies in supplying a large amount of carbohydrates, and, as before stated, the man who understands the peculiarities of the corn plant will be in the best position to use it to advantage.

The following table show the dry matter and digestible nutrients in 100 pounds of corn, turnips and mangels.

	Dry matter in 100 lbs.	Digestible nutrients in 100 pounds.		
		Crude protein. Lbs.	Carbo-hydrates. Lbs.	Fat. Lbs.
Corn silage	26.4	1.1	11.2	0.7
Swede turnips	11.4	1.0	8.1	0.2
Mangels	9.1	1.0	7.2	0.2

It will be noted that the silage contains considerably more dry matter than roots, and experimental work, so far as it goes, indicates that the dry matter of silage is practically equal to the dry matter of roots in the case, especially, of matured animals.

There is probably no crop which supplies more feed per acre than the corn crop, though it is a somewhat one-sided food, and must be combined with foods which will make up its deficiencies.

THE FARM.

Preservation of Farm Timbers Against Decay.

The chemical treatment of timber to delay or prevent its loss by decay, is a common practice in nearly all civilized countries excepting Canada. There are eighty-three operating chemical-treating plants in the United States. In Europe the practice is still more common; there, practically all railway, marine, mine and construction tim-



Fig. 1.—A barrel outfit.

bers are given some preservative treatment before they are used. Timber used in smaller private jobs, such as fencing and the foundation of houses and barns, is also treated. This policy is followed abroad for the same reason that would recommend its adoption in Canada, if it were better known; that is, economy.

It is economy to secure as long a life as possible from whatever structures may be built. In spite of possible substitutes, wood is still largely used for posts, shingles, sills, and other farm purposes, where it must be periodically renewed on account of decay. Renewal entails the double

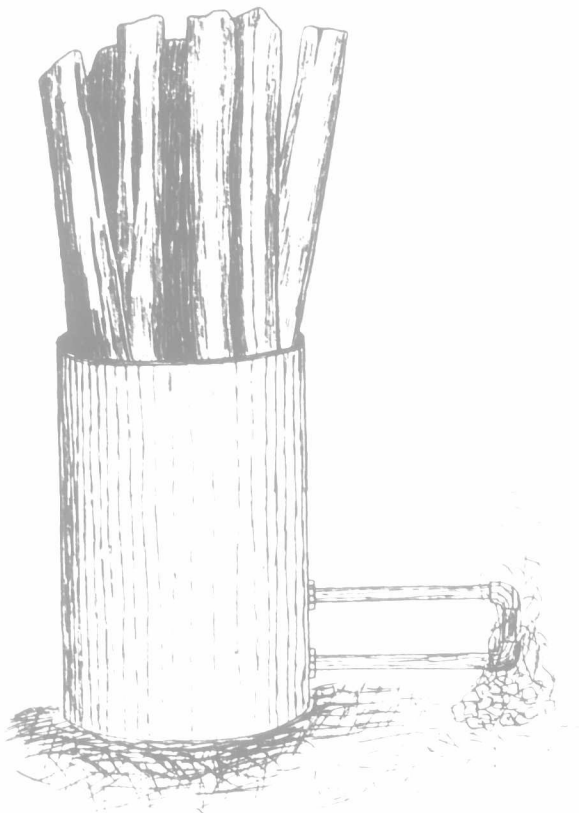


Fig. 2.—A tank outfit, with direct method of top heating.

expense of a cost in and labor cost. If anything can be done to timber to make it last twice its natural life when it is exposed to decay, it is quite evident that there is a saving provided that the process is not too expensive. Preservative experiments have shown that the life of wood from 200 to 700 per cent. can be extended, and that the process can be done for a cost of one cent per cubic foot of wood.

When a large quantity of timber is to be treated, it is necessary to have a thermometer reading to 250 degrees F.

are exposed to decay; 3,664,427,000 feet of lumber, about ten per cent. of which is destroyed and must yearly be replaced, on account of decay, and that there are required each year about 50,000,000 fence posts, 14,000,000 railway ties, and large quantities of poles, piles and mining timbers, it will be seen that the arrest of decay in timber will have a wholesome effect in forest preservation.

As long as farmers and others could secure cheaply durable oak or cedar posts and timbers, there was not much necessity of seeking artificial means to prolong their lives. But now that the Canadian supply of oak is practically exhausted, and cedar has become over large regions scarce and expensive, it is highly important that every means possible be adopted of making use of the yet fairly abundant supplies of inferior cheaper woods. These woods—beech, poplar, maple, willow, and others—when treated, give as good service as the more naturally durable woods.

The chemical preservation of wood is based upon the fact that the organisms or fungi causing the decay of wood require for their development a certain balance between the air and the moisture content of the wood, and a favorable temperature. Thorough seasoning, on the one hand, or thorough saturation with moisture, on the other, alters this balance to such an extent that the growth of the organism is either retarded or prohibited. Air seasoning only retards the growth. A coating of paint, if applied to well-seasoned wood, keeps the surface dry, and prevents the entrance of decay-producing organisms. The products of the distillation of coal tar and petroleum tar have the same effect, and, in addition, are antiseptics, and are poisonous to fungi in the same way as disinfectants are poisonous to disease germs. The deeper such antiseptics penetrate the wood, the more nearly permanent is their effect.

Unfortunately, no Government department in Canada has yet experimented with the chemical preservation of timber. Experimental work in the United States, extensively conducted, has proven that, from the standpoints of efficiency and cheapness, creosote is the best preservative to use, and that it is best applied by what is known as the open-tank process. Creosote is a by-product of the manufacture of gas and coke. It may be obtained in Eastern Canada for ten to fifteen cents per gallon.

The open-tank process of treating posts, or other timbers consists of heating the wood for a certain period, and allowing it to cool in the preservative. During the heating, the high temperature causes the air and water contained in the wood cells to expand, so that a portion of the air and water is forced out. When the timber begins to cool, the remainder contracts, and a partial vacuum is formed, into which atmospheric pressure forces the preservative.

Where a large quantity of timber is to be treated, it is advisable to have two tanks, in one of which the creosote is heated to about 220 degrees F., in the other of which it is kept liquid at about 160 degrees F. In this case, the posts would be heated in the first tank for about one hour, and then immediately placed in the cool oil, for one hour. Where only a small quantity of timber is to be handled, one tank can be made to serve the purpose satisfactorily. In this case the posts are heated in the preservative for two or three hours, and allowed to remain in the same preservative until it cools.

A very simple, and the cheapest form of apparatus, is that shown in Fig. 1. It consists of two oil or creosote barrels, connected by an iron pipe six or seven feet long, and three or four inches in diameter. The heating is accomplished by building a fire under the center of the pipe. This apparatus is sure to last, after a few days' usage, owing to the expansion and contraction of the pipe. The pipe should be fitted at each end with cunnings, and the barrels set in trays, so that any oil leaking may be collected. The apparatus is only satisfactory where a few posts of readily impregnated wood, such as beech, birch, red maple and lodge-pole pine, are to be treated. When in use, the barrels should be shielded from the direct heat of the fire.

A more satisfactory and permanent apparatus is that shown in Figure 2. This is heated on the same principle, and consists of a light galvanized iron tank (14 gauge), three feet in diameter, and four feet high, fitted with a T of three inch pipe. The whole outfit costs about \$10 to \$15. Whatever may be the other equipment, it is necessary to have a thermometer reading to 250 degrees F.

Posts which are to be treated, should have the bark removed, and should be thoroughly seasoned. Bark retards the treatment, and absorbs the creosote. Posts which have been air-dried, and then exposed to rain, should not be treated until they have dried for at least three good seasoning days after the rain. At least six weeks of favorable weather are required to season posts after they are cut.

At present many large posts are used, in order that after several coats of creosote the fence



O.A.C. Drainage Survey Staff, 1910.

All but one man, who was unable to be present for the photograph.

may remain solid. This is unnecessary if the posts are well treated. It is a waste of wood and creosote. The line posts need not be more than five inches in diameter.

The tops of the posts should be cut obliquely, so as to shed rain water. This is best done with an axe, as it makes a smoother cut. If the tops of the posts are not to be treated, the bevelling is important.

Decay in posts is most rapid about the ground line, where the conditions are most favorable for the growth of fungi. Posts should be treated to a distance of about one foot above the ground line.

It does not pay to treat such woods as cedar, locust and oak, which naturally are very durable. They are difficult to treat; the treatment does not proportionately lengthen their lives, and even without treatment they cost more than cheaper and equally satisfactory posts that can be had by treating inferior woods.

Canadian woods which have been satisfactorily creosoted are white ash, basswood, beech, birch, cottonwood, white elm, red and sugar maple, red oak, lodge-pole pine, quaking aspen, and white willow. These timbers should be allowed to absorb from four- to six-tenths of a gallon of creosote per post, which will be a penetration into the wood at the ground line of from four-tenths to one inch. The absorption of the oil can be measured by weighing; one gallon oil weighs 8.5 pounds. The penetration may be measured by chipping the post; it need not be mentioned that spots chipped should be thoroughly creosoted before the post is set. This absorption will probably, for the woods mentioned, require from four to six hours in the hot creosote, and ten to twelve hours in the cooling creosote. If two tanks are used, one of hot, one of cool oil, about one hour in each will be sufficient. It will be noticed that the sapwood absorbs the creosote much more readily than the heartwood. The sapwood, when creosoted, is as durable as the heartwood of any species.

Have sufficient creosote in the tank to submerge the butts of the posts about six inches above the ground line. Heat the oil to about 220 degrees F. before putting the posts in it, and keep it at this temperature for the four to six hours required for the hot bath. When the oil begins to cool, it will be absorbed by the posts, and enough oils should be added to keep the posts submerged to their proper depths.

In Eastern Canada, where creosote can be obtained for less than 15 cents a gallon, the cost of this treatment, excluding labor and fuel, should be about seven cents a post, allowing for a fixed charge of one cent per post for the cost of permanent apparatus, and six cents per post for creosote absorbed and evaporated.

Posts treated in this manner will last at least twenty years, no matter what may have been the original natural life of the wood. Cedar posts, to last twenty years, cost, in many sections of Canada, eighteen to twenty-five cents each. In the same localities, some other species, cottonwood, poplar, lodge-pole pine, soft maple, birch, pine or spruce, could be secured for five cents each or less, and treated for about seven cents. The result would be posts which would last about twenty years, at a total cost of twelve cents, or half the cost of a cedar or oak post.

It will be found advisable to use this same treatment for foundation, bridge or other timbers exposed to decay. If the timbers are too large to be treated in a tank, almost the same results will be secured if they are painted two or three times with hot creosote. Care must be taken to see that the creosote penetrates thoroughly all cracks. Where lumber is expensive, it would also pay to treat the lower portions of board fences and the lumber used near the ground in sheds and barns.

be done during the treatment by adding color to the creosote. Red or reddish-brown can be obtained by adding to each gallon of creosote 8 or 10 ounces of color "ground in oil," mixed with an equal bulk of linseed oil.

The objectionable odor from creosoted timber disappears in a few weeks, and creosoted shingles cease to taint cistern water after about one week.

H. R. MacMILLAN,
Dominion Forest Service.

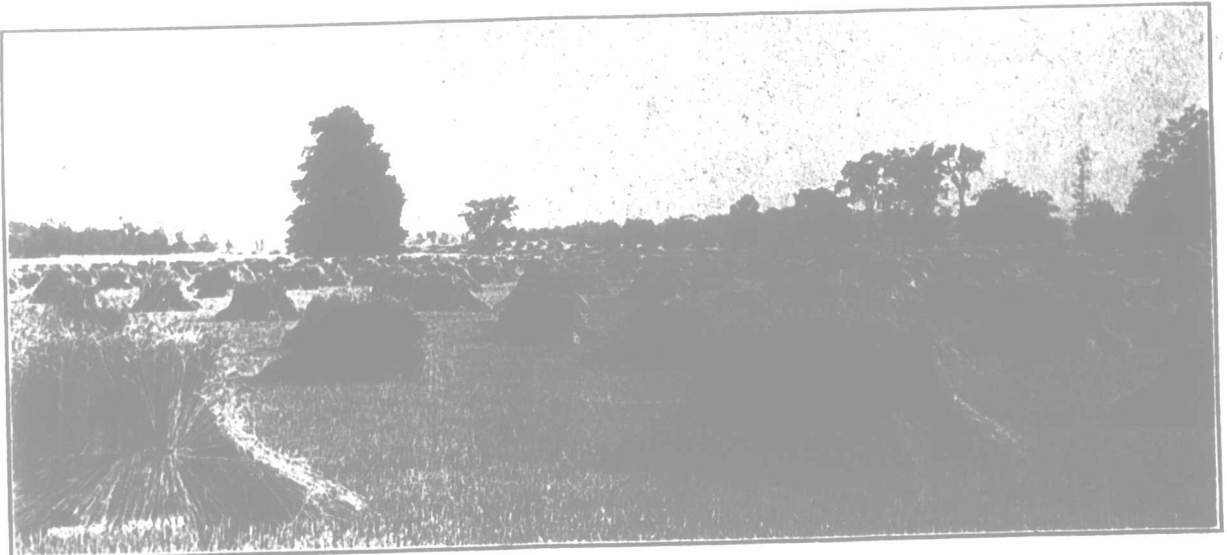
Canadian Alfalfa Seed Gives Good Results in England.

Following the interesting particulars given by Prof. Zavitz at the Ontario Winter Fair, concerning the production of alfalfa seed in Canada, our readers will be gratified to know that since 1905 an experiment has been in progress with different varieties of alfalfa seed at the Woburn Experimental Station of the Royal Agricultural Society of England, and the results up to 1909 are recorded in the last volume of the Society's Journal. The report states that in 1905 three varieties of alfalfa seed were sown in the Stackyard Field, viz. (A) Provence, (B) American, and (C) Canadian. In 1908, seed from Argentina was added to the series, but the plots sown with this were attacked by a fungus, *Pseudoopeziza Trifolii*, which, though destroyed by the application of ground lime, lessened the yield from the Argentine varieties. The other kinds, which remained free from the disease, although in close proximity to the attacked plots, produced well, and in 1909 gave three cuttings, viz., on July 7th, August 20th, and November 2nd. The plots were cleaned early in the summer; weeds and grass had begun to invade the Provence and American plots, but the Canadian remained much cleaner, and the better crop kept the weeds down. The total weights of green produce per acre from the three cuttings in 1909 were:

	Short tons.
A. Provence	11.80
B. American	12.81
C. Canadian	19.87

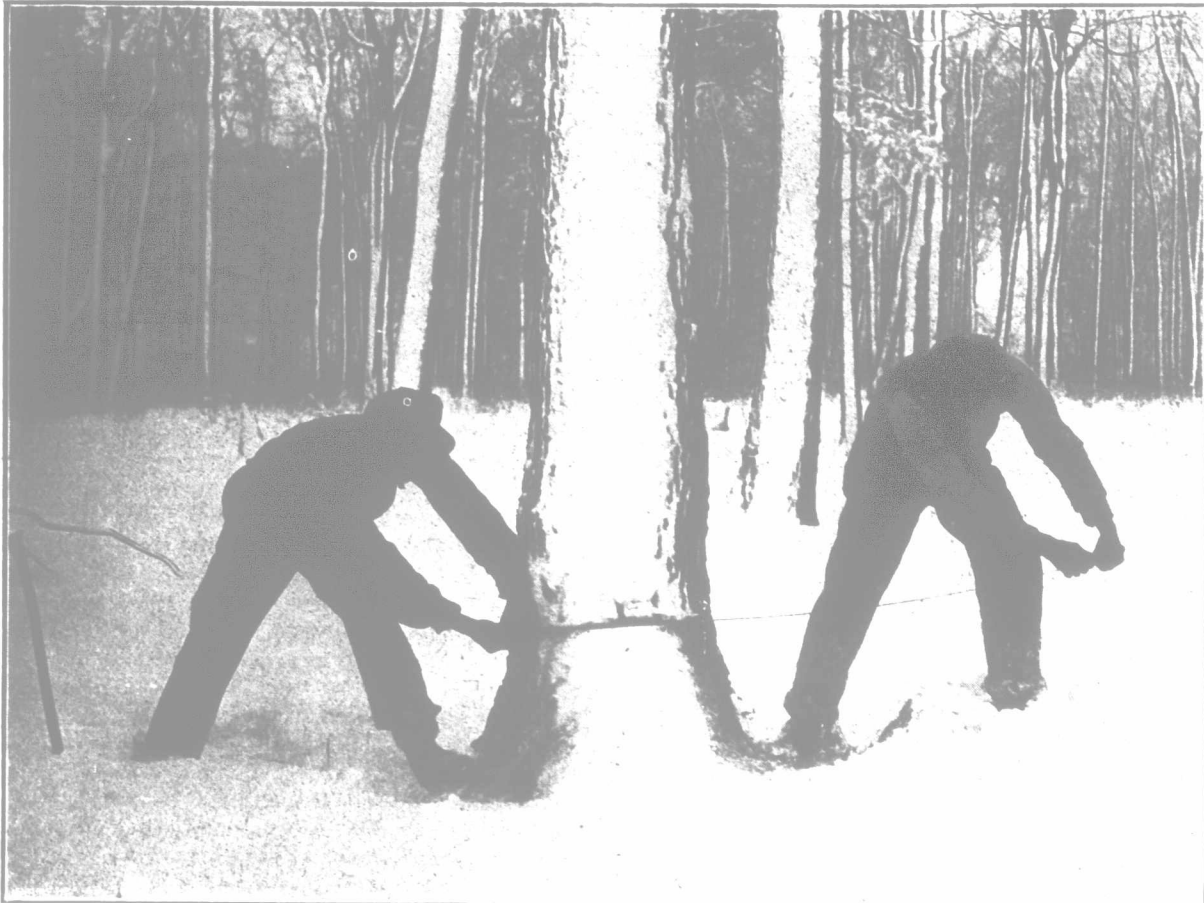
For the fourth successive year the Canadian alfalfa has yielded the largest crop, and the appearance of the crop warranted the conclusion that it would continue to occupy the ground longer than the other two, which seemed likely to be overrun with weeds. At a meeting of the Society's Council, held on November 2nd, last, Dr. Voelcker, who is director of the experiments, again drew attention to the superiority of the Canadian alfalfa seed, but added that, unfortunately, it proved to be difficult to obtain the Canadian seed in sufficient quantity. The Council decided to institute a new set of alfalfa experiments at Woburn, taking for comparison those varieties of seed generally obtainable on the English market. From the foregoing, it would appear that there is an opening for the production, in suitable localities in Canada, of alfalfa seed for export to Great Britain, and possibly, also, to the European continent.

Have you secured one of our complete Kitchen Equipments (six articles) or a Set of Scissors (three pairs)? Either one of these is yours for sending in only one new yearly subscription to "The Farmer's Advocate and Home Magazine." Look up the particulars and read about our other premiums in our announcement on page 35 of this issue.



"Fifty Bushels to the Acre Makes us Grateful to our Maker."

A 45-bushel-per-acre wheat field on the farm of John Murray, Lambton Co., Ont. The same field has yielded 50 bushels per acre in the past. The ensuing clover crop this season came out in full bloom. (Photo by W. R. Holmes.)



The Crosscut.

Road-making: Cost and Oiling.

"DO NOT DRIVE IN ONE TRACK. AVOID MAKING A RUT. USE WIDE TIRES."

The above directions appear on little signboards at intervals along New York State roads constructed under the Department of Highways. One of these, between the towns of Phelps and Clifton Springs, in Ontario County, presents, after two years' heavy traffic, a remarkably fine appearance. It was well built, of good material, and demonstrates the value of a system of maintenance and repair. In view of the attention being given to road construction in Canada, details regarding the method and cost, and the oiling done last summer to improve the wearing quality of the surface and keep down dust, will be of value. The results were highly creditable to Inspector C. R. Madden, under whose direction the latter work was executed. Early in December, after a great deal of wet weather and heavy usage, the road was beautifully smooth and firm.

This road was constructed in 1908. The excavation cost 50 cents per cubic yard, with an average of about 3,000 cubic yards per mile. Concrete culverts were built where necessary, and cost \$7.00 per cubic yard, in place, complete. The bottom course, of No. 4 limestone (broken) was then laid 4½ inches, and rolled to 3 inches, then filled with sand, at a cost for the bottom course of \$2.75 per cubic yard, rolled in place, complete. The top course of No. 3 limestone (broken finer) was then laid 4½ inches deep, then rolled to three inches; then filled with limestone dust and screenings until all the voids were filled dry. More screenings were added, sprinkled and rolled. This operation continued until a grout formed under the action of the roller, filling all voids, which, when dry and hard, forms a pavement six inches deep. The top course cost about \$3.50 per cubic yard, in place, complete. This road was built 12 feet wide, of macadam, with 6-foot shoulders on either side, making a 24-foot roadway between ditches. The guard-rail was erected where necessary, at a cost of 20c. per lineal foot, in place, complete, painted two coats.

The amount of construction, added to the cost of making plans and inspection, made the total cost of this road about \$7,000 per mile. The broken stone was transported from the Leroy quarries, making the cost much more than where stone suitable for construction is in the locality, the freight adding about 90c. per cubic yard to the cost.

Upon taking charge of the maintenance in that section, last spring, Mr. Madden found this road becoming bare and rough, and beginning to ravel, and recommended oiling, which was approved. He then caused the road surface to be swept clean from dust and dirt with a street sweeper, costing about ½ cents per square yard. Then the oil was applied from an oiling cart, using 1 gallon per square yard. It was next covered with limestone screenings, until the oil was all taken up. The oil cost .04 per gallon, f. o. b. cents, and .03 per gallon to apply oil and rescreen the road, making the oil, complete, about \$100 per mile, including cost of stone screenings and oil. This amount appears high for maintaining a road, but makes the road practically dustless, and very easily travelled by auto and horses, as its condi-

tion becomes similar to street asphalt, doing away with the raveling, which is often the case on water-bound macadam roads during the dry season. The road now, with very little repairs, it is confidently expected, will last five years. The oil used is manufactured by the Standard Oil Company, and contains a 60-per-cent. asphalt base, with lighter flux added to make it flow at air temperature. This treatment will also lessen the cost of "patrol," as one man is expected now to take care of at least three times as much oiled roads as straight water macadam. The cost of "patrol" on water macadam roads averaged \$50 per mile per year each. Patrolman receives \$3.00 per day for man, horse and wagon. Each town is assessed \$5,000 per mile for each mile of macadam road in town, which is used in the repairs of roads, and the balance is borne by the State. Piles of broken stone and screenings for repairs are located at intervals along the highways.

In the construction of State and county roads, the State pays 50 per cent., the county 35 per cent., and the town (township) 15 per cent.; and the State highways are borne entirely by the State. These roads comprise the through trunk lines connecting the cities.

Other treatments are used for maintaining.

such as calcium chloride, on roads which are subject to less travel, at a greatly-reduced cost, which is giving very good satisfaction.

The Department is also constructing at present roads of asphalt macadam, with very satisfactory results, thereby lessening the cost of maintenance considerably. They are constructed the same as other macadam roads, only the top course. After being rolled, the asphalt, which is a heavier grade (about 90 per cent. asphalt), is heated to from 350 to 400 degrees, and poured into the stone about 1.65 gallons to the square yard, then screened and rolled. This asphalt cost about 17c. per gallon, thereby adding to the cost of the macadam about 28c. per square yard. These roads are giving very good satisfaction. They are built generally about 16 feet of macadam, with a crown of ¼ inch to the foot, with a 6 and 8-foot shoulder, making a roadway 28 and 32 feet between ditches. The earth roads leading to the improved roads are not under the State Department. The road hoe or rut scraper, if properly used at the proper time, is found of good advantage, at a very little cost.

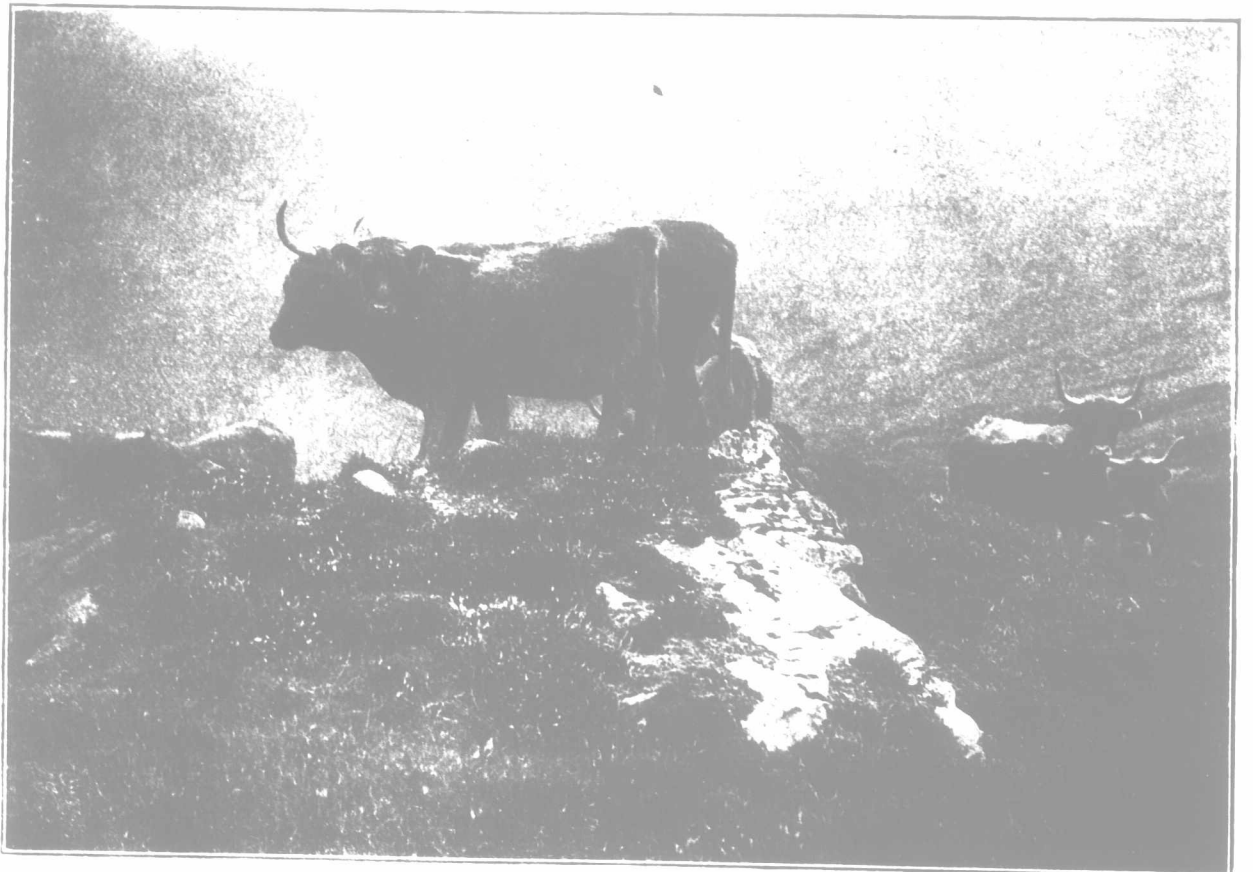
Alfalfa Hay Worth More Than Crop of Seed.

Editor "The Farmer's Advocate":

The writer has upwards of 80 acres seeded to alfalfa. Some has been down for several years, and the crop has been grown on this farm for over forty years, both for seed and forage.

I have almost given up the idea of growing seed, as it is very clear to me that very few farmers, if any at all, can afford to take chances, one year with another, on our small farms in Ontario to grow seed, as we generally need our feed or "starve our stock." Now, with the ever-growing demand for good alfalfa hay to-day, it is more profitable than the crop of seed. You sacrifice two crops of hay that are very valuable, or a lot of good pasture, for the crop of seed, which is very uncertain, and what seed is needed can always be bought at a fair price at any of the large seed stores, if not at the small ones. The yield with us is very uncertain of late years. The price is fair for good seed that is not injured with frost and well cleaned, but you lose two crops of hay, equal to from 3 to 3½ tons per acre, for the one crop of seed, and the two crops can be taken off with less expense than the one of seed, considering the expense of threshing and cleaning seed ready for market, and the probable yield of from two to four bushels per acre; some years, nothing; average, about 2½ per acre, at \$8 per bushel; this year, a little more for good seed. The straw, after threshing, is worth a little—but very little—for feeding, if it is a good seed year. I am satisfied no field will pay for seed unless it has a wonderful promise of blossom and not too rank a growth. If growth is rank, it is worth more for hay, as the demand is growing very fast for well-cured alfalfa hay.

As I said before, we can buy our seed and be ahead with the hay, but for those who wish to try the seed, would say the second crop is the best, and would prefer high-lying land, as the crop seems to mature much more quickly on the



It must have been Hubbard's cow, to which the postpaid herdsman remarked after he had driven them to the top of a mountain.

"The past is gone, but ye have a grand view o' the country."

high land. The harvesting is much the same as with clovers. By examining the pods, one can tell about when it is ready to cut. It can be cut with the binder and tied, if so desired, and shocked the same as grain, and threshed in the usual way with clover mill. It is better to put off threshing until cold, dry weather, as it is quite difficult to get from the pods if damp. Taking off seed does not injure the plants at all, and, so far as my experience goes with it, cutting seems to do it good, and there is always a good market for good seed. Sometimes an early frost does damage to the late seeds, spoils the sample somewhat, and, consequently, affects the price, but many of the dark-colored seeds will grow all right. After growing seed for a few years, you will, I think, agree with me that the two crops of hay, one year with another, are far the most profitable, and let the other fellow grow the seed, even if the seed costs half as much again as at the present time. I have always thought the amount of seed recommended to be sown per acre is a little too much. Buy good seed, and 15 pounds per acre is plenty, or one bushel to four acres. I sometimes add to this, and mix well, one pound of timothy, and the same or a little more, if you prefer, or red clover, per acre, just to thicken the stand the first year, as lucerne (alfalfa) has to form a crown, and thickens every year, or every time it is cut; and there will be no red clover the second year, or very little. JAMES DOUGLAS.
Brant Co., Ont.

Lessons in Seed Production.

Compared to the older agricultural countries of Europe, Canada has much to learn, and still more to apply, in cereal crops and seed production, according to Dominion Seed Commissioner Clark, in his address at the recent Ontario Winter Fair. From the records of the Canadian Seed-growers' Association, he concluded that from 12 to 15 per cent. of last year's grain crop in Ontario traced to improved seed, and fully 75 per cent. of it was produced from the grain that happened to be in the bottom of the bin at seeding time. Nevertheless, the grain-growers of Ontario are progressing. Six years ago there was about one-quarter as much selected seed available as was grown during the current year, and even that small supply had to go begging for a market. The present supply of selected registered seed is not equal to one-quarter of the demand. Why the change? Ontario farmers have seen for themselves that they can get ten per cent. increase in yield of a superior quality of grain by using seed oats or other grain that has been selected for seed, as distinguished from oats that are grown for food or feeding. The growing and selecting of high-class seed grain is a special line of farming, in the same sense that the breeding of pure-bred live stock is, has proven to be amply remunerative, and, as a specialty in agriculture, is quite as attractive and interesting.

But in Sweden, Mr. Clark found a greater advancement. The average-sized farm in Sweden has 25 acres. Fully 90 per cent. of the grain crop of Sweden would trace back within a few years to selections made by Dr. Nilsson and his staff at Svalof. As the result of using better seed grain on thoroughly-cultivated land, which is worked under proper systems of crop rotation and the economic use of fertilizers, the best of which they claim to be red clover, the average yield of the grain crop in Sweden, when compared with other European countries, has increased from one of the lowest until now Sweden stands among the first five countries of Europe. The grain crop of the south of Sweden is second only to that of England in point of yield per acre.

The school system of Sweden has been a potent force in bringing about this improvement. Up to September, 1910, there have been organized 52 High Schools for farmers, in which the teaching of agriculture is given a prominent place in the curriculum. The course of training that is provided at each of these schools is quite equal to the first two years of the Ontario Agricultural College. Sweden also has a splendid university for the teaching of the science of agriculture, but the practical instruction in agriculture that is intended primarily for the people who live on the land is provided to farmers in these 52 high schools, which are distributed over the country in a way so that the farm boy has easy access to them. The greater number of the young men of Sweden of 30 years of age and younger have had training in these schools of agriculture, and they are now making direct application of their training to their farm practice. These men know the value of good seed, and do not hesitate to pay ten per cent. higher price for it.

Selected German seeds are grown in Germany, as in Canada, by a comparatively few farmers who make a specialty of that work. By good cultivation and fertilization with clover, light, sharp, sandy land south-east of Berlin was made to give fair yields of grain. The poorest oat crop seen in Germany was on this farm, and it promised a yield of at least 60 bushels per acre. On this land it was found, as the result of careful experiments, advisable to renew the supply of

seed every three years. The land seemed to be unable naturally to maintain from year to year a strong, vigorous growth in the oats and barley.

Another and smaller farm, having a good strong, clay-loam soil, directly south of Berlin, was visited. On this land, it had been found from experiments that there was no advantage in a change of seed. The land seemed to be naturally well adapted to cereal crops, which, after being removed for eight or ten years from selected stock, would give almost as good results as the original seed.

Most German farmers devote their best lands to growing their own seed supplies. They know full well before the crop is cut where their next year's seed supply is to be taken from. Such seed supply was pointed out on several farms, and, although weeds were not prevalent anywhere in the crop, these small areas intended for seed had been carefully gone over, and all weeds and other grains not true to the one desired kind had been hand-pulled and removed. This practice of selecting and cleaning their seed grain supply before the crop is cut, we farmers in Canada should adopt. It is quite sufficient on most of our grain lands to procure a new supply of selected registered seed once every five or six years. It will pay our farmers handsomely to procure ten bushels or so of selected seed from some experienced member of the Seed-growers' Association, and keep it pure while increasing the supply of it. Then, if the German practice of saving seed year by year is followed, it will not, on good grain land, be necessary to renew the supply frequently. It is, of course, of first importance to select the variety that is best suited to the farm, but it should not be forgotten that there may be as much difference in point of yield between two strains of seed of the same variety as between two different varieties.

Mr. Clark referred to the large seed farms he had visited, which were devoted principally to the production of field-root seeds. The great bulk of the mangel seeds used in Canada are grown in the Province of Saxony, in Germany. In procuring their supplies, Canadian importers have the privilege of purchasing high-class selected stocks from the best and most careful growers; but the price they would have to pay for this seed to the grower in Germany is as great as the price that is commonly paid by our retail seed vendors for their mangel seeds delivered to them in Canada. In addition to these large seed farms, which are managed by reliable seed-growers, mangel seeds are commonly grown in Germany by small farmers who have them for sale under much the same conditions that our Ontario farmers have red-clover seed for sale. The buyer of these seeds has to accept the word of the grower as to the variety, and we know that when Mammoth red clover seed is quoted at 50 cents per bushel over early red clover seed, then it is surprising how many of our farmers have a supply of the Mammoth red clover seed.

"Our difficulty in procuring a high quality of mangel seeds," Mr. Clark stated, "has been that too many of our farmers persist in buying the cheaper supplies, not knowing that in doing so they are virtually robbing themselves. In that

matter I cannot do better than recommend our farmers to place their orders early with the best and most reliable seed merchants, always asking for the best available stocks, regardless of the cost."

Seed Selection: Opportunities and Results.

The most pronounced result of the work in seed selection thus far, according to E. D. Eddy, Acting Secretary Canadian Seed-growers' Association, at the recent Ontario meeting of the Canadian Seed-growers' Association, has been to reveal the great weakness of present conditions in regard to seed grain, and to emphasize the need of more aggressive work to remedy existing evils. There has been a great awakening to the value of good seed; the great problem now is how to supply this demand. Last year there was about 6,000 bushels of general crop registered seed offered for sale by members of the Seed-growers' Association, or about one bushel of registered seed for every 3,800 acres of grain sown.

To meet this need of a greater seed supply, provision was made last year by the C. S. G. A. whereby hand selection of seed may be made from the sheaf, instead of from the standing crop, thus avoiding the difficulty of selecting in the field during the busy harvest season, which difficulty has kept many members of the association from producing standard seed. The Association will also secure seed of outstanding merit, and supply it in small quantities to applicants, to be used under the direction of the Association, thus enabling the earlier production of registered seed. By these means, the production of pure-bred seed should increase much more rapidly than hitherto, and the need for selected seed be more nearly met. The benefits from using improved seed are so obvious that the demand has become very keen, creating an enhanced market that should attract many more men toward seed production.

Top-dressing Alfalfa.

1. Would it be advisable to dress with well-rotted horse manure now (December) a field of alfalfa, newly-seeded. It is a good catch, on a well-drained clay hill.

2. What time of the year, and in what way, can an alfalfa sod be manure to the best advantage?
G. H. H.

Ans.—Since alfalfa is becoming of more general cultivation in Canada, and is proving profitable under so many different conditions, the above questions have a wide interest. Hoard's Dairyman has recently been receiving answers from farmers on these very questions, and the gist of their replies will form the essence of the reply here given. It has been found advantageous to top-dress alfalfa. For this purpose, any kind of manure may be used, though, if there be much litter in the fertilizer, it may be necessary to use a rake in the early spring, and remove the coarser parts from the crop. The top-dressing should be done in the late fall or early winter, preferably before the New Year, but may be done in Jan-



The Sleet Storm.

The silver saplings bending,
Flashed in a rain of gems;
The statelier trees attending
Blazed in their diadems.

White fire and amethyst
All common things had kissed,
And chrysolites and sapphires
Adorned the bramble stems.

—Charles G. D. Roberts.

uary or February if there is not much snow on the ground. The manure thus put on the crop serves as a retainer of the snow, and as a protection to the tender crop when the snowfall is light or wanting. In addition, the enriching of the land results in an increased crop and stronger vitality in the plants. A manure spreader will make the application more evenly and more satisfactorily than it can be done otherwise.

Mayhap some of our readers have experience upon this matter in alfalfa-growing. If so, their contribution to the general fund of knowledge will be welcomed as correspondence in these columns.

A Clean-farms Competition Suggested.

Some agricultural societies have adopted the custom of giving a prize to the school section exhibiting the finest collection of noxious weeds. The competitors for this prize must inevitably have learned a good deal about these pests as they made their collection.

Is it not time to make an advance in this direction? The weeds certainly are gaining ground, and a good many farmers will soon be obliged to exterminate the weeds or leave their holdings, for prolific weed production and profitable agriculture cannot be carried on on the same premises. Already the Government is doing something in the way of encouraging clean husbandry, by giving prizes for good clean fields of grain, thus rendering it possible for some to procure pure seed.

Is it not desirable that a little more should be done in the way of getting rid of the weeds themselves? Would it not be well for agricultural societies to ask for prizes to be given the men in the township who keep their premises neatest and freest from weeds? Along with this must go the thorough co-operation of the municipal authorities in the matter of an earnest enforcement of the law that we already have.

Indeed, the Ontario Government would be making a wise move in offering a substantial prize to the farmer in any township whose premises are cleanest. The whole competition may well be under regulations similar to those governing the field competitions for successful grain or root-growing. There is money in it for the farmers of the first township that takes this important matter seriously, as the township that establishes a reputation for clean and pure seed will have little difficulty in selling its grain at fancy prices. What society will be the first to move?

J. K.
York Co., Ont.

THE DAIRY.

Fat-Casein Method of Dividing Money Among Cheese-factory Patrons.

Address by Prof. H. H. Dean, O.A.C., at Winter Fair, December, 1910.

In order intelligently to understand the question before us, it is necessary to know something of the nature and chemical composition of milk. This is the foundation of the whole question.

COMPOSITION OF MILK.

Milk is composed of water and solid material, the latter being partly in solution and partly in suspension in the liquid portion. The solids consist of solids not fat, and a solid called fat. The solids not fat are made up of casein, albumen, sugar and ash, or mineral matter. Stated in the form of percentage, we have about:

84 to 88 per cent. water, averaging	87.5
16 to 12 per cent. solids	12.5
3 to 4.5 per cent. fat	3.6
2 to 3 per cent. casein	2.5
albumen	7
4 to 5.5 per cent. sugar	5.0
ash	7

For cheesemaking, we require two milk constituents, fat and casein; either of these being lacking it is impossible to make cheese as ordinarily understood. This being so, any system of paying for cheese milk which is equitable and just must take into account both fat and casein; nothing less will, or can, satisfy the demands of justice and fair dealing.

SYSTEMS NOW IN USE IN CANADIAN CHEESERIES.

Three plans or systems are now in use among Canadian cheese-factory patrons. The oldest, and the one most commonly adopted, is that of dividing moneys received from the sale of cheese, according to the weight of milk delivered, not taking into account any differences in the composition of milk or its relative cheese-producing capacity. The injustice of this plan is readily seen in the following table of results, based upon five years' experiments with milk ranging in fat content from 2.7 to 5.5 per cent. In this work

nearly 200,000 pounds of milk were used, and 250 experiments were made:

Per cent. fat in milk.	Lbs. cheese produced per 100 lbs. milk.	Lbs. cheese per lb. fat in milk.
3.0	8.89	2.92
3.5	9.54	2.70
4.0	10.36	2.57
4.5	11.08	2.47
5.0	11.77	2.36

The range in milk-fat percentages at factories will probably be from 3 to 4.5 per cent. This difference in fat content makes a difference of

to determine the relative values of milk for cheesemaking. This system, in varying forms, has been followed by a few factories in different parts of Canada, and, where the work has been done conscientiously, it has, generally speaking, given satisfaction.

However, we now have a practicable short method of determining casein in milk, hence we advise the use of both the Babcock test for fat and the Hart test for casein, in cheeseries. The casein test was perfected by Dr. E. B. Hart, of the Wisconsin Experiment Station, and great credit is due him, and also the Wisconsin Station, for this second important test for dairymen from the same Station. We look next for a single test which will combine in one the features of the Babcock and Hart casein tests, so that both milk fat and casein may be determined at the same time and at one operation. The man who does this will deserve the thanks of dairymen in all parts of the world.

HOW SHALL THE TESTING BE DONE?

We come to the practical application of the foregoing principles to our co-operative system of cheesemaking, as found in the Province of Ontario. We beg leave to suggest:

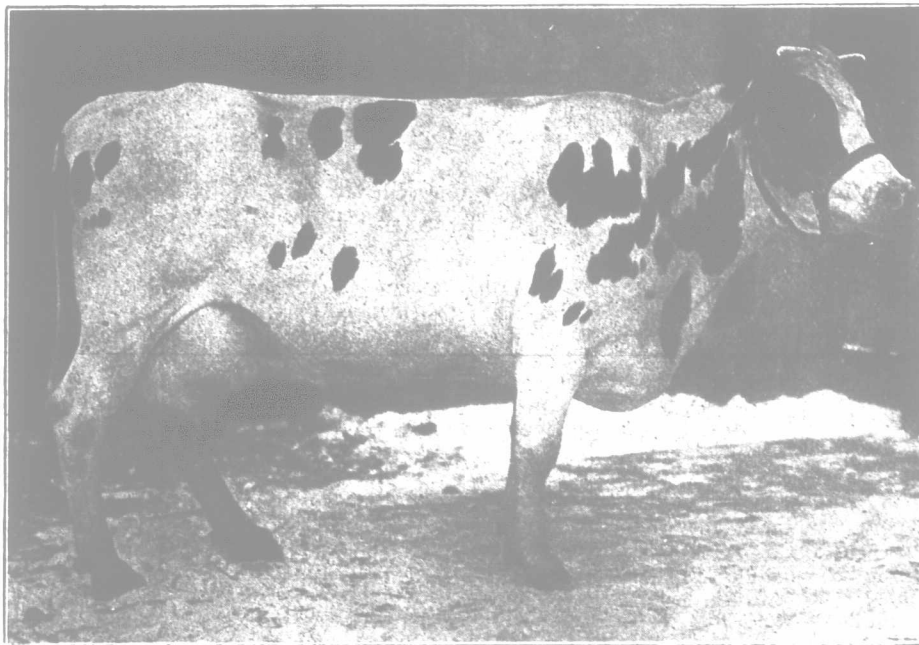
1.—That fat and casein shall have equal value, pound for pound, in determining the relative values of milk for the manufacture of cheese.

2. That, in large factories, where the business will warrant the employment of one man to do the testing, keep books, and generally supervise the business, the testing shall be done at such individual factories.

3. That, in the smaller and majority of factories, a system of co-operative testing shall be adopted by employing a skillful, disinterested person to do the work, either under the supervision of the factories interested, or by the Government, such person to be paid out of a general fund raised by said factories as a tax on the cheese manufactured; or, indirectly, by the Provincial Government, similar to the present system of employing and paying travelling instructors.

4. That a campaign of education on the importance of testing milk and paying for it upon a cheese-producing basis, be instituted during the coming winter among all our cheese-factory sections, in order to arouse interest in the question.

The dairyman's New-year resolution: "I will weigh and record every cow's milk every milking from now to December. Labor is dear. The more expensive it is, the greater the necessity of making the most out of it. The way to do this is to keep milk records. It will not only help me to develop a better herd, but it will make me a better dairyman."



Idaline Pauline De Kol 10083.

Holstein cow. First in class over 48 months, in milking competition, Ontario Winter Fair, 1910. Yield of milk in three days, 232.3 pounds, yield of milk in official test, 90.5 pounds in one day; butter in seven days, 24.798 lbs. on 80-per-cent. basis. Owned by R. J. Kelly, Tillsonburg, Ont.

about two pounds more of cheese per 100 pounds milk in favor of milk testing 4.5 per cent. fat. We thus see the absurdity and injustice of basing cheese values upon weight of milk only.

The second system, in use among, perhaps, less than 25 per cent. of the cheese factories of Canada, is that known as the "test" plan, or of basing values upon one milk constituent, viz., the fat. This system was advocated about the time the Babcock test for fat was brought to the attention of dairymen in 1890. This test was hailed with delight by Canadian factorymen, and it has undoubtedly been of great assistance in developing the dairy industry of Canada.

Referring to our table, we see that, as the percentage of fat in the milk increased, the yield of cheese per pound of fat in the milk decreased. On this point science and practice agreed. Science says that, as cheese is made from two milk constituents, fat and casein, one of these alone cannot be used as a basis for determining cheese production from milk with varying percentages of that constituent. In practice, we found this to be the case, hence we could not accept the "fat" theory and practice as a basis of settlement among patrons of cheeseries. We have maintained our position on this question during the past eighteen years.

The third system takes into account both fat and casein, but, as there was no short method of determining casein previous to 1907, we suggested the factor 2 as an addend to the fat percentage



"Jersey Jewels" in Their Island Home

Our Future Dairy Market.

There is an old "say," "Sufficient unto the day is the evil thereof." Still, it is wise sometimes to keep an eye on ahead and avoid snags.

"Tis the sunset of life gives me mystical lore, And coming events cast their shadow before," says the seer of old to Locheil. Probably the gold that tickled the seer's palm had more to do with making him "see things" than the sunset. One does not need to be a seer or prophet to come to the conclusion that we are upon the eve of a great change in the market for our future dairy produce. It is not very many years ago that the United States exported large quantities of dairy produce. This dwindled and finally ceased. Why? Because they had a better market at home. From exporting surplus dairy produce, their country has grown, until there is a real shortage for home consumption, and prices are styled "famine prices" by the consumer at present. Undoubtedly, in a very few years present prices will be considered cheap to what the consumer will be then paying.

From the "short" supply, the next stage is not enough to go round at any price. And that is a very short "lap," as consumers are increasing much faster than producers.

There is no doubt whatever that the United States will have to import dairy produce before long. Our best market for the product of our dairies will soon be our neighbors. The only point in doubt is how long will it be?

Tariff walls may stem the current for a time, but it is like damming a river with straw. The more water that is held back now, the greater the rush later. Our neighbors cannot produce enough for their own needs. If they keep up their tariff, prices will continue to mount, and consumers will rise like a mighty wave, and make a clean sweep of the straw dam (tariff).

Consumers will never stand for any length of time a tax that makes their food very dear and scarce. A tumbling of the tariff, as it affects food, is taking place in many protected countries, and the consumers of the United States are demanding reciprocity or lower tariff, especially as it affects food, not from any love for us, but for love of themselves. The hole left in the tariff wall whereby cream is able to squeeze through, shows us what we may expect when the wall is knocked down entirely or lowered. If the wall were kept up, then prices would rise, so that in a few years the Americans would pay for getting our produce over their wall, but they are not likely to do any such thing as that. It will be easier to knock the wall down than pay for getting over it. Our future market will be in the United States. The only question is, "In what time?"

Fears have been expressed that if we did not do this, that or the other thing, we would lose the Old Country market. The sooner we lose that market, the better; for, if we lose it, it will be because we have a better one nearer home. This continent will shortly need all the dairy produce we have. It is just as well to realize that fact now. There is no use continuing to spend money in cold storage on boats, warehouses, etc., when in a few years they will not be needed. Our export trade across the ocean will dwindle more quickly than that of our neighbors, because we have the increased demand from two countries on this side of the ocean, instead of one.

The boats of the future, instead of carrying our dairy produce in cold storage, will be carrying our dairymen across in their cabins and state-rooms, to "do" Europe, and be "done" by the Europeans.

Prices will soon be so high, cows will produce so largely, and be fed so cheaply, that dairymen will be able to make their "pile" in a few years. It should figure out about like this: How many years will it take a dairyman to make his "pile," with milk at \$2 per cwt. (it is over that in the States now); cows producing 12,000 to 15,000 pounds milk yearly; fed on silage, mangels, alfalfa, and a little meal; cost of milk less than 50 cents per cwt. for food fed. And should not the dairyman be better entitled to the good things of life, taking his wealth from the soil and air, producing more for the comfort of his fellow man, and not robbing anyone thereby? Is not such a man better entitled to a trip to Europe (or any other pleasure they prefer) than many that gain their wealth by robbing their fellow men under cover of Acts of Parliament? For the dairyman that continues to milk the 3,000-pound cow, feed her in the old-fashioned way, etc., no trip to Europe; but, after a life of toil, he will be laid away in a cheap coffin made out of cull lumber.

Yes, our dairy market of the future will be in the United States in time. The next question is, in what form will they want our dairy produce? Not likely as cheese, but milk and cream on the border counties, and butter, rather than cheese. We may look for a big change all round. It is

hardly wise for owners of cheese factories to spend much at this time, if, in the near future, the demand will be for butter, rather than cheese. GEO. RICE.

A very few minutes' bookkeeping per month might show a clear profit above cost of feed of forty dollars with some cows, only three dollars with others, and possibly no profit at all on one or two. It would not take long then to decide which to dispose of. Would it not be a sensible resolve to keep only such cows as will make good returns? Determine that your herd shall show an increase of forty per cent. in the milk yield inside of three years: you could easily gear the whole herd up another notch or two if some poor cows were beefed. Scores of dairymen who are now reaping large profits per cow date their success to the time when they commenced keeping milk and feed records of each cow separately. Blank forms are supplied free on application to the Dairy Commissioner, Ottawa. C. F. W.

POULTRY.

The New York State Hen.

"I'm getting tired of this business, and I think I'll buy a nice place in the country and start poultry farming," said a wealthy shirtwaist manufacturer to Supt. W. G. Krum, of the poultry plant at the New York State Agricultural College, Cornell University. "I've made money in the factory business, of course, but it's confining and unhealthy in the city, and I'm worried with the hands and all that sort of thing. Just look at the price of dressed poultry and of fresh eggs now, and we don't know hardly if they are fresh, even when we pay \$1.00 a dozen for 'em. There's good money in it, sure. Between now and spring I'll look around and read the thing up some more, so as to start in well posted." "Yes," observed Mr. Krum, "that looks straight and easy, but suppose we reason this thing out a little first." Now, Mr. Krum has a right to talk poultry.

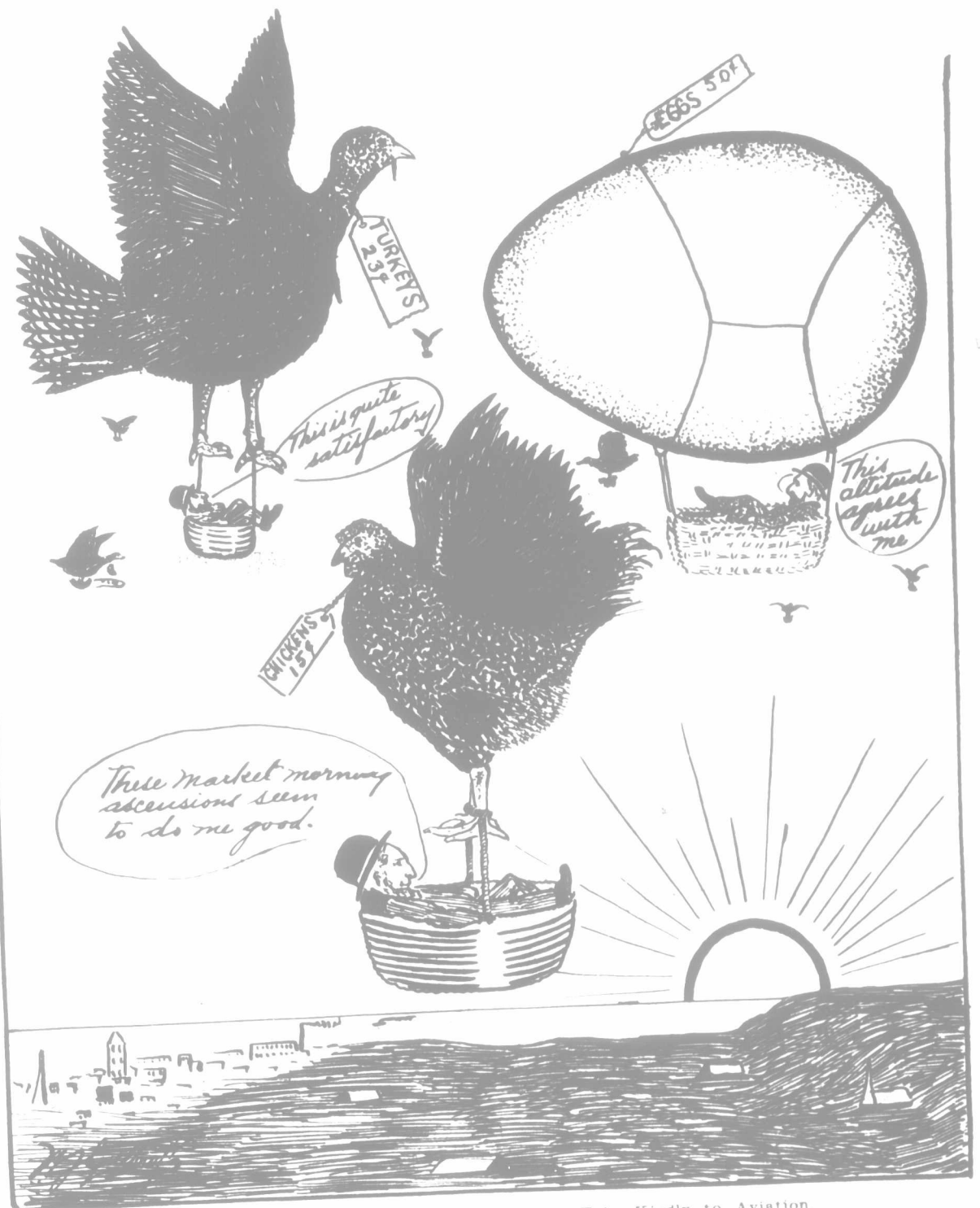
having made good at the industry as a practical proposition and otherwise, and he can reel off the facts of feeding and management rather faster than the ordinary mind can wind them in.

"Just for a change," he continued, "suppose I take over that factory of yours. I know nothing about making shirtwaists, but I've seen a lot of them on the ladies in the blissful summer time, and I can read up for a couple of months. I may probably change the office staff, and bring down 250 husky, healthy young men and women, so as to start fresh and strong. How long do you suppose I would make that shirtwaist business go?"

"Three months would likely see your finish," exploded the manufacturer.

"Exactly," replied the Poultry Superintendent. "To use the classic vocabulary of the campus, just about as long as it would require you to 'bust out' with the poultry plant. You have taken years to learn your trade, and it's vastly easier than poultry-rearing, because most of it is done by machinery, and when you put in the hales of material, you know precisely what's going to come out; but with birds it's altogether different, for you are dealing with living organisms having inherent variability, subject to internal and external parasites, and to scores of outward conditions modifying the results of breeding and feeding. Expecting one thing, you would get another, and probably jump at the conclusion that the whole business was bewildering lottery, and quit in disgust. It exacts close personal attention to every detail, and must be learned gradually by experience."

In a nutshell, the foregoing explains why so many townmen launching into commercial poultry-keeping make a failure, and why, even on the farm, it is not made the success that it should be. Individually, folks are using far more eggs and poultry flesh than ever, and in a State like New York, with over 9,000,000 people, mostly living in cities and towns, no wonder poultry-farming looks attractive. Only a small fraction of the eggs used are produced in the State. The ordinary store egg, alleged at the counter to be "fresh," has a disquieting tendency to lapse into a state of flux when pouched, or even fried on



Poultry Aeronautics.—The Poultrymen Take Kindly to Aviation

both sides. Cautious housewives will not run the risk of odorous complications by ordering them to the table in the shell. The papers have teemed with tales of "stales," and "spots," "desiccated" eggs and "rots" by the tank load, finding their way into delectable confections to humor the palate and nourish the jaded people of the strenuous life. Small wonder they are disturbed, and demand something better, which a determined effort will be made to supply.

The tendency is toward egg-producing plants, and the White Leghorn in many quarters has the call, just as the Holstein cow in the dairy sections. In New York City a large white egg sells for more money per dozen than a colored egg. Boston, Mass., pays a premium for a nice brown egg, but not as much by several cents as New York for the white-shelled product. Incubators are in very general use. At an Ontario County plant, a "Farmer's Advocate" editor saw over a dozen ready for operation in the concrete basement, one of them a seven-compartment machine, requiring 600 eggs each, or 4,200 for the hatch.

POULTRY COURSES AT CORNELL.

At the State College of Agriculture, 104 persons are taking the regular and 56 the winter poultry course. Scores have been turned away for lack of room, but the authorities are fully seized of the seriousness of the situation, and have planned a \$90,000 building and plant. Poultry survey work, after the plan of orchard surveys, and a State poultry-breeding station, are contemplated. There were ten women in the twelve-weeks' course. Each student has a pen of several dozen birds to feed and manage entirely. Accurate account has to be kept of the food used daily through the whole period, eggs collected, and other details recorded. Another small pen of birds must be fattened for a short period, and all details and results shown. Incubators of different makes have to be taken apart, put together, and tested, until the students understand them thoroughly enough to actually run a regular hatch for the 21 days. The brooding is similarly covered, and the running of gasoline engines, bone cutters, self-feeders, and other apparatus. Every phase of the subject is embraced in lectures that fill in the time from daylight till dark. And if the students do not acquire a good working knowledge of the poultry business, it is their own lookout. The pens were observed to be kept clean, and deeply littered with straw to keep the laying hens busy hustling for the mixed-grain feed of corn, wheat, oats and buckwheat. The jaying mash is fed dry, and includes, among other meals and meat scrap, a proportion of ground alfalfa hay. Fattening birds receive wet mash and more meat scraps. "Cornell eggs" have been selling from the plant at over 50 cents a dozen. It was stated that most of the eggs were laid before 10 o'clock a. m. Large eggs from yearling hens, mated with mature males, are selected for hatching purposes.

In the experience of the College poultry plant, it was found that from flocks of hens confined on bare yards, only 40 chickens from 100 eggs were hatched. Soon after the fowls were taken from these yards and placed under free-range conditions, the hatching quality so improved that 70 chicks from 100 eggs were obtained, and the increased vigor of the chickens so produced was even more marked. The conclusion was reached that, without a few pens kept on free range, the flocks could not be kept up without buying fresh breeding stock each year. After mating, some eggs were found to be fertile in four or five days, and in nine days 80 per cent. would hatch. The last fertile egg was found in 19 days after the male was removed from the flock. Supt. Krum does not advise trying to grade up an ordinary farm flock. Life is too short. The better plan is to start with a few pure birds or settings of pure-bred eggs, and keep the new foundation flock separate at mating time. The lectures by Prof.

Jas. E. Rice, who holds the chief chair in Poultry Husbandry, are very fine, disclosing a large fund of lore in theory and practice, presented with a lucidity and range of vocabulary, and a discriminating nicety of expression, that makes the talk an intellectual treat, and an education in the use of platform English.

GARDEN & ORCHARD.

Montreal Melon Growing.

Without stopping to make any remarks about the famous Montreal melon, I will at once give in brief what we consider the best method in the growing of this crop.

Three or four seeds are planted into 3½-inch pots about the 25th of March. These pots are well watered, and placed into a good hotbed or greenhouse, with a temperature of about 65 degrees. After germination is completed, the temperature should run around 60 degrees, so as not to force the plants too much. If in the hotbed, close attention should be paid to ventilation, and the plants should have full benefit of the sun. The plants are thinned to two plants to a pot after well established, leaving the strongest plants.

As soon as the ground is fit, during the latter part of April the field is prepared by thorough deep cultivation, it having been well manured the fall before. Rows are run out with a plow ten feet apart, throwing two heavy furrows each way, and loosening the bottom soil again between these furrows with the third furrow. This loose soil may be thrown out with the shovel, and the trench filled with good hot manure well tramped into the furrow. The bulk of manure is usually 6 inches deep and 1 foot wide. The plow is used to cover the manure, ridging the soil to the center, leaving the dead furrow between the 10-foot rows. The frames are then placed at once in place over these rows, and covered tightly. Towards the last of the first week in May, these frames are ready to receive the plants, which are spaced 18 inches apart, two pots to a light right over the row of manure. After a week or ten days, all of the plants but one in a place are cut off, and but eight plants are allowed to remain to a frame. If handled in this way from pots, the plants will suffer little check from transplanting. There is great advantage in getting the beds made up early, as this warms the soil, which is the most important thing in the early spring.

The frames require careful handling to keep the plants well ventilated, and yet not chill them. The plants should be occasionally watered, although every advantage should be taken of allowing rains to do this, as they do much better from being watered naturally than by artificial means. The ground should be given frequent shallow cultivation with the hoe to keep down all weeds and prevent evaporation.

Late in June the vines will have filled the frames, and should be lifted to allow the vines to grow out under the frame. Later on, about the middle of July, the frames may be removed altogether.

The ground should be rich, so that the plants may make continuous growth, without check. Plants handled in this way should give their first ripe fruit the third week in July, when Montreal melons are worth about \$12 per dozen.

About 300 frames, 12 x 6 feet, with four 3 x 6-foot sashes, are required per acre. These sashes and frames cost about \$13 complete, making the initial cost of the frames about \$3,900 per acre. Each frame should produce ten good marketable melons, which, on an average, should bring about 75 cents apiece, or equal to \$7.50 per frame, or \$2,250 per acre. The cost of handling these frames should not exceed \$500 per acre. Allowing 10 per cent. for wear and general deprecia-

tion in the frames, or \$390 per year, we still have a profit of \$1,250 per acre.

After the melons become the size of a coconut, they are turned every few days to admit of perfect development, care being taken not to injure the vine. Or they may be placed on three small stones to permit of a ready circulation of air around the plant.

The best size for market is from eight to twelve pounds apiece, although sometimes they are grown to weigh sixteen to eighteen pounds each. It is not wise for one without experience to start melon-growing on a large scale, as these and many more details that go to make up successful melon-growing in this country can only be fully mastered by experience, in the practical handling of the crop. Thirteen 6 x 12-foot frames grown here last year returned \$119.11, or \$9.16 per frame, which would total \$2,748 per acre.

W. S. BLAIR

Pointers on Vegetable-growing.

At the annual meeting of the Quebec Vegetable growers' Association, a brief notice of which appeared in our last issue, the president, Paul Watiez, presented a vigorous address, in which he referred to the advisability of securing legislation regulating the weight of vegetables sold in bags, so that, no matter where in Canada a bag of potatoes, for instance, is purchased, the consumer will know what the bag should contain. At present we have a law fixing the weight at 80 pounds for this vegetable, whereas in Ontario 90 pounds constitutes a bag. The 80-pound bag is more desirable, as it is impossible to put 90 pounds into the flour bag, which is the container usually used for handling potatoes. The weights per bushel for all the root vegetable crops is now legally 60 pounds, whereas a measured bushel of turnips will not weigh more than 45 pounds, unless carefully packed into the measure, and carrots and beets about 50 pounds.

The Association conducted fertilizer experiments at sixteen different points during the summer, with different grades of home-mixed fertilizers, and it was hoped that similar work would be continued. This and similar problems could be done, resulting in great good to the growers.

Reference was made to the summer excursion to Macdonald College. The president thought they were fortunate in having such an institution in the Province, and hoped that the growers would plan on sending their boys to this institution.

An attempt was made to increase interest in snowing vegetables at exhibitions, and for this purpose two silver cups were given for the best display of vegetables at the Laval and Hochelaga exhibitions.

MARKET ACCOMMODATION IMPROVABLE.

The market accommodations in Montreal were not all that could be desired. More room should be available. At present the market was too congested, and growers were not able to display their products to good advantage. To get a good stand on the market made it necessary for those at a distance to start very early in the morning, and even then the near-by grower generally got there first. There were no facilities on crowded market days for easy traffic through the streets, which condition the Association should aim to change, if possible.

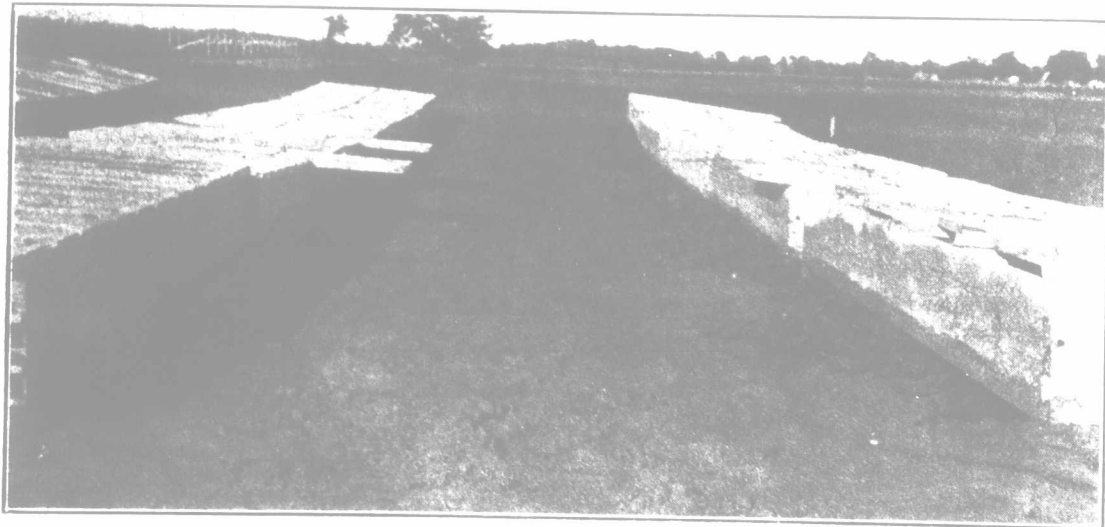
"Melon Wilt" was the subject of an address by Dr. Harrison. He outlined the symptoms of this disease, and methods for its control. Like many other similar diseases, prevention was the only cure. By burning all diseased plants, it would in a large measure be prevented.

TOMATO-GROWING.

L. V. Parent, Grand Ligne, Que., gave an interesting paper on tomato-growing. He pointed out the importance of giving more care to the development of plants for setting out. This may mean more expense at the start, but, for early crop, it much more than pays for the extra expense in the earlier fruit produced. He advised the use of three-inch flower pots or strawberry boxes. He also referred to the advisability of hardening off the plants, getting them used to wind and outside temperature, as in this way they suffer much less check in transplanting. He outlined the method followed in growing plants to a single stem. This may not be advisable on a large scale, but could be practiced to advantage for early fruit, and to secure fruit of first quality. The cost of this method was its great drawback.

DISEASES OF VEGETABLES.

Prof. Wm. Lochhead spoke on "Diseases of Vegetables," referring specially to the club-root, potato scab, early and late blight, and celery rust. Prevention is the best means of control. Diseased refuse should be burnt or buried deeply. To dump diseased material on the farm was a great mistake. Weeds are often responsible for carrying over certain diseases, and all fence corners or around buildings should be kept free from such weed plants.



Melon Frames at Macdonald College.

Lifted and blocked up at the corners, which allows vines to grow out under the frame.

All club-rooted plants should be burnt, and, if a field is infested, it should not be planted again to cabbage, cauliflower or turnips for some years. Heavy liming, 75 bushels per acre, gave good results in some cases in checking the disease. Diseased plants should not be fed to stock, as it will be spread again through the manure.

The germ of potato scab does not thrive well on acid soils, and is worst where soils are alkaline. Ashes, lime or stable manure generally favor scab. A clover sod will generally produce clean tubers. Rotation of crops is always advisable. Avoid scabby seed, and treat all diseased tubers with formaldehyde solution. For the blights, nothing yet discovered can take the place of Bordeaux. This, if properly applied, and the work done thoroughly, will prevent blight. Thoroughness, and proper mixing of the materials, was all-important.

INSECTS ATTACKING VEGETABLES.

J. M. Swaine, Macdonald College, spoke on "Insects Attacking Vegetables," such as the flea-beetles, potato-beetle, squash bug, cutworm, etc. For the cutworm, he recommended 1 pound Paris green to 40 pounds of bran. The bran is dampened, and the Paris green well mixed into it, and this poisoned bran is well scattered around the plant. They will feed on this, in preference to the plants. For the cucumber beetle, he advised the use of Bordeaux as a repellent spray; it had proved satisfactory. For the potato beetle, he thought one pound Paris green to 50 gallons of water plenty strong. The reason why better results are not obtained, and stronger than this quantity used, is that the Paris green is not kept well agitated, and not thoroughly applied.

Emile Le Plante, St. Jerome, Que., gave an inspiring address on the value of such organizations as this. "The sections making progress," he said, "are co-operating as you are, aiming to make improvement all along the line. There is not much difficulty in finding those who will criticize the work you are doing, but the good you are doing counterbalances all such criticism. Secure more agricultural papers. Keep adding to your library. Procure the best books you can get, and study them, and give the boys on the farm a chance to get the latest information possible." He referred to the growing of cauliflower from observations made in some of the best cauliflower districts around New York. His address was right to the point, and gave many valuable hints. The Government of Quebec is fortunate in having in their service Mr. La Plante, who is a well-informed and interesting speaker.

TOMATOES UNDER GLASS.

"Tomato-growing Under Glass," was the subject of an address by Prof. Blair, who pointed out that it was doubtful whether profitable tomato crops could be secured during January and February. Experiments conducted would indicate that plants started July 1st, and benched in August, which would finish their crop early in January, followed by a second crop started the last of October, and benched in January, which would give fruit during latter part of March, April and May, were the most profitable.

Onion-growing was discussed by Wm. C. Dreber, of Macdonald College, who pointed out the importance of making better use of the hand wheel-hoe. This tool is not used to any extent by onion-growers, and, if they once adopted it, they would find the cost of growing this crop greatly lessened. He also advised the use of the slatted crate for the proper curing of onions. Onions, as a rule, are stored in too great a bulk after taken from the field, and are liable to heat and grow, as a result. The crate is convenient for handling, and through them the crop can be handled more economically.

ASPARAGUS.

"Asparagus-growing" was treated by Stanton Jack, of Chateaugay Basin. He advised the use of one-year-old plants. Too much fertilizer could hardly be used, and this should be applied in the spring and early summer, after the cutting had finished. During August and September was when extra care should be given, for at this time the plants were storing up energy and food for the next spring's crop. The roots should be given lots of space; six feet between the rows, and 18 inches apart in the row, was not too much.

The meeting continued to a late hour, and all expressed themselves as well pleased with the meeting. Thanks were expressed to Prof. Blair and others from Macdonald College for interest in their behalf.

Robert Shepherd, of Parkside, Aston, Preston Brook, England, a subscriber to "The Farmer's Advocate," was winner in the Royal Prize-farm contest in the large arable class for this last year. His farms consist of 420 acres, although he began in a small way with about 120 acres all of twenty-two years ago.

Demonstrate Ontario's Apple-growing Capabilities.

Editor "The Farmer's Advocate":

The apple-growers of Ontario should seize the opportunity now offered them of holding a National Apple Show at Toronto next fall.

One of the developments brought about through our short crop of apples has been the increased offerings to our consumers of high-grade Ontario apples in boxes. Heretofore, our better grades of apples went to the Old Country. We have wrapped in tissue paper and tiered in boxes our choicest apples, and been pleased when they sold in the Old Country for from 6s. to 10s. per box. This year they are selling here for that much. If our short crop will make our Ontario consumer better acquainted with our high-grade apples, we apple-growers will never regret it.

This season we have United States boxed apples offered in our markets. We have seen an apple inferior to many of our Ontario apples selling to Ontario consumers for more money than the home product, and mainly because offered attractively. We apple-growers have neglected to cultivate our home markets with high-quality apples, and the demand is being supplied with high-priced foreign oranges and apples.

The apple should be more largely filling the place now filled by oranges. There is no denying the fact that the box is the only package in which a fancy apple should be offered to the consumer. Canadian consumers, as well as foreign, like an apple clean and without a bruise, and many are willing to pay for it; and the box, assisted by paper wrappings, can carry such apples.

Our Governments cannot do a better act to assist the apple industry than in furthering the National Apple Show at Toronto next fall. It will educate our growers to raise cleaner apples and pack them better, and it will also educate our consumer to appreciate a good apple, attractively offered him.

J. A. WEBSTER.
Elgin Co., Ont.

United States Standards for Paris Green and Lead Arsenate.

By "The Insecticide Act of 1910," which became effective in the United States on the first of January, 1911, Paris green is considered adulterated if it does not contain at least 50 per cent. of arsenious oxide; on the other hand, it must not contain arsenic in water-soluble forms equivalent to more than 3½ per cent. of arsenious oxide, and no substance may be mixed with it so as to lower its strength. Lead arsenate is counted adulterated if it contains more than 50 per cent. of water, or if its total arsenic is equivalent to less than 12½ per cent. of arsenic oxide, or if it contains arsenic in water-soluble forms equivalent to more than .75 of a per cent. of arsenic oxide, or if any substance is mixed with it so as to lower its strength. If lead arsenate contains more than 50 per cent. of water, it must be labelled "lead arsenate and water," and the extra percentage of water must be plainly stated. Any other insecticide or fungicide is considered adulterated if its strength or purity fall below the standard under which it is sold, or if any substance has been partially or wholly substituted for it, or if any valuable ingredient has even been partially removed, or if it is intended to be used on vegetation, and is injurious to vegetation. If the designation of an article imports the presence in it of a certain substance, that substance must be present in the customary amount.

Any insecticide or fungicide is misbranded if the label bear any statement, design or device that is false or misleading in any particular, either as to the character of the article or as to the place of manufacture. And the term "label" is defined so as to include any circulars, etc., that are packed with the article or referred to either on the label or on the circulars accompanying the article. If the contents are stated in terms of weight or measure, they must be correctly stated.

Holdings of Apples.

Of the total holdings of apples in storage, both box and barrel, in the United States and Canada, the States of New York and Illinois hold almost half of the total, says P. W. Hodgetts, Director of the Fruit Branch, Department of Agriculture, Toronto. Another quarter of the total, or about 900,000 barrels, is held in Missouri, California, Ohio, Massachusetts and Washington, these States standing in importance in the order named.

A close calculation indicates that present holdings are short of the same time last year by nearly 400,000 barrels, or about ten per cent. The shortage is chiefly in the stocks in Canada and Nova Scotia, the holdings in the United States being about the same or a little less than a year ago.

The figures include both box and barrel stock. The box holdings are about double what they were at this time last year, the total number of boxes being about 5,500,000.

THE FARM BULLETIN.

Programme of the Ottawa Live-stock Show.

The following very interesting programme of judging and addresses has been arranged for the coming Eastern Show:

TUESDAY, JANUARY 17th.

- 8.00 a.m.—Judging Poultry.
- 1.30 p.m.—Judging Beef Cattle, Sheep, Bacon Hogs, Poultry.
- 4.30 p.m.—Judging Horses.
- 4.00 p.m.—Address: "Paying for Milk by Cheese Factories, According to the Percentage of Butter-fat and Casein in the Milk." By H. H. Dean, Professor of Dairy Husbandry, O. A. C., Guelph.
- 4.30 p.m.—Address: "The Care of Milk on the Farm." (Illustrated by stereopticon views.) By Geo. H. Barr, Chief of Dairy Branch, Ottawa.
- 7.30 p.m.—Judging Horses.
- 8.15 p.m.—Judging Beef Cattle.
- 9.15 p.m.—Judging Horses.

WEDNESDAY, JANUARY 18th.

- 8.30 a.m.—Judging Poultry.
- 9.30 a.m.—Judging Sheep, Swine, Seeds, Horses.
- 10.30 a.m.—Address: "Classification of Horses at Shows." By Wm. Smith, President Ontario Horse-breeders' Association, Columbus, Ont. Discussion by M. Cumming, B.A., B.S.A., Principal, College of Agriculture, Truro, N. S.
- 11.00 a.m.—Address: "Training Horses." By F. C. Grenside, V.S., Guelph.
- 11.30 a.m.—Address: "Why not Horse-raising on the Same Business Basis as Dairying?" By M. Cumming, B.A., B.S.A., Principal, College of Agriculture, Truro, N.S.
- 1.30 p.m.—Judging Horses.
- 2.30 p.m.—Address: "Pastures and Supplementary Fodder Crops." By C. A. Zavitz, Professor of Field Husbandry, O.A.C., Guelph; C. R. Klinck, B.S.A., Guelph.
- 3.00 p.m.—Address: "Growing Roots." By Thos. McMillan, Seaforth.
- 3.30 p.m.—Address: "Storage and Feeding of Roots." By J. H. Grisdale, Dominion Agriculturist, Experimental Farm, Ottawa.
- 4.00 p.m.—Address: "Production of Eggs." By W. R. Graham, Professor of Poultry Husbandry, O. A. C., Guelph.
- 4.30 p.m.—Address: "Feeding and Selling Poultry." By F. C. Elford, Manager Poultry Department, Macdonald College, Que.
- 8.00 p.m.—Public Meeting will be held in the lecture hall, at which prominent public men will deliver addresses, and a musical programme will be rendered.

THURSDAY, JANUARY 19th.

- 9.30 a.m.—Judging Beef Cattle.
- 10.30 a.m.—Address: "Beef Cattle Industry in Ontario." By Thos. McMillan, Seaforth. Discussion by Robert Miller, Stouffville.
- 11.00 a.m.—Address: "Underdraining" (illustrated by stereopticon views.) By W. H. Day, Professor of Physics, O. A. C., Guelph.
- 1.30 p.m.—Judging Horses.
- 1.30 p.m.—Auction Sale of Seed Grain.
- 2.30 p.m.—Addresses: "Corn." (a) "The Seed," by E. D. Eddy, B. S. A., Seed Department, Ottawa; (b) "Seeding, Cultivation, Harvesting and Preservation," by John Fixter, Farm Superintendent, Macdonald College, Que.; (c) "Feeding," by J. H. Grisdale, Dominion Agriculturist, Experimental Farm, Ottawa.
- 8.00 p.m.—Judging Horses.
- 8.00 p.m.—Annual Meeting Poultry Association of Eastern Ontario.

FRIDAY, JANUARY 20th.

- 10.00 a.m.—Sale of Cattle, Sheep and Swine Carcasses, and Dressed Poultry.
- 10.30 a.m.—Judging Horses.
- 1.30 p.m.—Auction Sale of Pure-bred Cattle.

Railway Statistics.

During 1910 an addition of 627 miles was made to the railway mileage of Canada, but some 4,500 miles were in June last "under construction." Railways were aided to the extent of \$1,789,723 in subsidies during the year, bringing up the total from the Dominion to \$146,932,180; from the Provinces, \$35,837,060; municipalities, \$17,903,823. In addition, 55,292,321 acres of land were granted, of which 32,040,378 were alienated. The outstanding capital liability of the roads was equal to \$52,361 per mile. The increase of service was 3,211,267 passengers, and 7,640,608 tons of freight. Canada has the largest average passenger and freight haul in the world. Gross earnings and operating expenses both increased, but the net earnings were \$53,550,777, or 32.3 per cent. over 1909.

Electric-railway mileage increased from 989 in 1909, to 1,049 in 1910 with a net increase of

\$5,383,276 in earnings, after deducting \$2,953,759 for taxes and interest on funded debt. These roads carried 360,964,876 passengers and 852,294 tons of freight; employees, 11,390; wages, \$6,316,777; persons killed, 95; and injured, 2,538.

Farmers' Week at Pennsylvania Agricultural College.

INTERESTING LIVE-STOCK EXPERIMENTS.

From the 19th to the 24th of December, 1910, the Commonwealth founded by William Penn, devoted a considerable sum of money, and much valuable time and effort of those connected with the State College, to entertain and instruct the five hundred farmers in attendance at what is known as "Farmers' Week." We never saw more enthusiastic farmers, nor many more anxious to obtain information. We also found the Pennsylvania agriculturists and their leading men in connection with public-school work very eager for information about what is being done for the advancement of agricultural education "up in Canada." One of the State Superintendents of Education was present to get pointers on a scheme he has in view, of placing scales and Babcock testers in the hands of the older pupils of every school in his jurisdiction, and have them weigh and test the milk from at least one cow for a year, and make a report on this to the teacher. It is proposed to give prizes for the best records.

and for the one who is able to draw the best conclusions from the work done. He was very much interested and pleased with the Ontario system of having an agricultural representative in a county to direct agricultural thought and practice. A representative of one of the Philadelphia daily and weekly papers was present during the week, and sent a daily account of the proceedings to his paper. There may have been other newspaper representatives present whom I did not meet.

The live-stock department of the College has been organized but recently, with a man from Missouri in charge, and he is certainly "going some." His cattle-feeding experiments, comparing cattle housed with those running out of doors, having an open shed for cover, are very interesting. The steers are grade Angus, divided into lots of six or eight in each bunch, and those outside are doing as well as those stabled. In the dairy stables they have a similar experiment with milk cows, and the results from cows running in an open shed are nearly equal to those in good stabling. It looks as if we should have to revise our notions about stabling for both steers and cows.

Another interesting experiment with horses is in progress. Last fall, about thirty horses were bought on the Chicago market at a cost of \$250 each, delivered at State College, Pa. These horses are grade Belgians and Percherons. They are used for class-room instruction work during the term, and are being fed on three

different rations to compare gain in live weight and effect upon general thrift. In the spring these horses will be sold to Pennsylvania farmers at a price of about \$300 each, but a team fed on each of the rations will be kept on the College farm to work, in order to see the after-effects of the winter feeding.

The professor in charge of these feeding experiments said they expected to pay all expenses out of the proceeds of sale of stock, and have the manure as "velvet," together with a cash surplus. Last year he cleared over \$800 on the steer-feeding experiments.

Space forbids any detailed description of the work taken up during the "Week." In a word, those attending are divided into five sections for two periods in the forenoon (8.30 to 10 o'clock, and 10.15 to 11.45), and two in the afternoon (2 to 3.30, and 3.45 to 5.15), while all attend a joint meeting at 8 o'clock in the evening. I was told that many farmers are returning year after year. I talked with some who were back for the second year, and they were most enthusiastic over the benefits to be derived from a week spent at the State College. A very hopeful sign was the large number of young men in attendance. At some of these meetings in other places the attendance is largely made up of older men, the young ones having left the farm. If this hopeful farm spirit prevails generally among young men throughout the State, it is an indication of future greatness for Pennsylvania farmers. H. H. D.



The Tale of the Pioneers



The history of the pioneer farmer is largely unwritten, except in the pastures clothed with flocks, the green meadows, and the waving, swaying grain fields, as they bow their countless golden heads beneath the midsummer sun.

The roads, bridges, schools, churches, and even the cities, are but the outgrowth of the labor of the pioneer farmer.

Your eye wanders over a June landscape in this beautiful Province of Ontario, dotted with homes—sweet, peaceful homes, surrounded with comforts and conveniences from the sweet blossoms of spring until the gorgeous fruits of autumn, when the farmer receives fresh from his Creator his supplies, while his wife, rejoicing with him, prepares and spreads them upon the family board. They with bowed heads and grateful hearts adore and praise the Hand that feeds them.

About the year 1820 my father left the heather hills of Scotland, where he herded the peaceful sheep. What he could have seen in the future of the unbroken forests of London Township is hard to understand. However, he chose it as his future home. He went back to the borders of Scotland, and remained about a year. He married, and returned again to the forests of London Township, accompanied by a large number of border families. There were six families of Beatties, four of Scotts, two of Telfers, two of Robsons, two of Taylors, one Ord, Charlton, Hedley, Whillians and Waugh. At that time it took more weeks than it now takes days to cross the ocean, with few of the comforts that are found on the vessels of to-day. I never heard whether the many who came with him were disappointed; however, no one went back. How blessed have been these twenty-one families with "health, peace and sweet content," for the crown deeds are still in the hands of all those families, except Ord and Waugh. These families did not suffer the isolation and lonesomeness of even Western pioneer life, but privation was common to all.

Happy were they who could gather their first grain, handful by handful, from among the stumps. There were no floors to thresh it on, no place to store it, nor mill to clean or grind it. After mills were built, men carried wheat from five to fifteen miles on their backs to be ground.

Soups were largely used, grain and vegetables both being made palatable and nutritious. There were many devices by which the coarser grains, such as peas and barley, could be used without grinding.

A chain was hung in the chimney place on which to hang kettles for boiling. A later device was the "crane," which swung back and forwards to hook kettles onto. The pan for baking bread was rather flat, with a close-fitting lid. A later improvement was the tin oven, which was set on live coals in front of the fire.

The farmer was also getting improvements slowly. The first drag or harrow was a good implement for its purpose, as it served on freshly-cleared land as both harrow and plow. It was made of two rather heavy poles, like the letter A, with about a dozen heavy iron teeth, probably an inch square, and was drawn by the point, so it would easily pass stumps and snags.

Mowing hay with the scythe, tedding with a fork, raking and forking by hand, was slow and laborious work. The cradle was a great advance over the sickle. The cradler and binder were on their mettle from morning till night, with no light spots. The men of to-day can look to far more rapid and perfect improvements in tilling, harvesting and threshing of the last twenty-five or thirty years.

As families and clearings increased in size, larger houses and barns were called for.

The big raisings were usually a jolly affair. Peeled basswood skids, well soaped, were used for running logs up onto the buildings. Even large logs sometimes went a little too fast for safety where there was an abundance of whiskey. The social was a big feature, with women, old and young, present. The dinner hour was usually moderately quiet, but supper was often marred by troublesome guests.

Allow me to insist that a raising was a tame affair compared with a logging-bee. Over sixty years ago, I saw thirteen acres logged in one day. There were twelve yoke of oxen. To each team were five men with handspikes, their sleeves rolled up to their armpits. The driver had a blacksnake whip, with a new craker for this occasion. Each team took a strip one heap wide. It was a race to see who would be on the other side first, and, like the Scotchman at Burns' Haggis, "Deil tak' the hin' most, on they drive." The log-heap, if possible, was placed in a hollow, and in the center, so they brought a log both ways. Talk about your slow oxen! Say, those oxen seemed to comprehend the situation in a moment, for the logs fairly jumped over the roots. As the driver picks up the chain, the oxen turn half round, and as soon as they heard the click of the chain-hook they were ready to spring. When hitched to a monster log, the driver would put a half roll on his hatch, while two men dropped a skid. The whip swung in the air with a snap, and a shout told the oxen what was expected of them. They were game, if it even just came half its length. Remember, this whip seldom touched the oxen, for its snags, with the rattling shout of the driver, would inspire effort. How quick the handspikes dropped, and lighter stuff rattled on the heap until the next log came in. But what a joyous shout when the first set were finished. There was no lack of inspiration in either men or team, but no whiskey was at this logging.

The Rev. Jas. Skinner, from Dundee, Scotland, had taken charge of the two churches, English Settlement, and Proof Line, about the year 1835. He, with a number of his congregation, viewed the drink habit as a great evil, since it endangered life, and was a menace to peace and common decency, and considered it an awful wickedness to drink that which would de throne the reason, the highest gift of God to man. Should he not tremble, lest his reason should never return? Thus sprang up the first temperance movement at English Settlement, which has always been maintained and extended. The minister had the fullest co-operation of his people. In almost every home the family altar was set up. When the big hall Bible was brought down, with an accompanying Bible for each one who could read, a hush of quiet prevailed as they gathered around the table. How reverently this service was approached. My father's words in opening were, "Let us compose our hearts to sing God's praise."

Mr. Skinner's mode of travelling was in the saddle. He rode through the trackless forests of Middlesex, where the bay horse and rider in black, with light-draw leggings, were everywhere, fording streams, swamps and bogs. Once "Billy" floundered in a bog and threw his rider off. His clothes were in such a condition he had to borrow a suit from a farmer to preach in. He remained with his two charges about thirty years, where he died, and was buried among the people who loved and revered him.

Horseback was about the only mode of conveyance, and eggs, butter and other produce were thus carried to London, then called "The Forks," named from the junction of the North and South branches of the River Thames. Wm. Simpson walked to London, carrying butter and eggs fifteen miles. He returned at night with a load consisting of nails, putty and glass for his new house. There was eight inches of soft, slushy snow. Again, Mr. Johnston and his son Stephen carried bars of iron from London, twenty-three miles, to their home on the townline between Williams and Lobo; then three miles to a blacksmith to get the iron made into drag-teeth.

As clearings and crops increased, roads and markets became two great problems. Nothing would bring cash but black salts. Grain and pork could be sold at Sarnia. A straight road from London to Sarnia was surveyed, and most of it planked. The courage and enterprise certainly deserves praise. But their judgment may well be questioned, for plank was found to be much inferior to the old corduroy roads, which could be made fairly passable with a brush and earth covering; but the planks curled up like troughs, got loose, and made the worst possible travelling for horse and wagon.

The dress of the pioneer was a matter of real

concern; perhaps shoes the most serious, for wet feet was the rule, rather than the exception. Flax was grown and made into rude cloth. It took much labor to prepare it. Cotton was out of the question, as it took a bushel of wheat to buy one yard. The dresses were simple, and more a matter of comfort than fashion.

Our schoolhouse was built of heavy logs, about seven feet high, and twenty-five by thirty-five feet. The walls were chinked with split basswood and dabbled with clay. The roof was covered with clapboards. The fireplace was open on both sides and front. The back-log was often from twenty inches to two feet and six feet long, which gave great heat to the side next the fire in the coldest day. The chimney was made of split basswood, dabbled with clay. The door was undressed basswood. The two battens extended out and formed the upper part of the hinge. There was no latchstring, but a hole admitted the little fingers to raise the latch. Only the three R's were taught, and spelling; no grammar nor geography. The teacher kept a large "blue beech," but seldom used it, as he was not severe. He was a kind old master. He had a nice, sharp penknife, and the call came often. "Please, master, mend my pen." Pens were made from goose-quills. This simple education had this to commend it: it was all useful to the pupils. This rude log school was the first public building, and was also used as a church.

We have already said that flax was hard to manufacture, and cotton unprocurable, so wool we must have. The hungry howl of the wolf told that sheep husbandry was hazardous. Father was a real shepherd, and must have sheep. He built a long shed, open to the south, and fenced a yard with heavy poles. One morning he turned them out, and sat down to breakfast. The rapid ringing of the sheep-bell was a danger signal. Hastening out, he met the alarmed flock, with one short, and following the direction from which the sheep came, found in the edge of the woods a wolf sucking the blood from the throat of a good ewe. A rush at the wolf rescued the ewe. She rose, and staggered home with her tongue hanging out. Father cut her throat, but very little blood came, as the wolf had got most of it. One night he was awakened by the rapid ringing of the sheep-bell round and round the house. Hurrying out, the sheep in an instant surged around him. The wolf dropped his chase, then the sheep were put in the pen minus a few mouthfuls of wool. Father started for the cows rather late one night, and also in the wrong direction. After going some distance, by careful listening, he heard the bell coming home. Coming back in the dim twilight, a wolf came on the scene, apparently desirous of making a friend of old Pete, a rough, bristly-faced collie dog. But Pete treated him as a false friend, and kept close to father's feet. Another wolf made his appearance; then the first one shot after Pete. He "cut" for home, with two wolves at his heels. About this time father began to have some concern for his own safety, as well as that of Pete. Whether Pete was concerned for the safety of his master, or not, we do not know, but he kept up a vigorous barking until he met father some distance from the house. The wolves seldom attacked the cattle, but I remember once of a heifer having her ham eaten out of the skin.

The bear was less destructive than the wolf, but stayed longer with us, and was somewhat partial to pork. Pigs were plentiful in the woods in beech-nut time, and the bear may have been the unknown cause of numbers of pigs never returning.

My younger brother, Andrew, and John Simpson were going through the woods accompanied by our old coon-dog, Toss. The dog started after a bear, and forced him up a big oak tree to a thick limb about thirty feet from the ground that ran straight out, then turned up; on this he sat crosswise, like a hen on a roost. The two boys ran back to Simpson's for help. Mr. Simpson seized his rifle, and called the two Pringles, McNeil, and Mr. Garden. The weapons consisted of one rifle, two shotguns and a number of axes. Three men took aim at short range and fired at once, but the bear started to climb, and got to the very top, and kept moving about. They took another shot with the rifle. He still kept moving about, and his groans grew louder, until at last he lost his hold and fell to the ground with a terrible thud. He landed on Pringle's dog. They both died without a kick. The boys got about eight dollars for the skin and grease. When the skin was removed, Toss's teeth-marks on the hind legs showed plainly why he went up the tree and stayed there until the gunners came. Toss also had a few scratches, and one very deep one on the back behind the shoulder.

The two boys became renowned as bold hunters of large game. It was never explained how two boys could run for help quicker than one.

A ROY OF THE PIONEER DAYS.

The New Brunswick Provincial Exhibition this year will be held at Fredericton, September 16th to 23rd.

Facts About Beekeeping in Ontario

From an enclosure card, distributed from the office of the Provincial Apiarist for Ontario, we quote these interesting particulars:

Ontario has 5,000 beekeepers.
Ontario has 100,000 hives of bees.
The Ontario honey crop for 1910 is 5,000,000 pounds.

It is worth, at lowest prices, half a million dollars.

This is not a large crop: it is less than last year by 50 tons.

ARE YOU A BEEKEEPER?

Have you got your share of the 2,500 tons? Why not save the waste honey in your neighborhood?

The Ontario Government spends \$5,000 annually for the honey industry.

This brings to every Ontario beekeeper the following advantages, to be had on application:

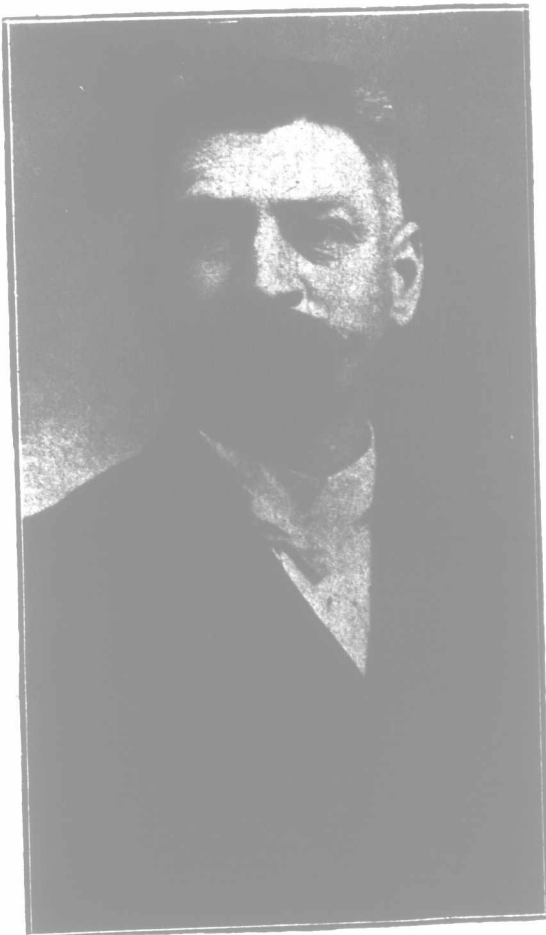
1. A foul-brood inspector in his own or adjoining county.
2. Information about beekeeping and the market price of honey.
3. A course of scientific and practical lectures for every student at the Ontario Agricultural College.
4. Practical talks on bees at county conventions and other gatherings, where requested.
5. Co-operative experiments in beekeeping.

Write for full information on any of these points to Morley Pettit, Provincial Apiarist, Guelph, Ontario.

The Kind of a Farm to Stay on.

Editor "The Farmer's Advocate"

From time to time we see in your valuable journal some of the reasons why the boys and young men of the farms become so unsettled, and wish to get to the city, where they may enjoy



Paul Wattiez.

President Quebec Vegetable-growers' Association.

life, society, and work regular hours, thus having the evenings for amusements and self-gratification.

To my mind, the monotony of mill, store or factory life would be very tame, compared with the variety of labor there is on a well-managed farm.

Many fathers wonder why their boys can't content themselves, and work as they did when they were of the same age, quite forgetful that times have changed, and that there is so much more to attract the young from the farm now than there was in these parts of the country forty or fifty years ago. This difficulty can only be successfully counteracted by creating some greater attractions at home.

Then the question arises, How can this be done? Many have been the solutions. Some will tell you to make the home attractive, and give the young folk plenty of fine clothes. Now, I haven't the slightest objection to inviting homes and fine clothes, but this is not sufficient;

we must remember that the young farmer's life is largely spent amongst horses and farm implements during the summer months, whilst, in the winter most of his time is taken up in the stable and barn attending to the returning wants of the farm stock, since feeding, watering, cleaning and training occupies so much of his time on the farm.

Would it not be playing the part of a wise man to see that the barn and stabling are just as modern and convenient as one's means will allow? And just as soon as you have a big, comfortable, well-lighted stable, insist that it be kept clean. Buy a good brush, hustle down those cobwebs that have been accumulating during the busy summer months, let the light and sunshine in; it's a good tonic, and doesn't cost anything.

I have in mind some stables that are so dark, filthy and unhandy that they alone are quite sufficient to discourage and drive any ambitious young man from the farm.

Don't excuse yourself by saying you can't afford it. Not infrequently, it is the man with the long bank account who has the poorest stabling. Now, just briefly, let me substantiate this statement. The other day, I had occasion to be in the stables of a young man who had quite recently bought a 100-acre farm, with very little capital to start on. He had a herd of number-one grade Holstein cows that were a credit to any farm. He kept a milk record, his cows were paying him for the extra care he put on them. His stables were swept almost as clean as some houses; everything looked prosperous and progressive.

The other stable I will refer to is one that belongs to a man conceded to be worth ten or twelve thousand dollars. He goes in for feeding cattle, and has them in an old board stable, with wooden floors, and two small panes of glass lighting the entire cattle stable, while one group accommodated the two rows of cattle. Quite needless to say, cobwebs adorned the timbers overhead in great abundance. The cattle looked as though their breeding had given their owner about as much concern as the stable that sheltered them. Such a stable as this seldom produces high-priced cattle or milk-record breakers. This kind of farming only has a tendency to make farm labor hard to get. There is certainly nothing attractive about it. If I were to meet a boy leaving a home of this kind, I would be very slow to put a straw in his way; for, if a father won't spend some of his cash to make his buildings comfortable and convenient, we may safely reckon that the son's cash will be easily counted when he wants to start in life for himself.

Good buildings, well-bred stock, and modern machinery, are three attributes that add much to the pleasure and comfort of farm life.

To my mind, it is poor economy for the father to draw 5 per cent. in a large bank account, whilst the sons draw manure on an old lumber wagon.

The farmer in Western Ontario who puts his grain to the elevator, and his steers to the straw stack, is on a side track to success. He may get there, but he won't enjoy the journey very much. Perth Co., Ont. JOHN J. HAMMOND.

Beef-raising in Canada.

A very comprehensive bulletin of 112 pages, thoroughly presenting the above subject, prepared by J. B. Spencer, B.S.A., Ed. Publications Branch, Dominion Dept. of Agr., has just come from the press. It is replete with reliable, down-to-date information upon the various phases of beef production. The origin, history, breed characteristics and development of each of the beef and dual-purpose breeds are concisely and accurately given. The methods of establishing and managing herds, and the importance of dual-purpose cattle in beef-making, are discussed. The rearing of calves, the care of yearlings, and the methods of feeding, housing and marketing, are most thoroughly set forth. The plans of buildings, the differences of open-lot and stable feeding, the value and uses of the different kinds of forages and concentrates, as applying in all parts of Canada, are outlined, according to the results of investigations and the continued practices of the best producers.

The conclusions of the most-reliable and longest-experienced men have been freely drawn upon, and the author has set forth the deductions of investigation and practice in a way that should be of great value to all farmers, and especially to all beef producers. The bulletin closes: "Great Britain needs a very large, continuous supply of imported beef, and prefers freshly-killed to that which comes in either chilled or frozen. The United States will soon discontinue exporting live cattle, and, unless the British port again admits live Argentine cattle, Canada will have the field to herself. Whether or not she will get it, depends upon the Canadian cattle-raiser. At no time has his outlook been so bright as now. He will act wisely if he prepares for it by conserving his female stock to the utmost, producing from



The treasurer of a club or society, no matter how small the amount entrusted to him, should keep the funds in a separate bank account. In that way he has a distinct check on all monies received and paid out, and the funds earn interest while on deposit.

THE TRADERS BANK OF CANADA
Capital and Surplus, \$6,550,000

The Canadian Bank of Commerce

affords to farmers and others every facility for the transaction of their banking business.

Accounts may be opened by mail and moneys deposited or withdrawn in this way with equal facility.

SALES NOTES will be cashed or taken for collection.

Branches throughout Canada, including Toronto, Hamilton, Montreal, Charlottetown, New Glasgow and Truro.

visions of all kinds probably reached the highest prices in the history of the trade. The strength in the market only began to waver last fall, possibly after the hogs began to come forward in the fall. The decline was fairly continuous for a short period, and prices last week were at the low point of the movement, abattoir-dressed hogs being 9½c. to 9c. per lb., and country-dressed 8½c. to 9c. Last week barrelled pork was \$20.50 to \$28 per barrel, and beef \$17. Lard was 10½c. to 12c. for compound, and 13½c. to 14½c. per lb. for pure. Bacon was 16c. per lb. for Wiltshire sides; 18c. for cottage rolls; 15½c. for Windsor skinned backs; 14c. for spiced rolls, and 14½c. for brown English bacon. Hams were 12½c. for 28-lb. weights and over; 14½c. for 20 to 28 lbs.; 15½c. for smaller; 16c. to 17c. for boneless, as to size. Exports during the season were as follows: Pork, 311 barrels, against 49 barrels in 1909; lard, 365,229 barrels, against 343,628 barrels; beef, barrels, none, against 627 barrels in 1909; hams and bacon, 24,450 packages, against 30,756; meats, 124,470 packages, against 160,251 in 1909.

Poultry.—As in the case of live stock, there was never a season when farmers received such high prices for poultry as in that just closing. Prices have been 1c., 2c. and 3c. higher, all things considered, than previously, although it is just possible that at the last moment turkeys did not show altogether what was promised earlier. However, the result must have been satisfactory to farmers, unless they were hard to please. Prices have slumped, and turkeys sold last week at 19c. to 20c., locally; chickens at 14c. to 15c.; fowl and geese at 10c. to 12c., and ducks—which were scarce—at 15c. to 17c.

Potatoes.—The crops have been only fair, and in some parts have been light. The market opened fairly low, but owing

to the development of an export demand, advanced ere long, and now stands at a very fair level, although still below many years. Last week, Green Mountains sold at 82½c. to 85c. per 90 lbs., carloads, track, and others 5c. less.

Apples.—While it is perfectly true that the price of apples was exceptionally high last year, it is doubtful whether this has been of very great advantage to the grower, inasmuch as the high price was due to the smallness of the crop, and the advance naturally does not take place, as a rule, previous to the time the growers sell the crop so much as afterwards. Exports for the season amounted to 147,185 barrels, as compared with 538,742 barrels in 1909. Last week, No. 1 apples were hard to get, and grocers said they paid \$7.50 and more for them. At auction, \$4.25 to \$4.50 and \$5, was paid for No. 2, and \$3 to \$3.50 for No. 3.

Eggs.—It is doubtful if farmers ever received much higher price, on an average, for eggs, as during the past season. At no time did the price decline to a very low point, 17c. to 18c. being possibly the bottom figures, at country points, and these being due to shrinkage on bad stock. Some dealers consider 19c. to 20c. a fair basis for the season's operations. As for exports, these have fallen off entirely. They had fallen to 400 cases in 1909, and in 1910 they ceased altogether. Last week, the tone of the market for held eggs was rather easy, and some thought that another mild spell or two would cause them to decline. Selects were 31c. to 32c. per dozen, and No. 1 were 25c. to 27c. New-laid were firm, being 50c. to 60c.

Butter.—This market was not subjected to many of the violent fluctuations which characterized the butter market during the past few seasons. No low prices were paid, and no very high prices, and the average will probably compare very satisfactorily with previous seasons. Good prices prevailed along about June, but about August purchases were being made at about 21½c. for choicest butter, in the Townships, this being fully 2c. lower than June. About September, the market rose again to 23c. or 24c. It was a good season for the factorymen. The export of cream across the border assumed large proportions for a period, so that dairy returns were not all from butter and cheese last year. Exports fell away below those of 1909, being 29,518 packages, against 39,554. Thus, the exports of butter seem to fall off from year to year, the price here being doubtless too high for the export market. Last week, the market was steady, at 24½c. to 25½c. per lb. for best fall makes, and perhaps a little easy on current makes, at 23½c. to 23½c., the flavor being "stabley."

Cheese.—Trade was of considerable volume last year, but the claim was made that very little money was made by the middlemen, unless it might be that a few of those who went short of the market were able to fill their orders towards the end of the season at reduced prices. Never before were prices so uniform during a season, the entire range, from first to last, being within a cent. The figures were probably from 10½c. to 11½c. to cover Ontario, the general range being 10½c. to 11c. Owing to the dead level of the market, it was thought that merchants had a hard year. Exports, however, were practically the same as those of a year ago, being 1,888,603, as compared with 1,873,427 boxes. This last week, prices ranged from about 11½c. to 12c., colored bringing a premium.

Grain.—A comparison of the exports of grain during the season 1910, as compared with that of 1909, shows the following results: Wheat, 20,000,000 bushels, against 25,000,000 in 1909; corn, 2,700,000, against 400,000; peas, 17,000, against 19,000; oats, 3,200,000, against 400,000; barley, 500,000, against 494,000; rye, 111,000, against 59,000.

Taking the whole situation in grain, the farmer again has much to congratulate himself upon. There have been partial failures in some of the crops, here and there, but taking the whole country over, the result is satisfactory. It was thought for a time that the wheat crop of the Northwest was going to be a failure, but the result was better than feared. Prices all the way round have been good, also, although there was a slight falling off after it was found that the Western crop

would not be so poor as previously reported. Oats for last week were 39c. to 39½c. for No. 2 Canadian Western; 38½c. for No. 1 extra feed; 38½c. for No. 3 Canadian Western; No. 2 local white, 37½c.; No. 3, 36½c., and No. 4, 35½c. Manitoba barley was 48c. to 48½c. for No. 4, and No. 3 American yellow corn was 57½c. to 58c.

Flour.—Throughout the last year, owing to the high cost of wheat, flour sold at a very high price. This situation, however, has altered of late, and there have been several declines, so that for the past week the official quotations were \$5.60 per barrel, in bags, for Manitoba first patents; \$5.10 for seconds, and \$4.90 for strong bakers', while Ontario patents were \$4.75 to \$5, straight rollers being \$4.35 to \$4.50. Even at these prices, it was said that millers were not able to make sales, and would cut considerably. It is unlikely that the milling companies will be able to show anything like their former profits in 1911. Exports were 1,075,000 barrels, against 1,063,000 in 1909.

Millfeed.—The market held very firm all year, and farmers had to pay high prices and beg for the goods. The exports of oil cake were 120,794 sacks, against 140,165 in 1909. The United States was a good buyer of bran at certain periods of the year. For last week, prices were steady, being \$19 to \$20 per ton for Ontario bran; \$22 to \$22.50 for middlings; \$21 to \$22 for Manitoba shorts; \$18 to \$20 for bran; \$31 to \$32 for pure grain mouille; \$25 to \$28 for mixed mouille. Cotton-seed meal was \$37 to \$38.

Seeds.—The market last week was about steady. Prices were not unlike those of a year ago, and dealers were offering farmers \$7 to \$9 for red clover, per bushel, country points, and \$6 to \$8 for alsike. Receipts have been light so far, but this was only to be expected.

Hay.—Farmers did well out of their 1909 hay crops in 1910, and up to the present they have been doing well out of their 1910 crops. The 1909 crop was large, and the quality was average, while the 1910 crop was large, and the quality poor. Until the present, farmers have been getting good prices, but those who have not sold, it is said, will have to accept less for the remainder of the crop. Prices ranged from about \$6 to \$12 to the farmer in 1910. Last week, No. 1 was scarce, and sold at \$12 to \$12.50 per ton; No. 2 extra was \$10 to \$10.50; No. 2 was \$9 to \$9.50; clover mixture was \$7.50 to \$8, and pure clover \$6.50 to \$7. Demand was light. Export was 662,348 bales, against 454,011 the previous year.

Hides.—The price of hides reached a fancy price in 1909, which could not be maintained, and the result was a bit of a slump in 1910. Trade was not active. Canada, however, exported 12,000 rolls of leather, as against 9,000 in 1909. For last week, dealers quoted 8c., 9c., and 10c. per lb. for hides, and 10c. and 12c. for calf skins; 65c. to 70c. each for sheep skins; \$1.75 and \$2.50 for horse hides; 1½c. to 4c. per lb. for rough tallow, and 6½c. to 7c. for rendered.

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.

SCALES ON BARN FLOOR.

Kindly describe, through your paper, how a weighing place for cattle, horses or pigs could be constructed. The scales, of 2,000 lbs. capacity, are to be placed upstairs in barn, and the platform below in stable. Please describe as fully as possible. **SUBSCRIBER.**

Ans.—Will readers who have scales placed as these are to be, kindly reply to this inquiry, describing construction fully, as requested?

SAFETY AND INCOME

Are the two primary reasons for depositing your spare money in **THE BANK OF TORONTO.**

A Savings Account

in this Bank is as safe as Government Bonds, it receives interest half-yearly, and the balance can be added to or withdrawn at your pleasure.

To have real peace of mind your money should be in safety.

Bank of Toronto
Assets, \$50,000,000

GOSSIP.

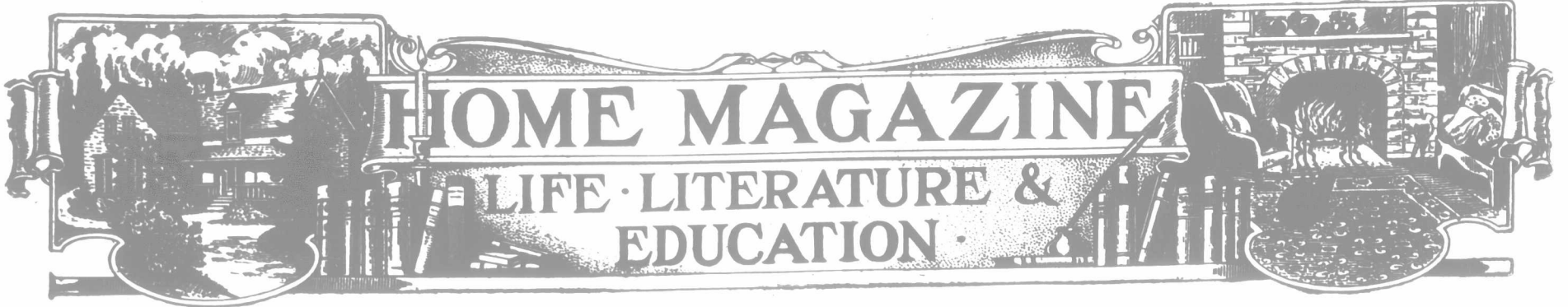
At the dispersion sale on December 15th, of the Percheron stud of J. H. Decker, at Roberts, Ill., 39 head sold for an average price of \$526. The highest price was \$1,600, for a five-year-old stallion. The highest for a mare was \$825.

STOCK SALE AT OTTAWA LIVE-STOCK SHOW.

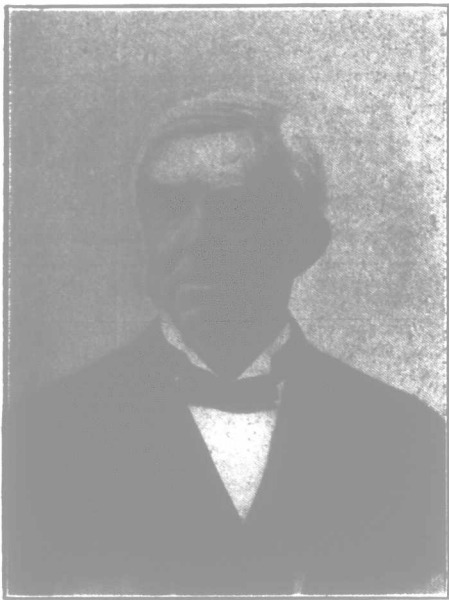
In connection with the Eastern Ontario Live-stock and Poultry Show at Ottawa, there will be a sale of pure-bred stock on Friday afternoon, January 20th.

BRYDONE'S GREAT SHORTHORN SALE.

Every animal to be sold at the great sale of Scotch Shorthorns, at Milverton on Tuesday, January 24th, 1911, the property of John Brydone, with the exception of one Strathallan cow, is either imported directly, or bred from imported stock. All those from one year old up, not imported, are the get of that great bull, Imp. Sittytton Victor, a Cruickshank Violet. He was sired by the Missie bull Merry Morning, a son of the great William of Orange; he by the Highland champion, Pride of Morning, dam Sittytton Violet, bred by Cruickshank, and sired by William of Orange, grandam by the Brawith Bud bull, Gondomar, the sire of the renowned Clan Alpine, great-grandam by Roan Gauntlet. This bull, therefore, has in his lineage two crosses of William of Orange, two of Roan Gauntlet, three of Champion of England, and on his dam's side is closely related to the great bulls, Pride of Morning and Star of Morning. Very many of this great bull's daughters are now in the herd, and will be sold, they being bred to the present stock bull, who will also be sold. Contender 72521 is a red-roan three-year-old son of the Rosemary bull, Imp. Scottish Prince, he by the renowned sire of Royal and Highland winners, and Luxury, a Bruce Rosewood. The dam of Contender was Countess, a Cruickshank Clipper, by the great sire of champions, Prince Gloster, a double-bred Duchess of Gloster, grandam by Revenue, a half-brother to the champion of two flags, Nonpareil. Contender is nicking remarkably well on the herd, leaving some grand show things. The herd that gets him at its head will be fortunate. He is a low-down, thick, mellow bull, with ideal lines. Another bull to be sold is a red ten-months-old son of Contender, and out of a Cruickshank Cashmere-bred daughter of the old bull and Imp. Hellens 2nd. He, thus, is royally bred, and is a low, thick, mellow youngster that cannot fail to do well. Another young bull is a white 8-months-old one, also sired by Contender, and out of the Lauretta-bred cow, Imp. Lily. This young bull looks good to develop into a thick, mellow herd-header. These are all the bulls that will be offered. In next week's issue will be a synopsis of the breeding of the female end of the herd. AM will be in choice condition, but not overloaded, numbering 24 head, 21 females and 3 bulls.



Little Trips Among the Eminent.



Oliver Wendell Holmes.
(1809-1894.)

Almost everyone has heard Boston spoken of as "The Hub," but comparatively few know that the name originated with Oliver Wendell Holmes. "Boston State-House is the hub of the solar system," he said, with playful patriotism, in the most famous of his books. "You couldn't pry that out of a Boston man if you had the tire of all creation straightened out for a crow-bar."

Holmes, it will be seen, recognized the idiosyncrasy of his fellow citizens in this respect; yet he joyfully took part in that idiosyncrasy. He was Bostonian to the core, American to the core, aristocrat to the core, university man to the core. Indeed, he has been called "the University poet" of America.

"Humorist, essayist, novelist, poet, physician," say the encyclopaedia. "Born in Cambridge, Mass., August 29th, 1809." He was the son of a minister of the First Parish Church of his native town, and, like the great majority of others who have attained to excellence in literature, was surrounded from infancy by an atmosphere of books. In 1825 he entered Harvard University, from which he graduated in the famous class of '29." In the same year he composed one of the best known of his poems, "Old Ironsides."

For a year he applied himself to law, then turned his attention to medicine, and for two years studied in Paris, from which he returned in 1835 with, as he said, a good stock of knowledge, some experience, and two skeletons. His growing reputation as humorist and poet, however, stood in the way of his advancement as a physician, and it is told that, when at one time he was advised to divide his practice in order to get more time for literary work, he replied that he "couldn't very well, as he had only one patient."

His intellectual attainments, however, recommended him to the far-seeing, and he was presently offered, and accepted joyfully, the Chair of Anatomy in Dartmouth College. A few years later he was appointed Parkman Professor of Anatomy and Physiology in Harvard, where, it is

recorded, the poet and humorist constantly appearing in his lectures, made them a delight to the students. "In the dissecting room, however," says a biographer, "his reverence for the poor body on the table was always that of the man who wrote 'The Human Temple,' and who always stood awestruck upon the shrine of that temple's mystery."

In 1857 the Atlantic Monthly was established, and with it began a new career for Doctor Holmes, since Lowell, who was the editor, with much perspicacity, insisted on having him taken on the staff as principal contributor.

Twenty-six years before this time, Holmes had published in the New England Magazine two or three articles written in a conversational style; he now thought of these, resolved to resume them, and so began his famous series of "Autocrat" articles with the statement, rather puzzling to the uninitiated: "I was just going to say, when I was interrupted," etc.

This series, "The Autocrat at the Breakfast Table," at once marked Dr. Holmes as an original writer of outstanding ability. There have been many essayists, but among them Dr. Holmes holds a place distinctly his own. "There was no 'Autocrat' before him; there has been none since." Even he himself failed to hold to this standard. The "Autocrat" was written at the height of his powers, when the maturity of age had come to him, and the liveliness of youth had not yet passed. "The Professor," and then "The Poet at the Breakfast Table," followed, but the order is a descending one, and the first "Autocrat," with its discursive ramblings on almost every topic, from horse-racing to "religious" insanity, from meerschaum pipes to moral obligations, from boxing to Shakespeare, will continue to be the book by which Oliver Wendell Holmes will be most widely known. The "remarks," as those familiar with the book will remember, are given in the form of conversations at a boarding-house table, the Autocrat taking the lead. Touches of pathos, flashes of wit, bits of satire, grave reflections, keen pronouncements alternate, and not infrequently, the trick of dropping from the sublime to the ridiculous is adopted—readers of Jerome K. Jerome will here see some slight analogy. Throughout appears, too, the man himself, the aristocrat, the man of culture, yet the hater of shams and stupidity.

Possibly Dr. Holmes' sympathies had been somewhat restricted. The great civil war broadened them somewhat, the more so, perhaps, that he had a son at the front who was wounded, the son to whom he proudly refers in his poem "My Hunt for the Captain."

Passing his essays, one finds Dr. Holmes a most prolific writer along other lines. He wrote noted biographies, on Jonathan Edwards (theologian), Motley, and Emerson. He also wrote three novels, "The Guardian Angel," "A Moral Antipathy," and "Elsie Venner," the last of which has been called "the snake-story of literature." None of his novels, however, attained the very highest rank as did those of Hawthorne. The scientist, the physician, the teacher, appears in them; to the obscurity of the romances, necessary, the prose-poetry, in which the highest type of novel is produced,

deed, he himself has quoted with much relish, the phrase of a lady who had spoken to him of his "medicated novels." They were, however, distinctly his own. The personality of Dr. Holmes is never wanting.

In poetry he sometimes struck a clearer note. "The Chambered Nautilus," has been numbered among the gems of poetry, and that he himself was no mean judge of his achievement in this bit, is evident from the fact that he said of it, "When I wrote that, I did better than I could." "The Chambered Nautilus," "The Last Leaf"—Lincoln's favorite—and others, were scattered among the essays of "The Autocrat."

He wrote many other poems, however, most of them by request, for anniversaries and other public functions.

In 1889 he read the last, "After the Curfew," at one of the annual meetings of his college class. The next year there was another meeting, "three present," as William Deans-Howells has told us, "but no poem—very quiet—something very like tears." Then even these two or three dropped off, and at last Dr. Holmes was left, "the last leaf," as has been noted, "on the tree of Boston's goodly men." On the 7th of October, 1894, he himself slipped quietly away, at the ripe age of 85 years. Almost to the last he was marvellously in possession of those brilliant faculties which rendered him one of the men most to be courted and admired in his day.

Upon one occasion, when Holmes was at the height of his powers, Henry James, father of the novelist of that name, said to him: "Holmes, you are intellectually the most alive man I ever knew." "I am, I am," returned he. "From the crown of my head to the sole of my foot, I'm alive, I'm alive." Mr. Howells, who met him at this time, remarks: "The secret of the man who is universally interesting is that he is universally interested, and this was, above all, the secret of the charm that Dr. Holmes had for everyone."

It is evident that a man of such personality as is revealed by these and a thousand other memoirs, in conjunction with the intellectuality and principle of Dr. Holmes, must be a force in his time; nor was the influence of this man lost with his own departure from the arena of this world's activities. "With his joyous laughter," as a student of his life (Richardson) has written, "he shook to its foundations the traditional distrust of the New England conscience in the undisguised enjoyment of life's various good. He heartily believed in human happiness, and he did much to make it more abundant." And again: "Manliness finds in him a friend, and culture a companion. Though as a poet he is almost great, but assuredly not great; while, as a prose essayist he must ever stand below the greater American whose biography he wrote (Emerson), his place on the shelf is characteristic, and likely to remain undisturbed." He has added to the valuable part of creative literature, while he has shown how an intense and perpetual localism, under the touch of a true though narrow genius, and aided by culture, may earn a place in the world's republic of letters.

From "Literary Friends and Acquaintances": Howells.
Speaking of Holmes in his old age

Howells says: "He was very constant at the Saturday Club, as long as his strength permitted, and few of its members missed fewer of its meetings. He continued to sit at the table until the ghosts of Hawthorne, of Emerson, of Longfellow, of Lowell, out of others less famous, bore him company there among the younger men in the flesh. It must have been very melancholy, but nothing could deeply cloud his most cheerful spirit. . . . The last time I was at that table, he sat alone there among those great memories.

"In his pleasant study, he lived among the books, which seemed to multiply from case to case and shelf to shelf, and climb from floor to ceiling. Everything was in exquisite order, and the desk where he wrote was as scrupulously neat as if the sloven disarray of most authors' desks were impossible to him.

"As he grew older, he must have had, of course, an old man's disposition to speak of his infirmities, but it was fine to see him catch himself up in this, when he became conscious of it, and stop short with an abrupt turn to something else. . . .

He carried his slight figure erect, and until his latest years his step was quick and sure. If you met him in the street, you encountered a spare, carefully-dressed old gentleman, with a clean-shaven face and a friendly smile, qualified by the involuntary frown of his thick, senile brows; well-coated, lustrously-shod, well-gloved, in a silk hat, latterly wound with a mourning weed.

"He was not a prophet like Emerson, nor ever a voice crying in the wilderness like Whittier or Lowell. His note was heard, rather, amid the sweet security of streets, but it was always for a finer and gentler civility. . . . He was not constructive; he was essentially observant, and in this he showed the scientific nature. He made his reader known to himself, first in the little, and then in the larger, things. From first to last he was a censor, but a most winning and delightful censor, who could make us feel that our faults were other people's."

A New Book of Poems.

It may be interesting news to some of our readers to hear that Mr. Lyman C. Smith, of Oshawa, has recently issued a book of poems, "A Blossom of the Sea, and Other Poems."

In his introduction, in which he compares his volume to a "wreath of blooms," Mr. Smith says:

"I proffer these to bring what cheer they may
To all that hurry on the crowded way;
For me, the breathings of their fragrant lips,
Their modest faces peering from the sod,
The touches of their velvet fingertips
Have cheered the darkest valleys
I have trod

—proof enough, if proof were needed, that the author writes for the "love" of writing, the only motive that should ever actuate the artist, whether in literature, music or art.

It is very evident, on reading the poems, that the great problems of death and suffering have been much in the writer's mind, and that he has settled the question for himself by looking to a perfect end, a "Far

seeing Fate, controlling all" that "Uplifts the race by slow degrees." This thought runs through many of the poems, e. g., "The Pioneer," "Onward," "Builders of the Broad Dominion," and others.

There is homely and touching pathos in "The Auctioneer," while the nature-touches, as well as the delicate portrayal of character in "Our City Cousin," make up a poem of charm and atmosphere.

In the section, "In Lighter Vein," will be found many "catchy" bits of the semi-humorous order, some of which have already appeared in "The Farmer's Advocate," of which Mr. Smith is a valued contributor.

The Windrow.

Algonquin Park is to be considerably enlarged.

Mr. John D. Rockefeller has donated a final gift of \$10,000,000 to the University of Chicago.

It is said that the Duke of Connaught will not succeed Earl Grey as Governor-General of Canada, owing to the fact that the King requires his presence in assisting at Court functions, etc.

The Nobel Prize in literature went this time to a German, Paul Heyse, poet, dramatist, novelist. He excels particularly in the short novel, of which he has been called "master of masters."

Plans for buying land in Palestine, and settling it with Jews, were outlined at the Eleventh Convention of the Zionist Societies in Toronto last week. The receipts for the Zionist funds in Canada for the past year totalled about \$5,000.

One of the new British battleships is to be called the "Royal George." The last "Royal George" in the British navy, while being careened somewhat in order to repair a damage was struck by a sudden squall and went down, Aug. 29th, 1782. All on board, numbering about 1,000, with Admiral Kempenfelt, were drowned. The disaster has been commemorated in Cowper's poem, "Toll for the Brave."

Some Thoughts on the Parting of the Ways.

Threefold the flight of Time,
From first to last,
Loitering slow
The future creepeth,
Arrow swift
The Present sweepeth,
And motionless for ever
Stands the Past."

So writes Schiller; whilst a later poet, nearer home, admonishes us to

"Look not mournfully into the Past,
It comes not back again
Wisely improve the present. It is
thine."

New Year's Day has been called by some "A day of good resolutions"; by others, "A day of delusions"; both terms, however, being in some measure interchangeable, it is explained in this wise: That many make good healthy resolutions, believing, for a day, that nothing will be easier than to keep them; struggling for two days against the natural impulse to break them; experiencing half an hour of remorse on the third day, and finally contriving to live comfortably for the rest of the year. Then comes what is claimed as "the preliminary delusion, that the New Year is new, and that some definite change has actually, and at a given moment, come over the universe, whereas it is the same old universe, after all. Some of us, in the making of our good resolutions, and in acknowledging the errors of the past, are not, perhaps, so humble as we appear to ourselves to be. We are, so to speak, proud of our humility, and place a mistaken value upon our assertions that "we are miserable sinners," forgetting that, perhaps, even if we carried out our resolutions to

mend our ways, it may be only ourselves, and not others, who may be benefited by it. What are more common than resolutions to be careful of our own well-being, to be more earnest in pursuing one's own advantage, to guard more scrupulously against being taken in; in other words, to practice a more enlightened selfishness? What are these but delusions? Nevertheless, even these have their value. A writer on this subject, last year, remarked: "The supreme value of the New Year's new resolutions is that they prove you are dissatisfied with your old self. You may have cast off all the other virtues, but so long as you retain the germ of them all, the great mother-virtue, dissatisfaction with yourself, there is hope for you. There is but one incurable disease, and the name of that is self-content. If you have no fault to find with yourself, you are beyond cure. Dissatisfaction, hope, energy—these are the

individual life, for "No man liveth unto himself."

In the framing of our New Year's resolutions, we might well bear in mind the words which fell from the lips of one of the noblest women who ever lived, Queen Victoria, of honored memory, upon the occasion of her having to give her royal sanction to a measure of the deepest importance to the welfare of her people: "Tell me whether it is right or wrong; if right, I will do it; if wrong, I will NOT do it; but never let me hear the word 'expedient'."

We may, it is true, never be called upon knowingly, to face moments of special crisis in our lives, but let us not fear to have high resolves, which may bear some blossom, if not a full fruitage, if only we realize that, whilst in our own strength alone we can do nothing, there awaits us, if only we ask for it, the enabling grace wherewith to

Through rough and smooth the journey will be joy,
I shall grow old, but never lose life's zest,
Because the road's last turn will be the best."

H. A. B.

Hope's Quiet Hour.

The Christian's New Year Prayer.

Thou Christ of mine, Thy gracious ear
I low bending,
Through these glad New Year days,
To catch the countless prayers to Heaven
ascending,—
For e'en hard hearts do raise
Some secret wish for fame, or gold, or
power,
Or freedom from all care—
Dear, patient Christ, who listenest hour
on hour,
Hear now a Christian's prayer.

Let this young year that, silent, walks
beside me,
Be as a means of grace
To lead me up, no matter what betide
me,
Nearer the Master's face.
If it need be that ere I reach the fountain
Where Living waters play,
My feet should bleed from sharp stones
on the mountain,
Then cast them in my way.

If my vain soul needs blows and bitter
losses
To shape it for Thy crown,
Then bruise it, burn it, burden it with
crosses,
With sorrows bear it down.
Do what Thou wilt to mould me to Thy
pleasure,
And if I should complain,
Heap full of anguish yet another measure
Until I smile at pain.
Send dangers—deaths! but tell me how
to dare them;
Enfold me in Thy care.
Send trials, tears! but give me strength
to bear them—
This is a Christian's prayer.

ANON

Sir, We Would See Jesus.

Certain Greeks . . . desired him, saying, Sir, we would see JESUS.—St. John xiii: 20, 21.

I was looking through my scrap book to-day for something of a New Year character, and found the poem given above. I can't remember where I got it, and don't know who wrote it, but it is a very brave and trustful prayer. One who can dare to pray like that must feel very sure of the Master's love. With the New Year before us, let us try to hold out both hands, trustfully and eagerly, for God's gifts. We ask him for Courage and He sends danger. We ask Him for Patience and He sends trials and difficulties. We ask Him for Trust and He sends darkness. How can He make these graces lastingly our own without exercise?

It is a very cold and dreary thing to preach the duty of patience and courage. But it is very different to direct seeking souls to the Living, Loving Master. When the Greeks said: "We would see Jesus," they were voicing the longing desire of all people of all ages. Christ is "The Desire of all nations." This is a questioning age, and people are not content to dream their lives away. It is a great mistake to fancy that those who make no outward profession of religion are not interested in it and its claims. Though we live in a professedly Christian country, our faith is on trial for its very existence. It is being tested and examined to see whether it is indeed the elixir of life, the true philosopher's stone that can turn everything to gold, bringing brightness and gladness into the darkest, dreariest life.

Plenty of practical, clear-headed men and women are—like the Greeks of old—saying to the disciples of Christ: "Sirs, we would see JESUS." As the Jews looked eagerly for their promised Messiah, so many a man to-day is searching



Holmes' Boston Residence.

three qualities really valuable in the somewhat delusive business of good resolutions. While there is evidence of them in the world, even from a moral point of view only, we need not be wholly cynical even on such a tempting occasion as New Year's Day.

But surely it is a good habit for mankind now and then to halt in its progress and look backwards over the paths upon which it has trod, just as business men recognize the wisdom of a prudent retrospection, so that they may know how they stand after the balancing of the columns of their ledgers. One of the great thinkers of our time has said: "An element of weakness in much of our resolving is that we try to grasp too much of life at one time. We think of it as a whole, instead of taking the days one by one. Life is a mosaic, and each tiny piece must be cut and set with skill."

Truly, the corporate life involves

"Clothe with life the weak intent,
And let us be the thing we meant."
Speaking of a coming year, Henry Van Dyke uses the following inspiring words, which, having as much meaning now as when they were penned, I will ask you to take, as our joint message for 1911:

"Let me but live my life from year to year,
With forward face and unreluctant soul,
Not hastening to nor turning from the goal,
Nor mourning things that disappear in the dim past, nor holding back in fear
From what the future veils; but with a whole
And happy heart, that pays its toll
To youth and age, and travels on with cheer.
So let the way wind up the hill and down,

for a Divine Leader, a mighty Master, at Whose feet he may pour out all his treasures of love and devotion—a Personal God.

It has been forcibly pointed out that the restlessness which destroys the peace of one who has lost his hold on faith, is a sure proof that scepticism is a disease of the soul and not its normal state. When doubt and unbelief bring painful restlessness to the soul of a man, is it any wonder that he is driven to seek eagerly for some relief?

Christians may disagree about many things, and may often find it necessary to change or modify their cherished opinions before the remorseless facts which science reveals, but—as Van Dyke declares—those who, in all ages, have uplifted souls with mighty power, are alike in one thing. "Their central message, the core of their preaching, is the piercing, moving, personal gospel of Jesus of Nazareth, the Son of God and Saviour of mankind. This, in its simplest form; this presentation of a Person to persons in order that they may first know, and then love and trust and follow Him—this is pre-eminently the gospel for an age of doubt."

Our only hold on things or ideas is through our personality; but, if no one else has had a like experience, we may doubt the truth of our own sensations. That is the reason we find a delight in exchanging ideas with a kindred spirit—we see our own thoughts reflected in his. When person really touches person, when the personal experience of one spirit is also the personal experience of another, there is a new joy in living. And that is the secret bond of union between souls who feel the very Life of Christ thrilling in their veins. They know by personal experience the joy of fellowship with Him, a joy which cannot be explained to one who has never felt it, and which need not be explained to one who has. The "secret of the Lord" is no secret to those who know Him—it is an ever-fresh spring of joy, constraining them to loving service, not a slavish fear of punishment, nor a selfish hope of reward. The only reward they really care much about is His smile and approving: "Well done, good and faithful servant!" Those who only look on from the outside may think that such a reward is hardly sufficient return for life-long service, but a very different opinion is held by all who have been drawn irresistibly by the attractive Personality of Him Who is "the chiefest among ten thousand."

Yesterday I received a letter from a friend, and in it was the following story, which she says she has lately read:

"A peasant hid in the room of a great and noted saintly man, wishing to hear him 'pray,' and hoping for a great treat. After several hours of quiet and patient waiting, while the holy man wrote, referred to his Bible and wrote again, at last he got up. Now, the peasant thought he should hear something grand! but all the holy man said was: 'Lord Jesus—things are between us, as on the old score,' and went to bed."

Are you beginning the year having an unbroken fellowship with Christ to rest quietly upon, or are you still saying restlessly, "I would see JESUS!" If your heart is at rest, then I am sure it is because you have found the only satisfying fellowship. You still say, "I would see JESUS!" but you can say it joyously instead of restlessly, feeling satisfied to begin the year by saying: "Lord Jesus—things are between us, as on the old score."

"To-night, I'm tired, Master, for rest I turn to Thee.
Turn to Thee for quiet, let me Thy Presence see.
Thy world is full of beauty; the tasks Thy hand hath set.
Have every one their meaning; I love them all, and yet
I turn from these to seek Thee. Do Thou Thy spirit give.
Thy love and peace will rest me; in Thee my soul doth live."

I don't believe anyone was ever argued into a satisfying belief in Christ. Christianity is LOVE, and you cannot force a man to love God by bringing overwhelming proofs to bear on him. He who will not hear Moses and the prophets, would not be convinced though one should rise from the dead. Love is alive and must

grow, building its body of proof around it as it goes on. The "proofs" it clings to may not be facts; they may not be the real proofs of Christianity, but only the opinions of certain Christians. And yet one who can, by faith, see the Face of Him Who is "Altogether Lovely," has a hold on a Personal Saviour which no advanced criticism can shake.

A real Christian is saturated with Christ, Who is continually breathing into him the breath of life. He may disobey his Master or deny Him, but give Him up altogether?—No! Love is not so easy to kill. To whom else can we go?

The Ingle Nook.

[Rules for correspondents in this and other Departments: (1) Kindly write on one side of paper only. (2) Always send name and address with communications. If pen-name is also given, the real name will not be published. (3) When enclosing a letter to be forwarded to anyone, place it in stamped envelope ready to be sent on. (4) Allow one month, in this department, for answers to questions to appear.]

Simplicity in Architecture

Some of our readers, no doubt, are planning to build a new house next sum-

ing the Colonial simplicity on lines of dignity and harmony to modern use, we stuck on the pseudo-classic, we broke out in the Mansard, we broke all up into the whimsicalities of the so-called Queen Anne, without regard to climate or comfort. The eye speedily tires of all these things. It is a positive relief to look at an old Colonial mansion, even if it is as plain as a barn. What the eye demands is simple lines, proportion, harmony in mass, dignity; above all, adaptation to use. And what we must have also is individuality in house and in furniture that makes the city, the village, picturesque and interesting. The highest thing in architecture, as in literature, is the development of individuality in simplicity."

Comfort in Winter.

The other day, one of our Nookers, a bright-faced, rosy-checked little woman whom it would do you good to see, came up to the office,—I'm sure she'll not mind my telling you this. She "had on" an automobile-bonnet, quite a pretty one made of velvet, with a touch of lace about the face. It was really quite becoming, yet the little lady said that people on the street had been "rubbering," and clerks in stores smiling at it. She felt half-ashamed of it, she said, although while driving it had been the most comfortable thing she had ever had on her head.

When she had gone, this question suggested itself: Is there any earthly reason why country folk should not set fashions for themselves if they choose—fashions that conform to their own idea of suitability and comfort? Is there any reason why we should eternally follow, like sheep, in the tracks of the town-folk, in regard to all that we wear? Also, is there any reason WHY WE SHOULD NOT SET THE FASHION OF PAYING MORE ATTENTION TO WHAT IS INSIDE OF OUR HEADS THAN TO WHAT SITS ON TOP OF THEM?

A city woman said to me the other day, that "all the clever people she had ever known had been born on farms." Well, we know that numbers of clever people have been born in cities also; nor need we take any credit to ourselves as a class on hearing such words. Well may we know, that, on the whole, we have no more latent cleverness than any other class, and that it is only those among us who try, try hard, who succeed in being worth while or doing worth while, whether in a quiet way or in a brilliant way.

Would it not, however, be grand, if we really could set a general standard of high thinking throughout the rural districts?—avoiding ever, of course, the silliness of intellectual snobbery which is as bad as, if not worse than, any other kind of snobbery. We need not apprehend much danger from this, however, knowing that the truly cultured, wherever found, is above the narrowness of intellectual snobbery. He who knows and thinks most is least likely to be puffed up because of his attainments. The greatest men have been, almost without exception, as noted by Warner in the preceding quotation, the simplest in speech and manner.

Now, to come back to that cozy little bonnet—Can we not be proud enough of our business of agriculture to be independent? And if we find a nicely-lined bonnet drawn snugly over the ears to be more comfortable for driving than a big hat that stands up in the wind, whirls round, and twists every hair on our heads out of place—to say nothing of the freezing hands attained by holding on to it—then, why should we not wear the bonnet? What do you think?



Cobblestone Fireplace, Mission Furniture.

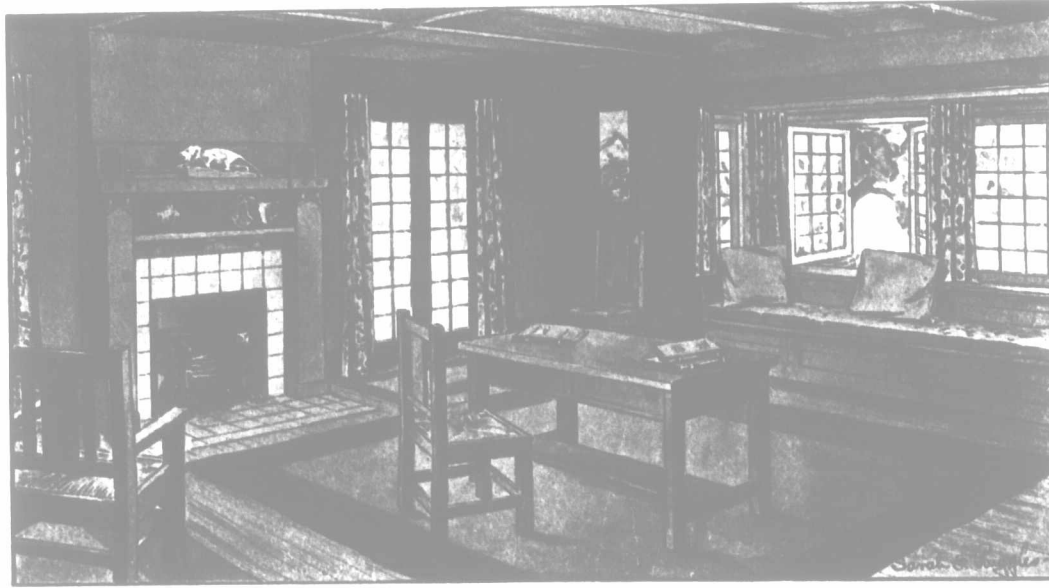
(By courtesy of Suburban Life.)

Who but this same JESUS has the words of eternal life? Our faith may be very weak, but we cannot face the New Year without it—even though it may not (at present) be much more than

"A broken sob, a hand-clasp in the dark,
a glimpse
Of JESUS passing by."

DORA FARNCOMB.

Do the work that's nearest,
Though it's dull at whites,
Helping, when we meet them,
Lame dogs over stiles.
—Charles Kingsley.



Some Ideas in Window Arrangement.

(By courtesy of Suburban Life.)

The Roundabout Club

Study III.

"Give your opinion on establishing an intellectual standard as a basis for the suffrage."

Kindly send all essays on this subject so that they may reach this office not later than three weeks after the date upon which this paper is issued.

Books will be given, as before, as souvenirs to those taking highest marks.

youth, and it seems also to be a characteristic of over-development. Literature, in any language, has no sooner arrived at the highest vigor of simple expression, than it begins to run into prettiness, conceits, over-elaboration.

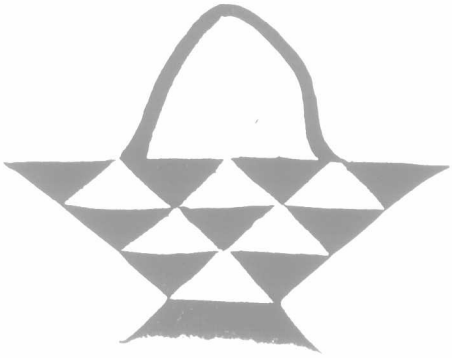
It is the same with architecture. The classic Greek runs into the excessive elaboration of the Roman period, the Gothic into the flamboyant, and so on. We have had several attacks of architectural measles in this country, which have left the land spotted all over with houses in bad taste. Instead of develop-

I wish you all a very happy New Year, the highest of ideals, the best of convictions, and the independence to act according to them. D. D.

Quilt Pattern.

Mrs. Isaac Edwards, Oxford Co., Ont., very kindly contributes a quilt pattern, from which we have had a drawing made, in order that any of our readers who choose, may copy it. She says:

"I am a reader of your valuable paper. Have seen an inquiry for a quilt pattern called the "Basket" pattern. It is a very old pattern. My mother made one



Basket Quilt Pattern.

You can make the handle a perfect curve if you like.

about forty years ago. I tried to get it. Came across it in Muskoka; a niece of mine had it, so I am sending it, thinking it may be the one that is required."

Since receiving the above, a similar pattern has been received from "Shut-in," Brant Co., and several others. Many thanks.

A Buffet Luncheon.

Dear Dame Durden,—I have been a reader of "The Farmer's Advocate" for several years now, and take great pleasure in reading the very helpful messages contained in its columns, and especially in the Ingle Nook part of it. I, like the rest, am writing for information, and my subject is "Buffet Luncheon."

Would like to know what is really meant by it, and how it is best to serve the eatables, and what should the menu contain? This luncheon is expected to take the place of an elaborate wedding dinner, as the wedding ceremony takes place at 9 or 9.30 o'clock in the evening. The dining-room being rather small, how think you is it best to serve the guests, numbering about fifty? Should small tables be used, serving the guests from eatables placed on buffet; or should there be a large table in center of dining-room? And last, but not least, if you think this style of serving the supper best, where should the bridal party be placed? "MUCH PERPLEXED."

At a buffet luncheon, or supper, the chairs are arranged against the wall, the tables are beautifully decorated, and upon them are placed sandwiches, cakes, bonbons, fruit, jellied meats, meat salads, olives, salted almonds. On the side-board, piles of napkins, forks, knives, cups and saucers, plates and glasses are placed. When the dining-room doors are opened, the guests go in and out as they please, choosing whatever refreshments they like, and sitting or standing to eat them, as they choose. Chairs are moved about as required. The men help to wait on the ladies, but three or four attendants should be in charge to replenish dishes and see to things generally. Hot dishes, such as chicken or oyster pates, chicken croquettes or souffles, may be served if one chooses; also ice cream or water ices, these being carried about the room on trays by the attendants, as are also the tea and coffee.

As your dining-room is small, I should think a buffet supper would do very well, as all need not go in at once. The large table will be sufficient.

The bridal party do exactly as the rest of the guests, unless the house is very large, when, if one chooses, a special table may be provided for the bride and her bridesmaids. In a large house, a number of small tables are sometimes used, the only requisition being that each table is large enough to contain a selection of all the viands, without crowding. Otherwise there would be confusion in serving.

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Recipes in Season.

Beef Balls.—Mince fine any scraps of cold beef, season highly with onion, salt and pepper. Moisten with cold gravy or soup, set over the fire, stir in 1 tablespoon flour, and cook five minutes. Remove, and when cool enough to handle, form into small balls, dip in beaten egg, and then in fine crumbs or corn meal, and fry in hot fat.

Milk Porridge.—Soak 2 cups oatmeal in a quart of water over night. In the morning, strain, and boil the water half an hour. Scald 1½ pints rich milk, thicken with a tablespoon flour rubbed smooth in a little cold milk. Add this to the water, with a teaspoon of butter and half a teaspoon salt. Boil up, and serve. This is very nour-

ishing, and is nice for a change. The oatmeal left over may be used up in muffins, or well boiled with a little fresh meal to make oatmeal porridge.

Graham Bread.—On baking day, take out 2 cups of the sponge which has been set with the wheat flour (after the first rising), put it in a bowl, add 3 table-spoons molasses, 1 pint Graham flour, ¼ pint wheat flour. Knead for 15 minutes, set to raise again for 2 hours, then form into a loaf and let stand 1 hour. Bake in a slow oven for ¼ hour. Graham bread must not be put into a hot oven, it burns so easily.

Mock Duck.—Take a pork tenderloin, split lengthwise, and get them as fat as possible. Place a rich stuffing, made as for fowl, between, put in a dripping pan

with two or three thin slices of pork on top, sprinkle with pepper and salt, dredge with flour, put half a cup of boiling water in the pan, and bake, basting frequently. When done, remove, thicken the gravy left in the pan with a little browned flour, season, and serve.

Apple Johnnycake.—Mix 1 pint corn meal with a scant half cup sugar, a pinch salt, and a teaspoon cream tartar. Dissolve half a teaspoon soda in a little milk, add to it enough milk to make a batter as for pancakes—about 1½ cups—and stir all together. Add 3 thinly-sliced sour apples, and bake in a moderate oven 35 minutes.

Piquante Sauce (to serve with meat).—Melt 2 table-spoons butter, add a small onion chopped fine, and fry it; then rub

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Every piano in this sale is brand-new, straight from our modern factory, and warranted in every detail. The reduction of \$100 from the regular price is bona fide. Thus this advt. actually represents a saving of \$100 to you.

You, or any musical expert, can test the piano in any reasonable manner before you buy it. You can take it on easy terms, if you wish. You can choose that style and finish you like best. Clip out this advt. and send it now.

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Will make your home attractive and inviting at a small cost. Beautiful fixtures giving a pure white brilliant light superior to gas or electricity at one half the cost. Can be installed anywhere in the home, store, church, etc. Easy to operate. Shows and installs use. Write our nearest office for Booklet. **RICE-KNIGHT LTD., Toronto**

in 1 tablespoon flour, and 1 cup gravy, a pickled cucumber chopped fine, 1/2 teaspoon made mustard, pepper and salt to season, a little chopped parsley or dried herbs. Boil 10 minutes, add a tablespoon vinegar, let cool up once and serve.

Swedish Bread. Roll 1 pint light dough half an inch thick. Spread with butter, sugar, a dash of nutmeg, and 1 cup well-beaten currants. Roll up, spreading water over top. Let rise and bake in a cake pan. Cut a sponge cake into two layers. Butter each, and spread with jam. Put together again, and spread with currant sauce. Let same rise again. Bake in a 9x5x3 inch loaf pan and 1 1/2 hours. Bake in a 9x5x3 inch loaf pan the first time.

pepper and salt. Add 4 spoonfuls of cream. Heat to boiling point, and serve.

Potatoes Hashed and Browned.—Cut cold boiled potatoes into small squares. Put into a greased pudding dish, pour over them a cup or more, according to quantity, of warm milk, seasoned well with butter, pepper and salt. Bake covered for half an hour, then uncover and brown.

Kentucky Potatoes.—Slice six large potatoes thin. Put in cold water for half an hour. Remove from water and put in a pan, season with pepper and salt, pour over them 1 cup milk. Bake 1 hour, then dot with bits of butter. Leave a little longer, and serve hot.

Our Scrap Bag.

When hanging out clothes in winter, heat the clothes-pins in the oven, then put them in the pocket of your laundry apron, and get the clothes on the line as quickly as possible. White laundry mittens, made from old woollen underwear, are also a great help in keeping the hands from becoming cold.

A writer in Practical Review, gives the following method of frosting cake to the edge so it will not run down over the sides: Double a piece of oiled paper 8 inches wide, and pin it closely around the cake, letting the band come up above. Spread the icing on, and do not take away the band until it is dry.

If flannels have become greatly shrunken, try the following plan, which is sometimes effective in restoring the garment to a wearable size. Lay the article on the ironing board, and lay on it a piece of cheesecloth which has been wrung out of cold water. Press hard with a hot iron until the cheesecloth is perfectly dry.

Applications of coal oil, put on at once, are said to be good for frostbites.

Sprinkle frostbitten plants before they have thawed, with cold water in which salt has been dissolved.

If eggs should become frozen, place them in boiling water and leave them there from 5 to 20 minutes, according to the amount of frost in them. Upon opening them, the yolks will be found soft, and in such a state that they can be used for almost any ordinary purpose.

To Shadow-town.

Sway to and fro in the twilight gray. This is the ferry for Shadow-town. It always sails at the end of the day. Just as the darkness closes down.

See where the fire-logs glow and spark.
Glitter the lights of Shadow-land,
The rain-drops on the window, hark.
Are ripples lapping upon its strand.

There where the mirror is glancing dim.
A lake lies shimmering cool and still.
Blossoms are waving above its brim,
Those over there on the window sill.

Rock slow, move slow, in the dusky light.
Silently lower the anchor down;
Dear little passenger say "Good Night,"
We've reached the harbor of Shadow-town.

Chinese Lilies, etc.

Dear Dame Durden,—In the issue of December 22nd, there was a letter from Sweet Sixteen about Chinese sacred lilies. Last year I had one large bulb, and when it was done flowering I did not put any more water on it. When it had dried up I pulled off the roots and tops and put the new bulbs, with other bulbs, to be kept. This year I put them in water and gravel as before, and after about six weeks' patient watching and waiting (you see I was determined to make them grow, or "bust"), there came up a little green sprout. I had pulled off the outer skin two or three times, and had scraped the bottom. They look healthy, and as if preparing to flower.

Wherein can China beat Canada?

The best wrinkle I have found, though not just in housekeeping line, is to have a loose-leaf notebook, a pencil, some tissue or carbon paper handy, when reading "The Farmer's Advocate" or other papers. Mine contain recipes, household hints, fashion hints traced or sketched, gems of poetry, bright ideas, etc.

Let me say, if anyone is building, be sure to have plenty of drawers, and of all sizes, in your pantry or kitchen. We nearly forgot them, and their absence is very conspicuous.

We farm people who get our winter cheese in a large piece, often have trouble in keeping it soft. If it is brushed with paraffin it will neither dry nor mold.

There is one recipe I have never seen anywhere; perhaps A Farmer's Wife could give it: How to make one's self rise from sleep at five or six o'clock in the morning; or, how to form the habit of early-rising. Early-retiring, being called, or shook, is of no avail. Can you tell me? I hope I have not taken too much space.

P. S.—How can I make my hair puff? Isn't there some simple way of doing the hair? I'm so tired of turbans and things. **SILLY SEVENTEEN**

Many thanks for your letter. I hope your lilies will bloom. If so, you will be the only person whom I have ever known to be successful. Let us know later, will you, please.

About your hair,—you will be pleased to know that "turbans and things" are said to be all going out of fashion, and simpler methods coming in. We'll all be glad to say good-bye to "rats." To make thin hair puff without either back-combing or curling over night on thick curlers, seems to be a secret of the dim future as yet. Can anyone answer?

"Air Plant."

Please let me know what is the proper treatment of an "Air Plant," whether it requires watering or not when kept in a room? **A SUBSCRIBER.**

By "air plant," do you mean the mossy kind sold in stores under that name? Many claim that this is a dried seaweed which does not grow at all when out of the sea, simply keeping evergreen. One I had was certainly dyed, as was revealed when, on putting it in a vase of water, the water became quite green. However, I know one woman who is firmly convinced that hers has grown. She keeps the stem end in the water all the time.

TRANSACTION FOLLOWED

Vera (eight years old)—"What does transatlantic mean, mother?"

"Across the Atlantic, of course, but you mustn't bother me."

Vera—"Does 'france' always mean across?"

Mother—"I suppose it does. Now, if you don't stop bothering me with your questions I shall send you right to bed."

Vera (after a few minutes' silence). "Then does 'transparent' mean a cross parent?" Ideas.



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TORONTO

The Beaver Circle.

Our Junior Beavers.

[All children in Second Part and Second Books, also those in Third Book, if ten years of age or under, will write for "Junior Beavers," which will appear as early as possible each month. Please address letters to "Junior Beavers' Dept."]

The Discovery of Peter Thomas Trot.

I'm just a little boy; my name is Peter Thomas Trot. But I have found out something That some bigger folks have not. I've found out why some weather's cold, And some is very hot.

If you'll come out on our back porch You'll see the reason why Our winters are so very cold. Our summers hot and dry. They call it a "ther-mom-eter". It's on a nail, up high

There are words and numbers on it. But I can't read all they say. And a little silver finger To show just what kind of day. And when it points to any place, You have to feel that way

I've watched it every day; it hangs Always in that same spot; And when it points to ninety, Why, the weather's always hot. But if it stops at ten or twelve, 'T will freeze, as like as not.

Sometimes the little finger Half-way up will stop and cling; And then the weather's lovely, And the birds begin to sing; And Mother puts my straw hat on, And says that it is spring.

Now, if I take my hatchet, and Just give a little chop, And cut some of the numbers From the bottom and the top, The hottest and the coldest days Will surely have to stop!

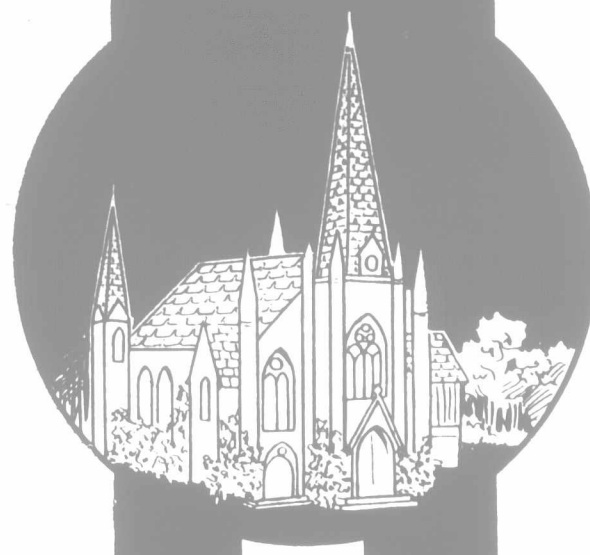
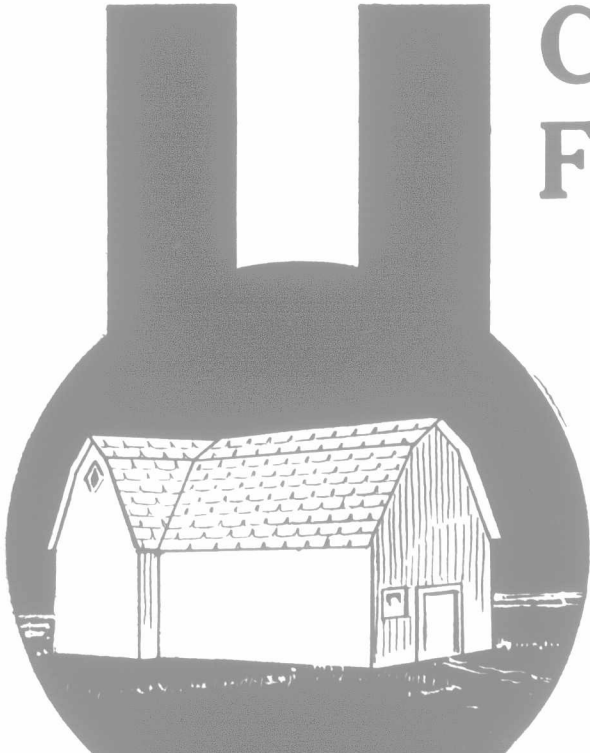
My papa thinks that I have made A great "dis-cov-er-y," And says if Mr. Edison Should hear about it, he Would want to go in partnership. When I'm grown up, with me! —Pauline Frances Camp, in St. Nicholas.

Our Letter Box.

Dear Puck and Beavers All,—I just think I will tell you about my party that ma gave me on Hallowe'en. Mother wrote the invitations out for the girls to come at 3 o'clock till eight, and they were all on time, and the first thing we did was to go to the woods and play house in the leaves, for we have a lovely woods on a hill, and when we are on the hill we can see for miles around. Then we went to the house, after we had a lot of fun, for my uncle came in his auto from the City of Toronto, and the girls wanted to see it, and then we played till tea-time. Mother had the house all lit up with cut pumpkins, and the table was lit with pumpkins, and we had lots of cakes, and tarts, and pies, and candies, and lots of other things, and after tea we hung apples up to see who could bite them, and not one of us

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For any permanent structure, whatever its cost or use, the modern metal shingle is the **ONLY** roofing worth any man's consideration. For it, and it alone, has every good quality a roof should have, and it, and it alone of all roofings, lacks every bad quality. But there are degrees of goodness in metal shingles. You must choose wisely. You will not go wrong if you roof with



Preston Shingles are made from heavy and imperishable metal, thickly and smoothly galvanized with a coating that contains 98 per cent. of pure zinc. Thus they easily pass the rigid bending and acid tests of the British Government. That insures them against rust, and their buyer against roof-troubles. No other metal shingle is made so well, and none will last longer. Ask us what this test is. Preston Safe-Lock Shingles make a roof that is absolutely proof against fire—a roof that the wind cannot rack a little bit—a roof that moisture cannot get

Fire Defying

through at all. For these are the shingles, and these alone, which positively **LOCK ON EVERY EDGE** with a grip that is so strong and tight it almost makes nailing needless. Next to the galvanizing—which is the most vital thing about a metal shingle—the lock is a point you should most carefully look into before you invest. Let us send you a "Preston Junior"—a little shingle imitating closely the construction of **OUR REGULAR OUTPUT**. Study it, and you will admire the patented Safe-Lock that only we can use. Ask for it.

Never Leaks

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Preston Safe-Lock Shingles are easily laid. No special skill or unusual tools are necessary. Fewer nails are needed than other metal shingles demand—the safe-lock cannot spring nor the shingles warp or twist. Every nailhead is covered. Therefore these roofs never leak—because rust simply cannot get at the nails. Preston Safe-Lock Shingles are sold with the warranty that—if properly put on, according to simple directions—**LIGHTNING CANNOT HARM THE ROOF WITHIN TEN YEARS**. These roofs are easily good for fifty years' reliable roof-service. Thus they are the cheapest good roofs money

can buy. Wood shingles actually cost—in cost-per-year—many times our price. "Ready" roofings are a wretched make-shift, and their cost per year is downright extravagant. Don't waste your money on a roof that can't last. You should send for, and read, before you roof anew, a truth-telling **FREE** book that many have read to their profit and satisfaction. It tells about **EVERY** kind of roofing. It goes into the subject fully and in plain words. You would be willing to pay for it after you've read it—but you are welcome to it for nothing. To-day would be a good day to write and ask for it. Use a postcard if you wish. Address—

Costs Little

Edolph
Manager

Metal Shingle & Siding Co., Limited
Queen Street Factory, Preston, Canada

could. Mother had a prize for the one that could, and no one got it, and then just before it was time to go home, mother had a box of chocolates for each one hidden, and their name on, and each one had to find their own. It was good to see us all with false-faces on, and all dressed up. I will close, as this is my first letter, and it is so long.

MADELINE DRAPER,

Whitby, Ont. Age 9, Senior 11

Now tell us about your Christmas—won't you, Madeline?

Dear Puck,—I live on a farm near Rockwood. I have a little pup called Carlo. I have a little colt called Teddy. I just have one little brother, called Robbie. He is five years old. We keep about sixty White Wyandotte chickens, and have some bantams of our own. Papa and mamma took Robbie and me

into the fat-stock show at Guelph. I am 8 years old. I will close this time.

FREDDIE CROFT,

Rockwood, Ont.

Dear Puck and Beavers, I am very thankful on seeing my first letter escaped the w. p. b. My papa has taken "The Farmer's Advocate" for nearly fifteen years. I like reading the Beaver Circle letters, and most of the little girls in the Junior Circle are just my age.

I like going to school very much, and our school is about half a mile from our place. There are seventeen scholars come to school, eight boys and nine girls. Our school stands on the corner of Adelaide St. and Seventh Concession, facing east on the seventh. My name is about half a mile up Adelaide St. We have about an acre for play ground. There is one tree in each tree in the corner of corner and a tree in the corner. I thought I would like to see you in

ity, but then changed my mind, and will wait till I get a little better acquainted with the Circle.

As I have now taken up too much room, I will close, wishing the Beavers every success in their compositions.

NELLIE WYATT,

Age 8, Book 11.

Middlesex Co., Ont.

P.S.—I would be very pleased if some of the girls would correspond with me.

A Note to the Senior Beavers.

I am sorry we could not announce the results of the competition sooner, but you see, so many letters had come in before the competition letters. But look out for the prizewinner in January.

Next to wood alone but in deed to love one another? Love-fellow

The Frontiersman.

By Richard Wrightman.

The suns of summer seared his skin ;
The cold his blood congealed ;
The forest giants blocked his way ;
The stubborn acres' yield
He wrenched from them by dint of arm,
And grim old Solitude
Broke bread with him and shared his cot
Within the cabin rude.
The gray rocks gnarled his massive hands,
The north wind shook his frame ;
The wolf of hunger bit him oft ;
The world forgot his name ;
But 'mid the lurch and crash of trees,
Within the clearing's span
Where now the bursting wheat-heads dip
The Fates turned out a man !

Who does the best his circumstance allows,
Does well, acts nobly—angels could no more.
—Young.

Does YOUR Face "Break Out?"



If so, why not have it cured? We've been engaged for over eighteen years successfully treating bad complexions, curing skins spotted and blotched with bair, pimples, blackheads, pustules, and all forms of acne.

IF YOUR NOSE IS RED

And you've tried everything in the hope of clearing it, write now, or call and see us regarding

OUR HOME TREATMENT

It positively cures. We care not how chronic the trouble is. We don't make empty statements about our remedies, but state positive facts.

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Moles, Warts, Red Veins, "Cowlicks," etc., destroyed absolutely by our reliable method of Electrolysis. Satisfaction assured in each case. Booklet "F" mailed free to any address, with sample of toilet cream.

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Horses, cattle, hogs and poultry not a stock food, but a scientific blending of roots, herbs and barks; makes good solid flesh naturally, not artificially; does not bloat; acts directly on digestive organs. Costs less, by increasing nourishment from food given. Makes pure blood, and cleanses the system. Try it for scratches, stocking-coughs, colds, distemper, indigestion, worms, bots and skin disease.

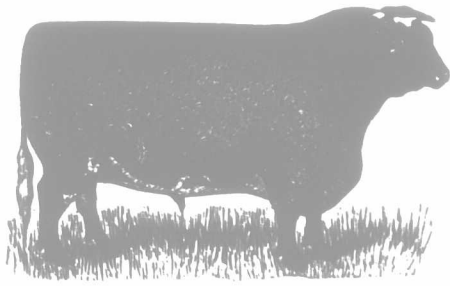
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The standard for over 30 years. Large can 50 cts., prepaid. Send for our veterinary booklet.

At most dealers, or
PALMER MEDICAL CO.,
Windsor, Ontario.

Hearts that change not, love that cannot cease,
And peace be yours, the peace of soul in soul!
—Tennyson.

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Tuesday
January 24, '11

25 Head—4 Bulls

All the herd but one imported of directly descended from imported stock. Many sired by Imp. Sittyton Vicer (87397). All females of breeding age are in calf to Contender 72512. Breed ng the best. Watch the Gossip column. Conveyances will meet morning trains at Milverton, G. T. R. and C. P. R. Sale under cover.

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J. BRYDONE, Milverton, Ont.

The Garden of a Com-muter's Wife.

(By Mabel Osgood Wright.)

CHAPTER VII.—Continued.

"Oh, I didn't go over on purpose, dear child," said father, quite innocently, drawing me down for his twenty-five kisses. "I often make my trip to the hospital early to take them unawares. It is well, you know, sometimes. Yes, to be sure, this is rather earlier than usual, but then, daughter, I wanted to have a longer day with my children at home."

Meanwhile Delia brought in the coffee biggin and lit the lamp (I make the coffee, Martha being too thoroughly steeped in English tea-making to compass the mystery). Still Evan did not sit down, but fidgeted about by the window.

Seeking the cause, I too looked out, and there on the piazza was what at a glance seemed to be the stock in trade of a nurseryman, all arranged systematically. There were bags of bulbs, rows of prickly though leafless roses with their roots tied in balls of moss, topless herbaceous plants, only identifiable by their labels; a line of well-grown shrubs leaned against the house, their roots also protected with moss, while in the walk, quite safe and sound reposed the sundial. Evan had not only unpacked and sorted the modest supply of things I had ordered, but supplemented them by those which he knew we should need, and, being slow of growth, ought to be planted without delay.

Father and Evan are never so handsome or happy as when they have planned a surprise for me, and as they are doing this almost every day, you can easily judge of the personal appearance and temper of my two lovers without further description.

In order to give each his due, I pushed over three chairs close together on one side of the table, and sat in the middle one myself.

When the second part of the breakfast should have appeared, a lull occurred, unnoticed at first, there was so much to talk about. However, as we all wished to go out, after a reasonable time I rang for Delia, who had disappeared, and told her to serve the steak.

She opened her mouth to speak, changed her mind, went into the pantry, where I heard whispering. In a moment Martha Cokle appeared in the doorway, her hands clasped over a faultless white apron, her bosom heaving.

A shocked expression jarred her countenance as she saw us all in a bunch on one side of the table, as if blown there by a storm. I must acknowledge that we were not behaving in a conventional British breakfast manner. Evan had stuck roses in my hair, and I had put one in every buttonhole of his velveteen coat, which he wore over a sweater, while a single bud was tucked over father's nearest ear—a fact of which he was blissfully unconscious, as he gave Martha the kindly and fraternal smile with which he invariably greeted her over the top of his paper, having refrained from handshaking since the night of our arrival.

"The steak is gone, Mrs. Evan, stole and gone, ma'am, by what ways it isn't for me to say. It was as fine a cut as ever I've handled, leastwise in this 'ouse. Two and a quarter in weight, without the end that I always trims off for the soup stock, Mrs. Evan. It was there when I cast my eye through the ice-chest after last night's dinner; this mornin' it was gone."

"Could the dogs have helped themselves to it?" suggested Evan, chuckling at Martha's perturbation. "You might have taken it out without thinking and left it on the table, you know," he said to her. "I remember once long ago that you rowed a lot about my taking a cold fowl and a ham shank to make a feast for some boating chaps, and my mother reminded you that we ate them the day before in a pie!"

"Mr. Evan, a sober woman doesn't so mistake herself twice. That was when I was but fresh widowed and my prospects gone, and I well remember how it turned me about. It was twenty years—"

"Yes, but now—and the meat, that is the question. Cook us some eggs, and we'll track the steak later."

"Mr. Evan, sir, I can't deal with eggs until I'm cleared of that steak." Then, lowering her voice, "I do think that terrier, Pat, is the likeliest to have ate it, though Delia says it was those hinnercent 'ounds." Mrs. Cokle spoke with unusual correctness for one of her class, only lapsing when under great excitement.

"Mrs. Evan, ma'am, in my 'umble opinion, Pat is the only one of the dogs tricky enough to make way with meat and dish besides," she added, as a convincing argument.

"The dish!" I cried. "No dog would take the dish."

"Yes, Mrs. Evan, the dish is gone, a plate of one of the old kitchen set, of whom there's but a few left, with a blue picture drawn out on it."

"Steak gone, plate, picture?" queried father, suddenly emerging from behind his paper and dropping it, while a flush struggling with a half-guilty, half-confused expression, crossed his face.

"Well, Barbara, that is, you see—the fact is—I took that steak last night, and forgot to replace it. I've been visiting that poor Baker woman who is so run down and has a cough. You know her, Barbara; she used to sew here, sometimes—but born a lady, and with the sensitiveness of one. She needs meat. Cheap slops and medicine won't build her up; but she is too poor to buy it, and it would offend her if I offered her money or ordered meat direct from the butcher."

"Last night as I was going out I looked in the ice-chest for some little knick-knack that I could carry her as a home product, you know—quite a different thing, I take it, from food purchased on purpose. The steak was exactly the thing she needed—would last her three days; and that old blue plate she was sure to recognize as ours, so I took them together, and forgot to mention it or buy another steak. You see, my dear, you understand?"

"Of course I did, of course Martha Cokle did not; but appreciating a man's property rights in his own ice-chest and contents, she retreated, technically if not entirely satisfied, and sent us in irreproachable poached

POULTRY AND EGGS

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

EXCLUSIVE breeder of pure Barred Rocks. High-class stock for sale at reasonable prices. Leslie Kerns, Freeman, Ontario.

FOR SALE—Snow-white Leghorns, cockerels and pullets, highest-scoring quality, single-combed. Robt. Hughes, Ideal Poultry Yards, Collingwood, Ontario.

FEATHERS WANTED—We buy Goose, Duck, Chicken, and Turkey Feathers; highest prices paid. Write for price-list. The Imperial Waste & Metal Co., Queen St., Montreal.

FOR SALE—Imported White Wyandotte Cockerels. From Goodes, winners of many firsts and special prizes. William Rummy, Nelson, Ontario.

FOR SALE—Toulouse Geese, two dollars and twenty-five cents each. (Order quick.) Emerson Tufts, Welland, Ontario.

FOR SALE—Bronze Turkeys, won first, second and third, London Show. Also choice Partridge Wyandottes. R. G. Rose, Glanworth, Ontario.

FOR SALE—Cocks and Cockerels, R.-O. Rhode Island Reds, Buff Orpingtons, S.-L. Wyandottes, W. Wyandottes, R.-C. Brown Leghorns, S.-C. White Leghorns. Prices, \$1.50 to \$5.00. Also a few choice Leghorn Pullets. W. H. Furber, Dunganon Poultry-yards, Cobourg.

RHODE ISLAND REDS of high quality; also Single-comb Brown Leghorns (Becker's strain). W. J. Bunn, Spruce Grove Poultry-yards, Birr, Ontario.

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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.

CHEESE FACTORY FOR SALE—In good dairy district; well equipped; everything in good repair. For particulars apply to: J. A. Thistles, St. Paul's, Perth Co.

FOR SALE—Iron, Pipe, Pulleys, Belting, Rails, Chain, Wire Fencing, Iron Posts, etc.; all sizes very cheap. Send for list, stating what you need. Agents wanted; good commission. The Imperial Waste & Metal Co., Queen St., Montreal.

MARRIED couple desires situation on farm. State wages. F. Grimble, 39 Gould Street, Toronto.

VANCOUVER ISLAND offers sunshine, mild climate; good profits for ambitious men with small capital in business, professional, fruit-growing, poultry, farming, manufacturing, lands, timber, mining, railroads, navigation, fisheries, new towns; no thunder storms; no mosquitoes; no malaria. For authentic information, free booklets, write Vancouver Island Development League, Room A 102, Broughton St., Vancouver, B.C.

WANTED—Good farm hand, single, by the year. W. C. Good, Brantford.

The Delhi Tannery Wanted—2,000 horse and cattle hides to tan for robes, coats, etc. All kinds of hides, skins and furs dressed soft and pliable. Deer-skin for buck, or with the hair on. Send them to me and have them dressed right. B. F. Bell, Delhi, Ont.

RIVERSIDE HOLSTEINS

8 choice bulls 6 to 9 months old, sired by Sir Pietertje Posch DeBoer and Prince DeKol Posch; latter is the only son of champion cow, dairy test, Guelph, 1908 and 1909, and out of R. of M. dams.

J. W. Richardson, Caledonia, Ont.

Haldimand Co. Long-distance phone.

eggs, and the dish of toasted bacon that, together with kidneys, always makes us forget her shortcomings in coffee, and the awful duck-on-rock bread she perpetrates. This bread is of the consistency of clay, and is called a "cottage loaf." You can't slice it; the native whittles it up with his knife, as one does a pencil. At present we live on toast, the

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THIS YEAR I'LL USE
NOTHING BUT

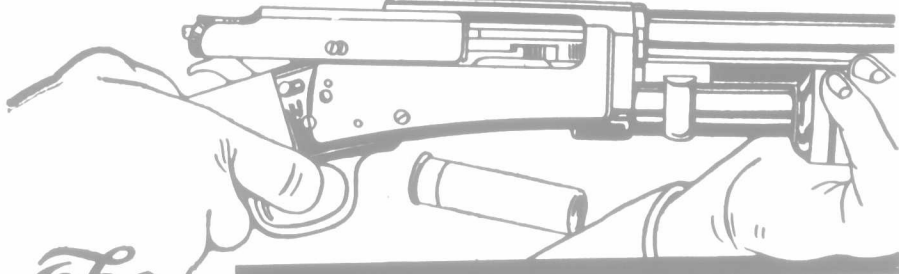
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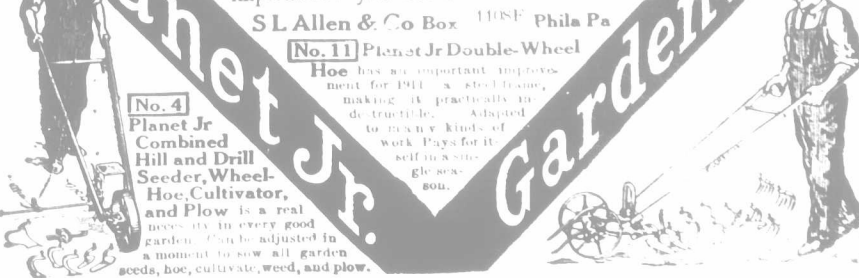


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Made famous by its dependability. The solid top and side ejection keep gases and powder away from your eyes; help quick, effective repeat shots. Rain, sleet, snow and foreign matter can't get into the action. The mechanism is strong, simple, wear-resisting. The double extractors pull any shell instantly; two special safety devices prevent accidental discharge while action is unlocked, and an automatic recoil block makes bang fires harmless. All Marlins are strongly made, finely balanced, accurate, hard hitting guns, and are the quickest and easiest to take down and clean. Illustration shows Model 24 grade "A" 12 gauge; it has all the features that make for a perfect gun. Send three stamps postage today for our 136 page catalog describing the full Marlin line. **The Marlin Firearms Co.** 118 Willow Street New Haven, Conn.

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The Planet Jr 1911 illustrated catalogue is a complete guide to lighter farm work, better crops, and more money. Every farmer and gardener should possess it as soon as the mail can bring it. What's the sense of drudging when you don't have to? Write today, and let this free book help you select the labor-saving implements you need.



WRITE FOR THE NAME OF OUR NEAREST AGENCY

basis supplied by an itinerant baker. Later, I shall doubtless get up my courage to ask her to take lessons of Mrs. Mullins, an old ex-cook.

The commuter's wife should have a hen rampant as her coat of arms, and adopt it as her patron saint. I swear daily gratitude to this commonplace and songless bird—for, given eggs, my household need not go breakfastless either to town or to hospital. Both father and Evan are not only satisfied but eager for eggs at breakfast and other odd times. They may be cooked in any of a dozen ways, or at a pinch not cooked at all, but shaken up in a deft way with a few other ingredients. If a man regards eggs seriously, there is no need for him to run to the train breakfastless, leaving wife or maids in a state of exhaustion, one having stayed awake half the night to wake the other. A late unsavory breakfast is never pardonable, for fruit needs no cooking, and good coffee, a cereal, hot toast, and eggs "a l'infinité" can be as well gathered together in half an hour as in half a day. You see, a country doctor's daughter has a good chance to learn the ways of ministering to the physical needs of a man who must always be well fed, though often not lengthily.

The bacon and eggs had scarcely disappeared and father had begged a third cup of coffee in honor of my birthday, when there was a vigorous scratching at the back door. I had been wondering all the time what had become of the dogs, who usually were the first to take their places either under the table or beside the chairs of their favorites.

I could hear Tim outside, admonishing them and evidently trying to chide them into order, which was instantly departed from the moment the door opened. They entered like rockets with a flash of color. Lark, Pat, and the hounds ran to me with every symptom of joy. Bluff alone crawling under the table with an evident desire to hide. Each dog had a red ribbon tied around his neck, from which hung a large pasteboard heart, bearing a birthday greeting and a quotation, something of the penny Valentine order, appropriate to, if somewhat derisive of, gardening.

One by one, much to the relief of the dogs, I gathered in the trophies, stringing them on my arm as I used to the hoops of wonderful paper flowers that were used as favors at the dancing-class cotillions that vexed my youthful spirits. I called Bluff to yield his ribbon, but he would not come out.

Father commanded him in an unmistakable voice, and then he crawled groveling to his feet, as if in abject terror, the cardboard heart chewed to pulp, in his effort to get rid of it.

"I believe he thinks the dangling thing some sort of a punishment for an unknown crime," said father. "Once when he was a year or two old, I tied a quail about his neck to punish him for eating some game he should have retrieved, and I believe the old fellow remembers it. Untie the ribbon, Barbara, and see what he will do."

The moment the bow was loosened, I tossed the whole necklet across the room, out of sight. Bluff sat up, still trembling and looked about, then, with two joyful barks, gave me his usual caress, the veriest scrap of a lick on the nose, and, with self-respect restored, began to coax for toast.

By this time the sun was shining bright and strong above the maples, and the air blowing through the door that the dogs had burst open was full of unexpected softness. Father and Evan disappeared each to his lair, to return simultaneously armed with pipe and tobacco pouch, which promised me two outdoor companions. For these beloved men, in strictly avoid saturating the mind with pipe smoke, knowing without a word from me that a woman's sensitive organization has the power of a lightning rod.

Then we three strolled down toward the long walk to take the first step toward capturing the Garden of Dreams, that I might live my life in it. A song sparrow sang merrily, a bluebird perched away from the Mother Tree, the soft bright air bore the fragrance of Russian violets, and a bit of the tangle was gay with the hardy pompon chrysanthemums, tawny, red, yellow, pink, and white. My heart beat joyously, for love held me by either hand, and before me there was work to be done, and work is life. Still, it is the first day of November! Fie upon you, melancholy autumn poets!

VIII.

SETTING THE SUNDIAL.

November 1 (continued). Last night I told Evan my plan of turning the old strawberry bed into a bit of formal garden, and he agreed that it would be a natural resting place for the eye in its journey from the seat under the apple tree down the walk and across the fields.

He emended the somewhat crooked design that I had traced on a slate found in the attic desk, and made me a fascinating water-color sketch in which the strawberry bed appeared as a small level lawn, in the center of which stood the sundial, acting as the hub to a large, wheel-shaped flower bed, or, rather, group of beds, as the wide spokes, each of a different but harmonizing color, were separated by narrow grass walks. A similar walk circled the spokes, and was bounded in turn by a circular bed that might be called the tire of the wheel, and divided the grass walk into four, in order that one might get to the center without walking through the outer bed. Four graceful wing-shaped beds filled the corners of the grass plot, which by actual measurement proved to be forty feet square. This plateau was on three sides enough higher than the surrounding ground to allow an arbitrary grass slope of two feet, with a couple of steps where the long walk joined it.

Without suggesting what plants should be used—that is to be settled on some dreary day in midwinter when the first seed catalogue appears, bringing its tantalizing mirage of possibilities—Evan washed in a color scheme that he knew would satisfy my rather savage taste, and make this formal bit a blaze of light without the aid of a single "foliage plant." For it is really astonishing how few colors are in harmonious when they are profusely massed and have green for a background.

One thing we decided about my Garden of the Sun, as Evan calls this formal bit, because it stands out in the open, entirely without shelter. It is to contain only the perishable summer flowers, really flowers of the sun, and fit companions for the sundial. Gorgeous blossoms that come into being in June after the hardy roses have vanished, and glow and blaze until they fairly bloom themselves to death, before the frost touches them.

Of these flowers, some are annuals, and others tender perennials or so-called florists' flowers that it is always a mistake to mix with bulbs or hardy perennials, for in the early season they are overpowered, and in their turn choke the hardier plants, exhausting the goodness from the soil by their rank growth.

As for the spring bulbs, I do not like them in set beds, each of a kind, and arranged in stripes or figures, any more than I do the formal beds of foliage plants. Grown in this way, as soon as the bulbs are out of bloom they must be replaced, or the space will look ragged and unsightly. This does away with the natural seasons of the garden. I think that one of the greatest charms of nature to women is that she is, like ourselves, a creature of moods, phases, seasons, and not always equally radiant.

Her wild garden has its spring, summer, autumn and winter seasons.

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one waxing as another wanes. I think the cultivated garden should follow the wild plan, and, while it must yield flowers in some part during the whole growing season, it ought not to be coerced and stuffed like pate geese, and every bed expected to be in full bloom at all times.

Besides, this constant pulling up and replanting entails labor not within the power of the commuter's wife, who, if she is wise, plans as far as possible for the permanent, so if she is obliged to neglect her flowers for a time, garden baldness will not result.

Evan says that if gardening is to be my relaxation and a pleasure, I must pursue it, but be very careful that it does not get the upper hand and pursue me, for he has seen this turning of tables not only cause the downfall of many gardens, but of country homes, as well.

If, a few days ago, Cris had put the sand where he was directed, I should have planted my bulbs in the wrong place. During the delay, Evan discovered that the grassy stretch outside the study and windows of our den, where father tramps to and fro and smokes when he is thinking, looked bare, and something was needed to shield the foundation of the house.

This is a dry and sheltered nook, and an ideal location for bulbs, if they are planted well forward of the path and drip-line of the eaves. Evan has marked out two curving beds that follow the line of the path that goes to the rear door, and I am massing all my bulbs in them—daffodils, narcissus, hyacinths, tall late tulips, the golden-banded auratum, pure white madonna (candidum), and pink and crimson spotted Japan lilies. I shall plant them in groups, not rows, according to height, rather than color, so that, by scattering some portulacca seed in June, the ground will be covered beneath the tall stalks of the later flowers, and we shall have color under the windows from April until October. There are no plants more healthy, sturdily brilliant in bloom, and unlikely to disappoint, than the bulb tribe.

These are the only two flower-beds to be allowed out of strict garden limits, as we have decided that all the other decorations grouped about the house must be tufts of eulalia, various shrubs, and groups of scillas, daffodils, peonies, and iris set in the grass. The older shrubs we have in plenty—great masses of lilacs, syringas, and snowballs filling every corner and overarching the walk. Our ancestors were aided by their usual common sense regarding economy of labor when they gathered their little home gardens in a corner, often fencing them in from the rest of the land. Here the flowers could be considered as a whole, be loved, tended, watered, and protected from insect enemies without waste of energy.

Upon this same principle I must collect my flower family under one roof, so to speak, keeping them in such order that I may not only enjoy them freely, but minister easily to their needs quite out of range of highway criticism. Not that I object to being seen weeding, watering, tying, and insecting in a perspiring and collarless condition, but I do not wish to be pounced upon by every patient that calls and be expected to take them into my sanctuary, there to prowl and despoil me of garden privacy or flowers, after the custom of the idly curious. It is something of a responsibility, of course, to be one's own gardener, but an infinite satisfaction withal to feel that the making, and even the marring, is within one's own grasp. That is, as far as things agricultural are ever within the power of a mere human. For as a humbling and God-fearing occupation, none can exceed the gardener's. Mother Earth has ways of trying and proving the temper, or lack of it, that cannot be surpassed for variety.

(To be continued.)

The Quickest, Simplest Cough Cure.
 Easily and Cheaply Made at Home. Saves You \$2.

This recipe makes 16 ounces of cough syrup—enough to last a family a long time. You couldn't buy as much or as good cough syrup for \$2.50.

Simple as it is, it gives almost instant relief and usually stops the most obstinate cough in 24 hours. This is partly due to the fact that it is slightly laxative, stimulates the appetite, and has an excellent tonic effect. It is pleasant to take—children like it. An excellent remedy, too, for whooping cough, sore lungs, asthma, throat troubles, etc.

Mix 2 cups of granulated sugar with one cup of warm water, and stir for 2 minutes. Put 2 1/2 ounces of Pinex (fifty cents' worth) in a 16-oz. bottle and add the Sugar Syrup. It keeps perfectly. Take a teaspoonful every one, two or three hours.

Pinex is one of the oldest and best known remedial agents for the throat membranes. Pinex is the most valuable concentrated compound of Norway white pine extract, and is rich in guaiacol and all the other natural healing elements. Other preparations will not work in this formula.

The prompt results from this recipe have endeared it to thousands of housewives in the United States and Canada, which explains why the plan has been imitated often, but never successfully.

A guarantee of absolute satisfaction, or money promptly refunded, goes with this recipe. Your druggist has Pinex or will get it for you. If not, send to The Pinex Co., Toronto, Ontario.

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Cowan's "Perfection" Cocoa

Is absolutely pure, strong and healthful. Delightful in flavor, nourishing, economical. Cocoa should be boiled three or four minutes in either milk or water to produce best results.

The Cowan Co. Limited, Toronto. 86



Mrs. Smith was interviewing a cook. "Yes," she said, at last, "I will engage you, providing your references are satisfactory. By the way, I suppose you have references." "Well, ma'am, I did have some, but I tore them up." "Dear me!" said Mrs. Smith, "surely that was a very silly thing to do"; at which the cook replied, "Well, ma'am, you wouldn't have thought so if you had read them."

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The natural loveliness of the charming girl set in a background of ripe, golden grain will appeal to all lovers of art.

Place the calendar anywhere in living room, parlor or dining room, it will harmonize with the decorations and form an attractive picture which will be pleasing to look upon.

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QUESTIONS AND ANSWERS. Miscellaneous.

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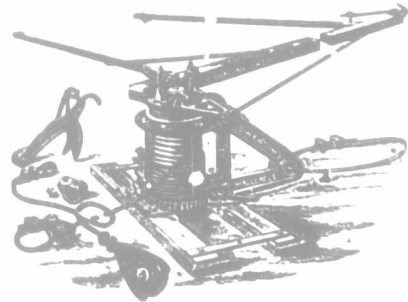
1. Is it good for horses and colts?
2. I have a mare, four years old. She has a cough, and I think a slight touch of heaves. Would it be good for her?
3. Would it be hard on a young horse's teeth?

Ans.—1. Silage is not especially adapted for horses, but a small amount of it daily, on account of its succulent nature, is probably beneficial. The horse will likely regulate the amount.

2. There is nothing in silage itself that gives it a heave-curing value, except that it is moist. No dusty hay or other feed should be given to a heavey horse, and if the heaves are just beginning a recovery might be possible by light hay feeding, and by always avoiding dust in the stable or on any of the feed. In so far as silage serves this end, it will be valuable. Wet the hay and oats with lime water, after shaking off all dust, keep the stable well ventilated, and give an ounce of Fowler's solution of arsenic twice daily. One to three ounces of raw linseed oil daily is also advised.

3. No.

Stump and Tree Pullers



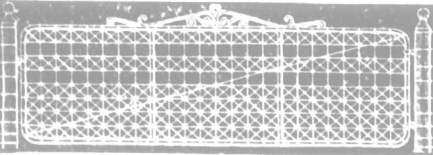
We are the largest manufacturers of Stump, Brush and Tree Pullers in Canada, and the only ones making Malleable Machines. We have these machines adapted for all kinds of work, and sell them on a guarantee to be better than anything else made. Write for Catalogue "A."

CANADIAN SWENSONS, LIMITED
Lindsay, Ontario, Canada.

The heavy-duty-welded, solid-piece frame gives strength and stiffness to

Peerless Form and Ornamental Gates

We build Peerless gates in just a few minutes. They are time handy, convenient, and durable. They remain staunch and strong under all kinds of rough usage.



made of heavy steel tubing electrically welded into a solid piece. The Peerless gate is a real Peerless. It saves expense and is a real Peerless. We also have a Peerless gate with a top of exceptional strength. Write for free book.

THE BANWELL HOXIE WIRE FENCE CO., Ltd., Hamilton, Ont., Winnipeg, Man.

GOSSIP.

John Elder, Hensall, Ont., writes under date December 24th, 1910, that he has sold to Samuel H. Farrell, Pine River, Ont., one of the young Shorthorn bulls recently advertised by him in "The Farmer's Advocate," and that the purchaser, after visiting a number of herds, pronounced the bulls offered by Mr. Elder the best he had seen, and considered a number of them show animals.

Jno. Semple, of the firm of Semple Bros., Spring Hill Stud Farm, Milverton, Ont., and La Verne Rock Co., Minn., U.S.A., importers of high-class Clydesdale, Shire, Norman and Percheron horses, says for his native land on January 6th, 1911, for his second shipment since August, 1910. Mr. Semple seems to have the stock that is so much sought after, and also begs to thank his many friends for their kind patronage in the past.

D. C. Flatt & Son, Millgrove, Ont., advise us that they have recently sold to Byron Stephens, of Bridgen, Ont., to head his noted herd of Holsteins, the grandly-bred young imported bull, Sir Albino Segis. The dam of this young bull, at twenty-four months old, gave 72½ lbs. milk in one day, and made over 20½ lbs. butter in seven days. This bull is described as an excellent individual, as well as having the finest of breeding and official backing. Mr. Stevens also took with him the heifer Francy Calamity Snowdrop. Her sire is a son of Francy 3rd, the great Canadian-bred butter cow.

BUSINESS METHODS IN FARMING.

Farming is a business, and when conducted on a proper basis, is as remunerative as most pursuits, considering the capital invested. The multiplicity of its details, and the diversity of its many features, have an overwhelming influence upon too many engaged therein. They feel the need of greater care and study along all lines, but not knowing where to begin, too often do not begin. A good place to start is with the machinery. By using the best, great improvements and increases are wrought.

There are many farmers working along year after year, depending largely upon the weather and market prices for a successful season, who could increase their yield of crops, reduce working expenses, and add greatly to their profits by adopting improved time- and labor-saving Planet Jr. tools in their work.

The well-known Planet Jr. farm and garden tools are great time- and labor-saving implements. They frequently do six men's work, and enable the farmer to get larger and better crops with half the labor and expense.

Every farmer who is desirous of improving his farm and garden and adding to his profits, should procure the Planet Jr. catalogue, which will be sent upon request, by addressing S. L. Allen & Co., Philadelphia, Pa., manufacturers of Planet Jr. tools.

This catalogue contains a complete description of the different types of time- and labor-saving implements, seed drills, wheel hoes, horse hoes and cultivators, potato diggers, riding cultivators, and orchard and beet cultivators, and fully describes their purpose and how they can be used.

TRADE TOPIC.

Dr. Hess' Poultry Panacea is claimed to be a tonic formulated with scientific exactness, and containing elements which medical men have recognized for generations as beneficial to the digestive organs. Any interested person may test the truth of these claims by putting Panacea to the test. A week's feeding, following the directions which the manufacturers give on the package, will suffice; and if anyone tries it and isn't satisfied that it is the greatest preparation known for indigestion, he can go to the dealer who sold it to him and ask for his money back.

She: "I don't like her."

He: "Why? I saw you kiss her yesterday."

She: "Yes, but that's all we do. We hardly speak."

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. No truss could hold. Doctors said I would die if not operated on. I fooled them all and cured myself by a simple discovery. I will send the cure free by mail if you write for it. It cured me and has since cured thousands. It will cure you.

Fill out the coupon below and mail it to me today

Free Rupture-Cure Coupon

CAPT. W. A. COLLINGS,
Box 653 Watertown, N. Y.

Dear Sir:—Please send me free of all cost your New Discovery for the Cure of Rupture.

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

WRITE TO THIS WOMAN

IF YOU WANT TO STOP A MAN FROM DRINK

She Cured Her Husband, Her Brother and Several of Her Neighbors and Prompted by Her Restored Happiness, she Generously Offers to Tell You of the Simple, Inexpensive Remedy that she so Successfully Used.

For over 20 years the husband of Mrs. Margaret Anderson was a hard drinker, but nine years ago, by using a simple remedy, she stopped his drinking entirely. He has not touched a drop since.



MRS. MARGARET ANDERSON

She Will Tell You How To Stop a Man From Drink

The remedy can be given secretly, so there is no publicity of your private affairs. She wants every man or woman who has drunkenness in their home to write to her so she can tell them just what remedy she used. Hundreds have freed their homes from drink by using the information she gave them, but there are still hundreds of others who need and should have it, so we earnestly advise every one of our readers who have a dear one who drinks, to drop her a line to-day.

The proofs of the hundreds of really remarkable cures are too strong to be doubted or denied. Yet she makes no charge for her help, (she asks for no money and accepts none); so there is no reason why you should not write her at once. She only requests that you are personally interested in curing one who drinks. Send your letter with confidence to her home. Here is her address:

Mrs. Margaret Anderson,
183 Home Avenue, Hillburn, New York.
Note: (Write your full name and address plainly—do not delay)

Learn Bookkeeping at Home.

We teach you this by mail, also Penmanship, Arithmetic, Correspondence, Commercial Law. Our Complete Commercial course includes these subjects. All books and supplies free. One hundred other courses. Ask for what you need.

Canadian Correspondence College, Limited.

Dept. E, Toronto, Canada.

ECONOMISTS.

Jack Spratt could eat no fat.
His wife could eat no lean.
But now the two they will eschew,
And eat the humble bean.

GOSSIP.

RE-RECORDING PERCHERONS IN UNITED STATES.

The Percheron Society of America, whose offices at the Union Stock-yards, Chicago, Ill., for the past four months has permitted the re-recording of pure-bred Percheron horses previously recorded in some of the other associations, at nominal rates, in order to permit all members to get the registration of their stock straightened out. Many men have taken advantage of this opportunity, and, in response to many requests, the time limit for this work has been moved forward to March 31st, 1911.

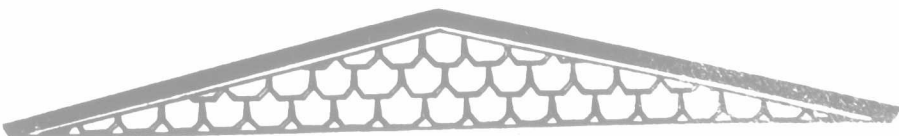
Canadian Shorthorn breeders will be interested in the announcement that early in March next, the noted herd of Dean Bros., of Heath House, Nocton, and Dowsby Hall, Bourne, Lincolnshire, trading under the style of S. E. Dean & Sons, will be dispersed by auction. Shorthorns from this herd have won many important prizes at leading English shows, and the herd stands high in the ranks of the best in Britain. Announcement of the date, with further particulars, may be looked for in these columns in due time. The renowned flock of Lincoln sheep, which, under the same ownership, has been so successful in prize-winning and sales for many years will, under the terms of the dissolution of partnership, be transferred entire to J. H. Dean, and will in future be carried on by him at Heath House, Nocton, Lincoln.

THE GREAT ANNUAL SHORTHORN SALE.

As stated in the advertisement in this issue, the great Canadian annual sale of selected Scotch Shorthorns, will be held at the Union Stock-yards, West Toronto, on February 8th and 9th, following the annual meeting of the Dominion Shorthorn Association. One hundred head of selected animals from eight high-class herds should afford a splendid opportunity for securing superior sires for herd-headers, and females for founding or reinforcing herds. The cattle contributed to this annual sale in the last two or three years have been strictly first-class, and there is every reason to expect that this year's offering will be equal to, if not better, than that of the previous years. Everyone interested should apply for the catalogue to Robert Miller, Stouffville, Ont., without delay, mentioning that the advertisement was seen in "The Farmer's Advocate."

TROUT RUN AYRSHIRES.

Every year shows a regular and steady improvement in the type, quality and productiveness of the Trout Run herd of Ayrshire cattle, the property of Wm. Thorn, of Lynedoch, Ont., about six miles from Delhi Station, on the G. T. R. The herd, now about thirty-five strong, is an exceptionally high-class one. Big size, big producers, strong, vigorous constitutions, ideal dairy type and good breeding, are characteristic of the herd as a whole, strengthened to a marked degree by having as herd-header that choice and well-bred bull, Holehouse Pilot (Imp.), whose splendid form and quality he transmits to his offspring. Two of his daughters, now in milk, Holehouse Flirt and Ayrshire Beauty, at two years of age, are showing officially phenomenal milk yields; of the former, 7,000 lbs. in seven months; the latter, within a few pounds of 4,000 lbs. in four months, and butter-fat test up to 4.2 per cent. Out of this latter heifer, for sale, is a four-months-old bull calf. Other great producers in the herd are Lady Cairn, with 9,000 lbs. in seven months to her credit; Dal-sible Aggie (Imp.), who, with 60 lbs. a day to her credit, has a bull calf eight months old by the stock bull. This youngster should be most alluring to anyone looking for a coming herd-header. Imp. Lessnescock Grace Darling, with 55 lbs. of milk a day to her credit, has a bull calf eight months old, by the stock bull, that is a coming header of a high order. All these young bulls are for sale, as well as a number of heifers of various ages, four of which are bred to freshen this winter. Mr. Thorn is also offering a number of pure-bred Toulouse geese at \$5 per pair, as well as a number of White Wyandotte cockerels, true in color and type.



How "Eastlake" Steel Shingles will save you money



Talk No. 1

Quality

By

The Philosopher of Metal Town

Bank your dollars on quality. Inferior quality, whether in building material or farm implements, is the source of constant worry and needless expense.

It's poor economy to save on first cost, and then—

Pay out two or three times the original cost in repairs, wasted time, inconvenience, etc.

In barn roofing much depends on quality—the safety of your crops, your implements and live stock.

"Eastlake" Steel Shingles are an absolute assurance of safety.

They are made of the finest and toughest sheet steel, perfectly galvanized.

The "Eastlake" workmanship is the best—careful inspection at each turn in the big "Metallic" shops guarantees perfection.

And perfection means satisfaction—a roof that lasts a lifetime.

"Eastlake" Steel Shingles are highest quality, yet cost you no more than inferior roofing that requires replacing or repairing in a few years.

And an "Eastlake" roof means clean rain water for household use.

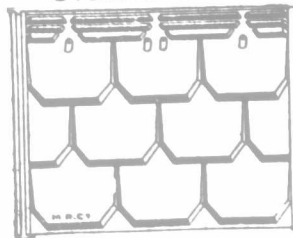
Let us send you our illustrated booklet, "Eastlake Metallic Shingles." Write to-day—just your name and address on a postcard.

We also manufacture Corrugated Iron, Barn and House Siding, Eavetrough, Conductor Pipe, Ventilators, etc.

The Metallic Roofing Co. LIMITED

Toronto - Winnipeg A60

"EASTLAKE" STEEL SHINGLES



NEXT TIME you are in need of a Tub or a Pail or a Fire Bucket, see that your dealer shows you the ones made of

EDDY'S INDURATED FIBREWARE

and buy no other. EDDY'S Fibreware is perfect in every detail; it is light, tight and durable.

POSITIVELY WILL NOT TAINT LIQUIDS.

Makes an A1 Pail for carrying milk.



This is the lock with the double-grip

You've heard a great deal about the Leader double-grip lock during the past two years. You'll hear even more about it this year, for its

fame is spreading

throughout the land. Because of this wonderful lock, the demand for Leader fence is rapidly increasing. We advise you to order at an early date.

Look at the Leader lock and you'll agree that nothing more simple in a fence lock has been devised. That's the beauty of it. There are no wonderful wraps, no fancy twists, to weaken the wire. But the ends do curve in such a manner that the lock

practically interlocks

itself, and produces the now famous double-grip. It's impossible to spring the ends of the Leader lock. And the vise-like grip of the Leader lock never relaxes. It's always doing its duty.

The Leader fence is built entirely of No. 9 hard steel wire. The galvanizing is very heavy and very smooth.

No better wire

was ever put into a fence, for the largest mills in the world make this wire to specifications we have proved are correct for Canadian requirements. Leader fence is a match for Canadian weather. From

zero weather to scorching summer, through snow and rain, it stands up stiff and erect.

defying rust,

resisting wear. The Leader is your kind of fence—the kind you will be proud to erect—the kind you will mark down, in later years, as one of the best investments you ever made.

LEADER FENCE



In almost every locality, we have competent agents to show farmers the proper way to erect Leader fence. If there isn't a Leader agency in your locality, perhaps you would like to be appointed. We've a mighty good proposition for you, covering a complete line of farm and orna-

mental fence and gates, and will lend you every reasonable assistance to close orders. Ask for full particulars.

Send for Leader fence booklet, which describes and illustrates the Leader fence and double-grip lock in a clear and interesting manner.

Frame & Hay Fence Company, Limited
STRATFORD, ONTARIO

QUESTIONS AND ANSWERS Miscellaneous

A DISSATISFIED TENANT.

I rented a farm on the owner's recommendation, and find out that it is very little good and will not pay expenses. The lease says either party can quit by giving six months' notice, in writing, after the lease has been in force one full year. The lease was drawn up in September. Possession was given first of March. The lease is for five years.

1. Had I quit this place last fall on account of its not paying expenses, could the landlord come on me for any damages if the place had not been rented for as much?

2. If the place had not been rented, could the landlord hold me good for next year's rent?

3. On the farm is a flowing well. It has been failing, and will not supply me with water. The well is repaired, but I have asked the landlord to repair it personally and by letter, but he gives no attention. If the landlord would not attend to it, can I hold back the rent, or are there repairs, or what are the next steps to take?

4. Because of the landlord's neglect, I have quit the place, and quit at the present time, without the landlord coming on me for damages. I have done all fall plowing and now am full work. A. C. B. R. H. E. T. Ontario.

Ans. 1. Yes.

2. Yes.

3. This may be provided by the terms of the written lease, but in the absence of such provision, it is hardly probable that you are in a position to withhold payment of the rent; but it may vary

Read this Offer

And note how easily you can make a good salary in your spare time, and have work where you are your own boss.

The Farmer's Advocate and Home Magazine has been for the past forty-five years, and is at the present time, an acknowledged authority on all agricultural topics. We are bound to hold this record, and we wish to extend our circulation and want you to help us.

The work is very pleasant, and you are in contact with a congenial class of people. You can undertake it without any expense, and we will pay you a very liberal cash commission. If you can spend your whole time at this work, we guarantee satisfactory remuneration.

Look up our premium announcements on pages 31 and 35 of this issue. These premiums are all excellent value, and we know you will be delighted with them. It requires very little effort to secure several or all of them. We are sending out a great many every day, and in every case they give great satisfaction. We would like to send one to you.

For sample copies, agent's outfit and full instructions to canvassers just send a postal card, and **do it now**, to:

CIRCULATION DEPARTMENT,
The Farmer's Advocate and Home Magazine
London, Canada.

Please Mention this Paper.

well be that you are entitled to bring an action against the lessor for non-repair.

4. It would seem from your statement of case, that you can now only take advantage of your right under the lease to give notice of quitting, and to quit in accordance with such notice. We have answered your questions as well as we can without seeing the written lease and having all the material facts before us. But it is possible that you may still be in a position to go upon the fact of misrepresentation and proceed against the lessor for damages; and we would therefore advise that, before paying rent, or otherwise dealing with the matter, you consult a solicitor personally, and be directed by him as to your proper and prudent course. We assume, however, that it was in September of 1909 that the lease was made, and we are inclined to think that you made a tactical mistake in doing fall plowing, etc., notwithstanding your discovery that the farm had been grossly misrepresented to you by the lessor.

VALUE OF ASHES FOR ORCHARD.

1. What are the constituting substances of unbleached hardwood ashes?

2. What is their value as a fertilizer for an orchard, taking the price of potash or commercial fertilizers as a standard?

3. Having an abundant supply, what amount of them would be most advisable to apply to each tree, the same being about twenty years planted and in a fairly healthy condition? FARMER.

Ans.—1. Good mixed wood ashes contain about 6 to 8 per cent. of potash, and from 1 to 1½ per cent. of phosphoric acid. The greater part of the balance is lime, in the form of hydrate and carbonate. It must be borne in mind, however, that the potash content varies a great deal according to the care the ashes have received, their dryness and the kind of wood from which derived. The latter variation is considerable, and bears no direct or constant relation to the density of the wood fibre. Some of the soft woods have a more valuable ash than certain of the hard woods. For example, analyses made at the Ontario Agricultural College some years ago, gave the following surprising results:

	Phosphoric		
	Potash	acid	Lime
Rock elm	6.68	.71	49.52
Swamp elm	35.37	.45	23.64
Basswood	9.39	5.28	33.42
Hard maple	9.32	2.03	45.24
Beech	7.58	1.39	41.21
Black ash	25.30	1.20	49.04
White ash	16.88	.93	37.14
Oak, red	5.75	.92	48.97
Oak, white	9.39	1.69	43.54

This goes to show the great importance of knowing what one is buying.

2. Figure the phosphoric acid as worth, at a conservative estimate, 5 cents a pound. Call the potash the same, though lately it has been purchasable for less. At this rate, ashes showing the average analysis represented in answer to question one, would be worth 35 to 40 cents per cwt. Ashes from some kinds of wood would be worth more, and from others less.

3. Do not apply ashes at the rate of so much per tree, but so much per acre. Fifty bushels per acre would be a fairly liberal dressing. Broadcast them uniformly over the whole surface of the ground.

CLYDESDALE REGISTRATION.

How many crosses are necessary to render the produce of a mare eligible for registration in the Clydesdale Studbook? SUBSCRIBER.

Ans. Four topcrosses of pure-bred sires (entirely Clydesdale) mare to registration, and five topcrosses are required for a stallion. All the progeny of a four-topcross mare by a registered sire are eligible.

AGED COW

I have a cow that has a growing hay crop in the spring of the year, but her teeth are so worn that she cannot eat fourteen years of age. Has been very highly fed for years, but her condition has not improved. Can you tell me what to do? G. M.

Ans. We are afraid not, if you can fatten her on soft feed, do so, and "kill her to save her life."

QUESTIONS AND ANSWERS.
Miscellaneous.

FARMING ON SHARES.

What share should each person get off a farm of 100 acres devoted to general farming? I am to find all farm implements and horses and cows, and two brood sows, and everything to work with, the man to work farm and turn stuff into money and give me share. Now, what share should each have? The man is to get up wood; should he pay for sawing, as he has to get wood for himself and for me also? Should he pay all tax?
W. H. S.

Ans.—It is difficult for us, not knowing the circumstances in detail, to suggest a perfectly equitable basis of agreement. In working farms on shares, the apportionment of expenses borne and proceeds received by the tenant commonly runs from one-third to forty per cent., 35 per cent. being a fair average. According to this plan, the owner, besides furnishing land, buildings, live stock and implements, pays 65 per cent. of the taxes, repairs, etc., and receives 65 per cent. of all the proceeds. The tenant does all the work, including the hiring of help, bears his 35 per cent. of the expenses, and receives 35 per cent. of the proceeds. With regard to the wood, we would suggest that each party pay for sawing his own.

A BALANCED RATION.

Will you please make me out a balanced ration from the following feeds: First-class silage, good red and alsike clover, bran, oats and barley, with good straw as roughage. I feed the hay at noon and the rest cut and mixed twelve hours ahead, also have mangels.
J. R. H.

Ans.—It is impossible to give a precise answer to this question until the kind and function of the animal to be fed is known. A balanced ration for a work horse is entirely different from that of a horse being fitted for market, so also is that of a dairy cow from that of a beef steer. The ration, furthermore, is affected by the size of the animal; so also the amount of milk a cow is giving should influence the ratio of the ration for her. To give an answer to the query, we have assumed that the animal to be fed is a milk cow giving a liberal amount of milk daily. We have assumed that the cow weighs one thousand pounds, and that she is giving about 27 lbs. milk daily. If the cow is larger, the amount of feed will have to be increased, if she gives more milk proportionately than we have assumed, more nitrogenous feeds will have to be fed, i. e., the ration will have to be narrowed, if she is not capable of giving so much milk, less bran and oats may be used and some barley may be substituted.

With such a supply of excellent feed-stuffs, we have disregarded the straw as a factor of importance in the ration; barley is not as valuable under these circumstances as bran or oats, and we have left it out, considering its use as undesirable. At the usual prices of oil meal and cotton-seed meal, it is highly probable that these feeds can be used to advantage in place of much of the oats and bran suggested. In buying oil meal or cotton-seed meal, one should buy according to guaranteed analysis.

The following ration is submitted: Silage, 30 lbs.; roots, 10 lbs.; red clover, 10 lbs.; alsike clover, 5 lbs.; bran, 2 lbs.; oats, 2 lbs.; oil meal, 2 lbs. This ration contains 27.59 lbs. dry matter, 2.82 lbs. digestible protein, 13.37 lbs. digestible carbohydrates and 7.1 lbs. digestible fats, thus being somewhat under the Wolff-Lehman standard in dry matter and in digestible protein, which is desirable, since American investigations rather preponderate in evidence that in these two respects the German standard is high.

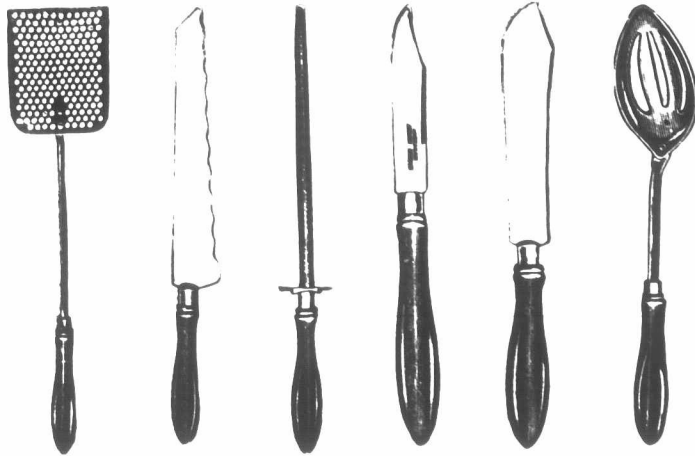
A balanced ration has to be worked out for every cow the individual is an important factor and while we submit this as a working basis, we would strongly urge a study of the effects accomplished by it. It may be advantageous to reduce the oats and increase the bran or oil meal in this ration, thus making a stronger ration without materially affecting the bulk. On the other hand, some cows may demand a ration with more carbohydrates, in which case barley might be used advantageously.

Look! These Premiums

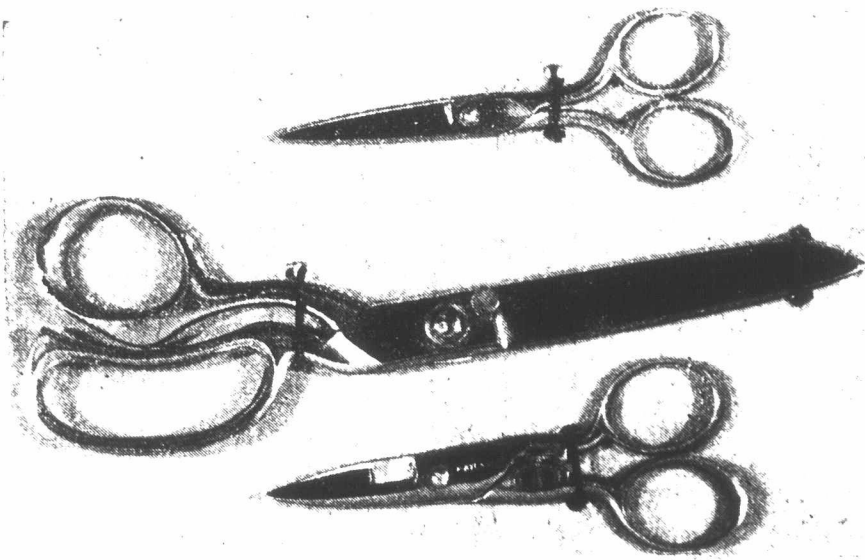
Can be very easily obtained. By very little effort you can secure the required number of new yearly subscriptions to

The Farmer's Advocate and Home Magazine

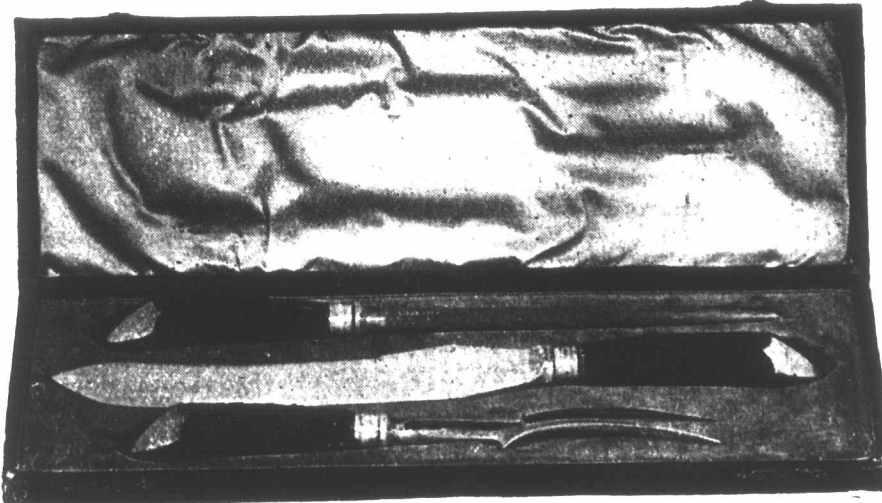
To entitle you to one or more of these handsome premiums. Every premium we offer is exceptionally good value. We give greater value in our premiums than if you were paid a cash commission. Note the following list:



A COMPLETE KITCHEN EQUIPMENT—A Utensil for Every Purpose.—All made of the highest grade of crucible steel, carefully tempered, ground and polished by the latest improved process. Rubberoid finished hardwood handles, mounted with nickel-plated ferrules. Now is your opportunity to supply your kitchen with a complete cutlery outfit. All six articles sent to any subscriber for sending in only one strictly new subscription and \$1.50.



SET SCISSORS.—One self-sharpening scissors, one embroidery scissors, one buttonhole scissors—will cut buttonhole any size. All good quality steel. For only One New Subscriber to "The Farmer's Advocate." Must be sent by present subscriber.



SET STAGHORN CARVERS.—High-class goods. First quality of our present subscribers for sending steel and staghorn handles and handsome nickel mounting. These in bona-fide new yearly subscriptions, carvers will retail at \$3.50 to \$5.00 per set. Three new subscribers, accompanied by \$1.50 each.

8 MONTHS' CREDIT.—Any subscriber may have the date on his own label advanced 8 months by sending us the name of one new subscriber and \$1.50.

Send Postal for Sample copies and Agent's Outfit and Start to Canvass at Once.
THE WILLIAM WELD COMPANY, LIMITED, LONDON, ONT.

40-PIECE AUSTRIAN CHINA TEA SET, handsome and dainty in shape, coloring and design; ordinarily retailing from \$4.00 to \$6.00, depending on locality. Four new subscribers.

STENCILLING PATTERNS, containing a variety of designs for curtains, cushions, portieres, table covers, etc. A set of 20 patterns, all ready to be cut out (which may be easily done by laying the pattern over glass and cutting with a sharp knife). For only one new subscriber.

FARMER'S ADVOCATE KNIVES—Manufactured by Jos. Rodgers, Sheffield, England. Jackknife and Penknife, both nickel-handled and having two blades. These knives were manufactured specially for "The Farmer's Advocate." Worth, retail, \$1.00 each. One new subscriber for each knife.

BARON'S PRIDE. Handsome picture of the Champion Clydesdale. Size, 17 x 13 in., including margin. Suitable for framing. One new subscriber.

DICTIONARY.—An indispensable volume in every home. The Chambers' Twentieth Century Dictionary. Cloth bound, contains 1,200 pages, profusely illustrated, printed on superior quality of paper. Two new subscribers.

BIBLE—Old and New Testaments in beautifully clear, legible type; references; concordance to both Old and New Testaments. Index to names of persons, places and subjects occurring in the Scriptures. Twelve full-page maps, all excellent in type and outline. This book is of most convenient size, being 7 x 10 inches when open; weight, 23 ounces; with strong and flexible binding; and would sell at regular retail price for \$1.00 or over. Sent postpaid to any subscriber for sending in only one new subscription accompanied by \$1.50.

We have a large stock of **PRAYER BOOKS,** with **NEW HYMNAL,** in good print and beautifully bound. Will give two, worth in the ordinary way \$1.00, for one new subscriber; or one book of superior quality for one new subscriber. These books are extra good value.

"THE VISION OF HIS FACE": by Dora Farncomb, writer of "Hope's Quiet Hour" in "The Farmer's Advocate," contains 18 chapters (224 pages), in cloth, with gilt lettering. One of the many expressions received regarding it is: "I am pleased, edified and comforted in reading it. It is better, fuller and richer than I expected." Cash price, \$1.00. For only one new subscriber.

"CARMICHAEL": A Canadian Farm Story. Bound in cloth, illustrated. Just the thing for Christmas or Birthday Gift. "Far above the ordinary run of fiction," says the Buffalo Courier. "Should be in all the homes of the people." Toronto World. Two new subscribers; or cash, \$1.25.

These premiums are given only to our present subscribers for sending in bona-fide new yearly subscriptions.

BOVRIL

IS THE FLUID BEEF OF QUALITY.

Sir James Crichton Browne, M. D., says: "BOVRIL is a genuine food, and rests its reputation on merit."

BOVRIL, LIMITED, are purveyors to His Majesty King George V.

USE Formaldehyde

(FORMALIN)

It permanently obliterates **SMUT** and increases your yield per acre. **Improve the quality of your grain and command a better price.**

The most effective way to handle wheat, oats, barley, etc., is to mix one pound (4 5 of a pint) of 40% Formaldehyde thoroughly with 45 gallons of water in a clean barrel and completely submerge the grain. This solution will treat from 40 to 50 bus. of seed grain, the Formaldehyde costing in the neighborhood of 30 cents. Is it good judgment to run the risk of losing from 10% to 40% of your crop when you can prevent it for such a slight cost? Pamphlets giving fuller information gladly furnished. Write for one. Sold in pint and quart bottles at all dealers.

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of Toronto, Limited,**

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TORONTO, ONT.

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WRITE MAILING CLERK NO. F **Dominion Railway School, Winnipeg, Canada**

Maple-Syrup Makers!

You must go at it in the right way to make money out of your maple grove. A **Champion Evaporator** will get more syrup out of a given amount of sap, with less trouble than any other evaporator on the market. Any boy 14 years old can use it. Write for catalogue.

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



QUESTIONS AND ANSWERS. Veterinary.

SEROUS ABSCESS—POSTAGE.

1. Foot has a large, puffy swelling that seems to contain fluid, on its breast.
2. How much postage is required on a sealed letter, posted in London, to a resident of London? S. BROS.

Ans.—1. This is a serious abscess. Lance at the lowest part to allow escape of the fluid. Then flush the cavity out three times daily until healed, with a four-percent solution of carbolic acid.
2. One cent. V.

COUGH—QUIDS FOOD.

Cow has a cough, and she chews hay but cannot swallow it, but quids it. She is in good condition and milking well. R. J. H.

Ans.—The cough indicates tuberculosis. The only means of diagnosing is by the tuberculin test, by a veterinarian. The quidding of the food is due either to defects in the molar teeth, or throat trouble. Get your veterinarian to examine her, and, if necessary, dress her teeth, or treat her for whatever trouble he finds. V.

Miscellaneous.

DATES OF BIRTH AND WINNING

In what year was the Scottish Clydesdale stallion, Marcellus, foaled? In what year, and at what age, did he win the Cawdor Cup? W. G. S.

Ans.—Marcellus (11110), by Hiawatha, was foaled May, 1898. He won the Cawdor Challenge Cup at the Scottish National Show, February 4th, 1903, when he was coming five years old.

CLEARING LAND.

Is there a proper course for a farmer to take before setting out fires to clean land? V.

Ans.—There are numerous and elaborate statutory enactments on this subject: See Revised Statutes of Ontario, chapters 267, 268 and 269. And you should also enquire of your Municipal clerk as to any by-laws that may be in force in the municipality, passed pursuant to Sec. 542, Subsec. 16, of the Consolidated Municipal Act, 1903.

VENDOR, PURCHASER AND TENANT.

1. If A sells a farm to B, and nothing is said of the hay fork, car and ropes, do they go with the farm, or are they chattels? V.

2. A has the farm rented to C for three years (the three years being up next March), with the agreement that C can sell four loads of straw each year. Can B stop C from selling the straw? J. H. R.

Ontario.
Ans. 1. It is altogether probable that they are legally to be regarded as chattels, and, accordingly, removable at any time prior to the date for B's taking possession of the farm.
2. We think not.

COW POX—BLOODY MILK.

1. What is the cure for cow pox?
2. What is the cure for a cow giving bloody milk? E. P. F.

Ans. 1. As the disease is contagious, no contact by milkers' hands or otherwise should be allowed between the udders of the diseased and healthy cows. Dress the affected teats two or three times daily with the following ointment: Borax and four drams, carbolic acid, twenty drops, vasoline two ounces.
2. Bloody milk is generally due to rupture of some of the small blood vessels of the udder, usually induced by contusion or other local weakness. Treatment consists in bathing the affected teats, long and often with cold water, and giving one ounce of tincture of iron to each quart of milk as a blood tonic. Also give a few drops of blood tonic to the cow. If the disease is not cured, the milk should be discarded, and the cow should be kept in a clean, dry stall.



Make More Money This Year

When you turn the leaf into the new year, the wisest and most profitable resolution you can make is "I will use

Pratt's Poultry Regulator

every day." It is the greatest tonic ever devised for building up the money-making qualities of your poultry. It increases vitality, improves quality, protects from disease, and, above all, it's a guaranteed egg producer.

Just now when laying hens are paying best, is a good time to start. Pratt's Poultry Regulator must make good or it doesn't cost you a cent. It is

Guaranteed or Money Back

Every penny you spend will be refunded without question if you are not more than satisfied. It is worth your while to try it at our risk.

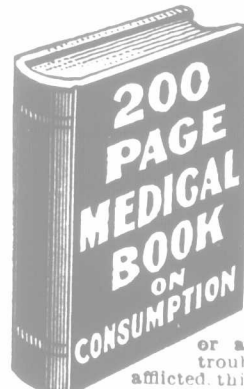
Use Pratt's Powdered Lice Killer for lousy hens. Keep Pratt's Roup Cure on hand. It prevents and cures Roup and will save you many a fine bird.

25 lb. pails \$2.50—also smaller sizes and in 100 lb. bags. Be sure you get PRATT'S.

Let us send you Pratt's POULTRY WRINKLES, you'll find it helpful.

Pratt Food Co. of Canada, Ltd., Dept. 62, Toronto.

Consumption Book FREE



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. Even if you are in the advanced stage of the disease and feel there is no hope, this book will show you how others have cured themselves after all remedies they had tried failed, and they believed their case hopeless.

Write at once to the Venkerman Consumption Remedy Co., 1632 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.

LAMENESS from a Bone Spavin, Ring Bone, Splint, Curb, Side Bone or similar trouble can be stopped with

ABSORBINE

Full directions in pamphlet with each bottle. Does not blister or remove the hair, and the horse can be worked. \$2.00 a bottle, delivered. Horse Book 9 E free.

Mr. Robt. Jones, Sr., Marjora, Ont., writes, April 8, 1907: "I had a valuable horse with a big leg, and used one bottle of ABSORBINE, and it cured him completely."

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We are breeders of the very best kind of **PERCHERONS**

We sell nothing but meritorious stock, and our stock sells on its merits. Young stock of both sexes for sale. Write us now.

Imported Clydesdales Imported and Canadian-bred Clydesdale mares and fillies and young stallions, of most fashionable breeding, up to a big size, with character and quality. Phone connection. ALEX. F. McNIVEN, St. Thomas, Ont.

For Sale Ohio Improved Chester Hogs, and London. Also registered Jersey Bulls, from 8 to 10 months from highest-testing stock. Write.

CHAS. E. ROGERS, Ingersoll, Ont.

WINDSOR DAIRY SALT



The wise housewife knows the importance of always keeping a good supply of Windsor Dairy Salt on hand.

She knows that Windsor Salt makes the best butter—and she is not satisfied to make any other.

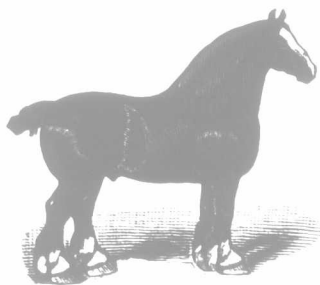
Windsor Dairy Salt is both a money-maker and a money-saver.

It makes money for farmers and dairymen because it makes butter that brings the best prices.

It saves money for them because, being absolutely pure, it requires less to properly salt the butter.

39

TOP-NOTCH CLYDESDALES



I have 22 Imported Clydesdale Stallions to select from, of different ages, and from such noted sires as the champions Hiawatha, Marcellus, Baron of Buchlyvie, Baronson, Hapland's Pride, Silver Cup, Revelanta, Royal Blend, Baron Clyde, Shapely Prince, etc. The breeding is the best, and the individuals second to none. Prices and terms right. Just give me a call and be convinced that you struck the right place. Markham 20 miles north of Toronto, on the G. T. R. Locust Hill Sta., C. P. R., 3 miles. Long-distance phone. Will meet visitors on the shortest possible notice.

T. H. HASSARD, Markham, Ont.

Imported Clyde and Shire Stallions



With 20 years' experience I know the kind of horses wanted in this country. I have both Clyde and Shire stallions up to a ton in weight, with quality, character and breeding unsurpassed. I am never undersold, and give terms to suit. Write your wants.

T. J. BERRY, Hensall, Ont.

OUR WINNINGS AT GUELPH

Were more than any other firm exhibiting. **Champion** imported mare. **Champion** Canadian stallion. **Six** firsts and many seconds and thirds, making a grand total of **Twenty-one** ribbons on eighteen horses exhibited. It is worth your while to go and see this bunch at:

Smith & Richardson's, Columbus, Ont.
MYRTLE, C. P. R. BROOKLIN, G. T. R. PHONE CONNECTION.

Mount Victoria Stock Farm, Hudson Heights, Quebec.
Champion Clydesdales and Hackneys. We have for sale 2 imp. Clydesdale stallions, by **Pride of Blacon** and **British Chief**; one imp. Hackney stallion, by **Copper King**. Prizewinners. Prices right. Long-distance phone.
T. B. Macaulay, Proprietor. **E. Watson, Manager.**

NEW IMPORTATION OF CLYDESDALES
Superior breeding and quality, selected for the requirements of the Canadian trade—9 stallions, 6 fillies, 3 colts, including prizewinners and champions. This consignment will bear close inspection, and will be sold at moderate profit.
Phone connection. **GEORGE G. STEWART, Howick, Que.**

Imp. Clydesdale Stallions and Fillies
My 1910 importation of Clyde stallions and mares are in my stables at Mitchell. They are ideal in draft character, big in size, toppy, and have perfect underpinning, and bred from the best blood of the breed. Prices right.
Wm. Colquhoun, Mitchell, Ont.
Phone connection.

CLYDESDALE STALLIONS (IMPORTED and CANADIAN-BRED)
I am offering a number of imported and Canadian-bred Clydesdale stallions, whose breeding is unexcelled and whose size, character, type and quality are essentially Canadian. They will be priced right for quick sale.
JAMES PATON, Swinton Park P.O., Fiesherston Sta., C. P. R.

QUESTIONS AND ANSWERS. Miscellaneous.

SOIL PROBLEMS ON PORCHER ISLAND, B. C.

Editor "The Farmer's Advocate":
Porcher Island, B. C., where we have located, is about twenty miles long and twelve miles wide, and the nearest land to Prince Rupert is fourteen miles. The climate is mild, but the rainfall is considerable. From May till September is fairly dry. The rest of the year is three or four fine days and three or four wet days. There is not much snow; some winters hardly any. The prevailing winds are from the south-east. They start in the fall, and last on and off till spring. The soil is mostly decomposed vegetable matter along the beach, and heavy-timbered. Back a little way it has been all burned off, and the soil is loam—some places clay—and there is gravel and rock close to the surface (not too close to plow). Potatoes and turnips, etc., grow where they have been fertilized with kelp and fish and ashes. Hay grows exceedingly thick and tall where there has been stock. There does not seem to be any trouble about raising feed for stock, but it is hard to save it. There are a good many preemptions to be taken up here yet. There has been no farming done here yet, as most of the settlers are railroad laborers or axe men. There are no horses on the island yet, and I don't think there will be much done here till the G.T.R. comes through. There are about 100 settlers on the island now. There is a schoolhouse and post office at Refuge Bay. Deer are plentiful, and seem to do well. They get very fat in the latter part of summer and fall. Clams, crabs and fish are very plentiful. Geese, ducks and grouse are everywhere. The market here is the best; eggs, fresh, when there are any, sell for 60c. to 75c.; potatoes from 1c. to 2c. per lb. Meat is high, but there is no one raising any here. Milk is 15c. per quart, or two for 25c. There is a steamer runs to Refuge Bay once a week in summer, and every two weeks in winter. I had the soil analyzed at Victoria. It was dug when the frost was in the ground, and they stated there was 24 per cent. nitrogen, trace lime, trace potash, trace phosphoric acid, and loss by water and ignition, 85 per cent., and they told me it was unfit for agricultural purposes, but I have raised potatoes and good turnips on same by applying kelp and a small amount of potash, basic slag and nitrate of soda.

What I would like to know is whether kelp or seaweed, fish and lime, take the place of stock manure or artificial fertilizers; if so, will you tell me the proportions and amount to use per acre? If it requires anything else, please advise what would be the best way to get a stand of alsike clover? Would alfalfa grow here?
Is deer meat as good as ground bone for laying hens?

M. J. O'KELLY.

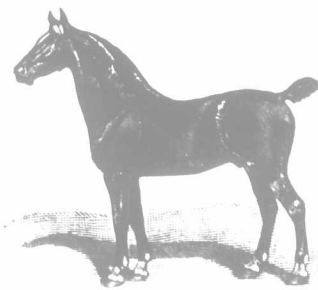
Comment.—The account given by your correspondent of the conditions and agricultural possibilities of Porcher Island, B. C., are of considerable interest; it would seem to be a country better adapted for vegetables and forage crops—more particularly hay—than for the growing of cereals.

Though the data from the soil analysis as given in the letter are incomplete, there is no difficulty in concluding that the area is covered with "muck," which, consisting chiefly of semi-decomposed vegetable matter, and containing but very small amounts of clay and sand, is not considered as well adapted to farm crops in general. Mucks, however, are of many kinds, and there are those which appear to be particularly adapted to the growing of potatoes and grass (clover and timothy); it is evidently such a one that occurs on this island.

By the application of kelp, fish-waste, basic slag, potash compounds and nitrate of soda, your correspondent can supply all the essential elements of plant food, but I doubt whether it would be desirable to use them to the exclusion of farm manures, as the latter, among other important functions, serves to inoculate the soil with bacteria, which bring about

Warranted to give satisfactory action.

Gombault's Caustic Balsam



Has Imitators But No Competitors.

A Safe, Speedy and Positive Cure for Curb, Splint, Sweeney, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a Human Remedy for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is warranted to give satisfactory action. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address
The Lawrence-Williams Co., Toronto, Ont.

BITTER LICK MEDICATED Salt Brick



The Great Conditioner, Bolic. Digestor & Worm Destroyer.

For Horses, Cattle and Sheep
SEND FOR BOOKLET B.

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DUNHAMS' PERCHERONS

For forty-six years renowned as the best of the breed. Six large importations since February 1, 1910 (the last arrived October 12th), insure fine selection, as each animal was individually selected for size, bone quality and excellence. If you want choice stallions or mares, write for catalogue, illustrated from life.

W. S., J. B. & B. DUNHAM
WAYNE, ILL.

KENDALLS SPAVIN CURE

Sure Cure for Spavin

Seattle, Wash. Nov. 1st 1909
"I have used your Spavin Cure and find that it is a sure cure for Spavin and Ringbone."
Yours truly, A. T. Lynch.
Equally good for Curb, Splint, Sprain, Swollen Joints and all Lameness.
Hundreds of thousands of horse owners have used it in the past 40 years. Today, it is the world's standard remedy. Good for man and beast.
\$1 a bottle—4 for \$5. Buy at dealers and get free copy of our book—"A Treatise On The Horse"—or write us.
DR. B. J. KENDALL CO.,
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AGENTS 200% PROFIT

Handy, Automatic HAME FASTENER
Do away with old hame strap. Horse owners and teamsters will about them & back if they don't. Fasten instantly with gloves on. Outwear the harness. Money back if not satisfactory. Write today for confidential terms to agents.
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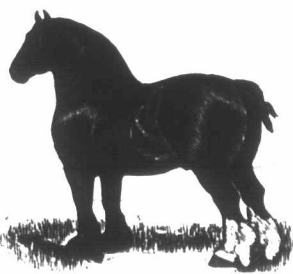
To Buyers Looking for a Good Stallion:



price than I will. Come to the home of the champion prizewinners and judge for yourself.

I have imported **Percheron Stallions** for years. Always bought from the best breeders in France, and beg to call the attention of prospective buyers to the fact that I have won this year at Toronto first and second aged class sweepstakes and silver medal. Also at Ottawa Fair, first and third in aged class, first, second and third in 3-year-old class, sweepstakes and gold medal. Those horses are beautiful dapple-greys and blacks, three to four years old, weighing 1,800 to 2,000 lbs., with feet and legs that cannot be beat, beautiful heads and necks, the kind that good buyers are looking for. **I do not intend, and I will not allow,** if I can help it, any one to give more quality breeding for a fixed

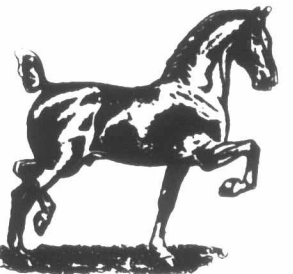
JOHN HAWTHORNE, Simcoe, Ontario.



21 IMPORTED Clydesdale Stallions

My 1910 importation, nearly all 2- and 3-year-olds. They are ideal in draft character, with faultless quality of underpinning, every one will make a ton-horse and over, and they represent the best blood of the breed; they will be priced right and on terms to suit. Farm is two miles from end of street car line. A 'phone from Guelph will bring a conveyance to meet visitors.

O. SORBY, Guelph, Ont.



UNION STOCK - YARDS Horse Exchange WEST TORONTO, CANADA.

The Greatest Wholesale and Retail Horse Commission Market.

Auction sales of Horses, Carriages, Harness, etc., every **Monday and Wednesday.** Horses and harness on hand for private sale every day.

The largest, best equipped and most sanitary stables in Canada. Half-mile of railway loading chutes at stable door. Quarter-mile open track for showing horses. **Northwest trade a specialty.** **HERBERT SMITH, Manager.** (Late Grand's Repository.)

IMPORTED PERCHERON STALLIONS.

We have at our stables some of the finest Percheron Stallions ever imported to this country. The large drafty kind, with plenty of good flat bone and the best of movers. Our horses range in age from 2 year-olds to 5-year olds.

We also have three **German Coach Stallions** of the true type. We invite inquiries from all intending purchasers, and assure them that they will do well to get our prices and terms before buying, as we are in a position to sell below competition.

R. HAMILTON & SON, SIMCOE, ONTARIO.

Imp. Clydesdale Stallions and Fillies



For Sale Gentlemen, don't miss this opportunity. I am out for business now that my Toronto and London prizewinners are in my stables at Milverton. I am open to compare prices and quality with any man in the trade. Don't be without a good stallion or mare when I will either buy, sell or exchange for Canadian-bred stallions or workable, sound horses. Write me or call, and you will have every attention.

J.N.O. SEMPLE, SPRING HILL STUD FARM, MILVERTON, ONTARIO. Stations, G. T. R. and C. P. R. Phone connection, long-distance.

Clydesdale Stallions and Mares

JUST THE KIND YOU WANT. WRITE OR CALL ON:

Dalgety Bros., London, Ont.

IMPORTED CLYDESDALES Our spring importation of fillies will be selected during the winter months for shipment end of May. Special orders will be filled on commission. Place your order with us now. Every one guaranteed as to soundness and breeding. We have a few choice yearlings on hand which we will sell cheap if bought soon. **Urmsby Grange Stock Farm, D. McEACHRAN, ORNSTOWN, P. QUE.**

Imported Clydesdales My new importation of Clydesdale stallions for 1910 have arrived. They were selected to comply with the Canadian standard, combining size, style, quality and faultless underpinning with Scotland's richest blood. They will be priced right, and on terms to suit. **BARBER BROS., GATINEAU PT., QUEBEC.**

IMPORTED CLYDESDALES AND HACKNEYS In my stables at Ingersoll, Ont., I have always on hand Clydesdale stallions and fillies, and Hackney stallions, personally selected in Scotland for their high-class type, quality and breeding. Let me know your wants. **W. E. BUTLER, INGERSOLL, ONT.**

NEW IMPORTATION ARRIVED Our 1911 importation of **Clydesdale Stallions and Fillies** are now at our stables. We can show some of the best individuals and best breeding stock imported. Our prices are right, and terms to suit. **JOHN A. BOAG & SON, QUEENSVILLE, ONT.** Phone connection.

IMPORTED CLYDESDALES AND PERCHERONS. My 1910 importation are in my stables at Bolton, Ont. There never was a better bred lot landed, nor a better lot of big, typical draft horses, full of quality, and with perfect underpinning. Clydesdale stallions and fillies, and Percheron stallions. I will not be undersold. **T. D. Elliott, Bolton, Ontario.**

nitrification, and to favor other processes which result in the liberation of plant food. All things considered, it is very doubtful if farm manures have any real substitute, but there are many substances that can be profitably used to supplement them. In the case of muck soils, it would not be necessary to manure heavily, since the object is not to increase the soil's store of organic matter, but rather to stimulate bacterial activity and thus foster the further decay of the muck. One or two applications when the land is first brought into cultivation, may suffice for a number of years.

Muck soils are lacking chiefly in the mineral elements of plant food, and to supply these the following fertilizers may be suggested:

	Lbs. per acre.
Basic slag	300 to 600
Muriate or sulphate of potash	100 to 200

Broadcast in the spring on the prepared land, and harrow in. The crop, after it is above the ground a few inches, may be dressed with, say 100 lbs. nitrate of soda per acre. If, however, the foliage is vigorous, healthy looking, and of a dark green color, there is no need of this dressing with nitrate.

For potatoes, the sulphate of potash should be used, but for other crops, nitrate of potash the cheaper of the two compounds—may be used.

Wood ashes may be used in the place of the foregoing mixture, indeed, there is no better fertilizer for muck soils. If unleached and fairly free from sand, etc., they should contain from 4 to 8 per cent. potash, about 2 per cent. phosphoric acid, and in the neighborhood of 25 per cent. lime.

Fish-waste is essentially nitrogenous, though containing some phosphoric acid, potash is practically wanting. Kelp, in addition to nitrogen, possesses a notable amount of potash, and hence, in a large measure, its use supplements the fish-waste. Both these substances can no doubt be profitably used on this soil (the amount to be found by actual trial), but we do not think they could be employed exclusively with advantage. With lime, or, better still, wood ashes, they would furnish a fairly complete and suitable fertilizer.

It is not likely that alfalfa will do as well as one of the clovers, and we would suggest trying Mammoth Red.

We should not expect to find deer meat quite as good for laying hens as freshly-ground green bone, but undoubtedly, if untainted, and fed in moderate quantities, it could be satisfactorily used to furnish a large part of the protein so necessary for egg-production. Yours faithfully,

FRANK T. SHUTT,
Chemist Experimental Farm.

GOSSIP.

Vol. 23 of the American Shropshire Sheep Record, recently issued, is a bumper, containing 1619 pages, and the pedigree records numbering from 277056 to 299484, a total of 22,428 animals. An excellent portrait of the late lamented Secretary, Mortimer Levering, who filled the office faithfully and well for twenty-five years, appears on the fly leaf. The breed has certainly made remarkable progress in America in the life of this pedigree record, which plainly proves its popularity.

A. A. Colwell, Newmarket, Ont., ordering a change in his advertisement of Shorthorns and Tamworths, writes: "The past season has been an unusually busy one in every respect. I never sold so much stock by mail as last year. I have sold Tamworths to go to Newfoundland on the East and British Columbia on the West, with heavy shipments to the States, and among the many good things sent out, none excel that excellent cow I sold to Prof. Day of the Agricultural College, Guelph. This was a magnificent young cow, bred by Top 9 holder, Gen. Golden Brier, and out of a cow that was sold by Colwell, Ontario, Canada's champion breeder, on Feb. 23, 1911. In the face of all this demand I still have some very choice stock for sale, including the Tamworth and Shorthorn. I am, of course, well pleased to hear that you are still a successful breeder of Shorthorns and Tamworths, and I hope you will continue to be so for many years to come."

Bone Spavin

No matter how old the blemish, how lame the horse, or how many doctors have tried and failed, use

Fleming's Spavin and Ringbone Paste

Use it under our guarantee—your money refunded if it doesn't make the horse go sound. Most cases cured by a single 45-minute application—occasionally two required. Cures Bone Spavin, Ringbone and Sidebone, new and old cases alike. Write for detailed information and a free copy of

Fleming's Vest-Pocket Veterinary Adviser

Ninety-six pages, durably bound, indexed and illustrated. Covers over one-hundred veterinary subjects. Read this book before you treat any kind of lameness in horses.

FLEMING BROS., Chemists
76 Church St., Toronto, Ontario

Messrs. Hickman & Scruby
Court Lodge, Egerton, Kent, England.
EXPORTERS OF PEDIGREE LIVE STOCK OF EVERY DESCRIPTION.

During the fall months the export of heavy horses will be a specialty. A trial order will convince you that it is to your advantage to do business with us. Write for full particulars, stating what you require.

ABERDEEN - ANGUS

Will sell both sexes; fair prices. Come and see them before buying. **WALTER HALL,** Drumbo station, Washington, Ont.

Shorthorns, Cotswolds, Berkshires.

In Shorthorns: 40 females, comprising 9 calves, 6 yearlings, 6 two-year-olds, and the balance cows from 3 years up. In Cotswolds, a few breeding ewes. No Berkshires to offer at present. **CHAS. E. BONNYCASILE,** Station and P. O., Campbellford, Ont.

Maple Grange Shorthorns

Royal Bruce, imp., a Bruce Mayflower, is the sire of all my young things. Nonpareils, Clarets, Myrtles and Lavinas. Heifers up to 2 years of age, of showing type. Several young bulls, thick, even and mellow. **R. J. DOYLE, Owen Sound, Ont.**

OAK LANE FARM

Clydesdales, Shorthorns and Cotswolds.
Young stock for sale—most fashionably bred.

GOODFELLOW BROS., MACVILLE P. O., ONT.
Bolton Station, C. P. R.; Caledon East, G. T. R. Local and Long-distance telephone.

Oakland Shorthorns With 46 head of Scotch-bred Shorthorns to select from. We have eleven bulls, from 6 months up, most of them are beautiful roans, thick and mellow and out of good milking dams. Scotch Grey 7292 at head of herd. When in need, inspect our herd, or write. **JOHN ELDER & SON, Hensall, Ont.**

Woodholme Shorthorns

are of the richest Scotch breeding, modern in type and quality. For sale: One- and two-year-old heifers, several young bulls, thick-fleshed, low-down and mellow.

G. M. FORSYTH, Claremont, Ont.
100 yards from station. Phone connection.

HIGH-CLASS SHORTHORNS

I have on hand young bulls and heifers of high-class show type, pure Scotch and Scotch-topped, sired by that sire of champions, Mildred's Royal. If you want a show bull or heifer, write me. **GEO. GIER, Grand Valley P.O. and station, also Waldemar station.**

JOHN GARDHOUSE & SONS

Still have for sale a right good lot of young Shorthorns; a few No. 1 Shire stallions and fillies just imported in August; also a choice lot of ram lambs. Weston Station, G. T. R. and C. P. R. Long-distance phone. **HIGHFIELD, ONTARIO.**

Imp. Scotch Shorthorns

When looking for Shorthorns, be sure to look me up. Young bulls, fit for service, and females all ages; bred in the purple, and right good ones. **A. C. PETTIT Freeman, Ont.**

INVERNESS SHORTHORNS.

I can supply Shorthorns of all ages, with richest Scotch breeding and high-class individuality.

W. H. EASTERBROOK, Freeman, Ont.

Shorthorns and Oxford Down Sheep

Trout Creek Wonder at head of herd. Young bulls and heifers of richest Scotch breeding. Phone connection.

Duncan Brown & Sons, Iona, Ontario.

Clover Dell Shorthorns For Sale. Young stock of both sexes. Milking strains a specialty. Moderate prices. **I. A. WAKELY, Bolton, Ont.** Bolton Junction, C. P. R., 1/2 mile of farm.

GEDARDALE SHORTHORNS

Imported and home-bred Imp. Ford Favourite heads the herd. For sale are choice young bulls and a few 1 and 2 year old heifers of superior breeding and type. **Dr. I. S. Sproule M. P. Markdale Ont.**

Was So Bad With Heart and Nerves Could Not Sleep At Night.

Many men and women toss night after night upon a sleepless bed. Some constitutional disturbance, worry or disease has so debilitated and irritated the heart and nervous system that they cannot enjoy the refreshing sleep which comes to those whose heart and nerves are right.

Mrs. John Gray, Lime Lake, Ont., writes:—"Last summer I was so bad with my heart and nerves that I couldn't sleep at night. There was such a pain and heavy feeling in my chest that I could not stoop, and at times I would become dizzy and have to grasp something to keep from falling. I tried different things but never got anything to do me any good until I tried Milburn's Heart and Nerve Pills and I can now recommend them to all troubled as I was."

Milburn's Heart & Nerve Pills are 50 cents per box, or three boxes for \$1.25, at all dealers, or mailed direct by T. & T. Milburn Co., Limited, Toronto, Ont.



"ELECTRO BALM"

CURES ECZEMA,

Also Piles, Burns, Scalds, Chapped Hands and Face.

Gentlemen use it after shaving. This Balm is handled by the best firms, and is highly recommended by those who have used it.

Write for Free Sample

ENCLOSE 2c. STAMP FOR POSTAGE

50c. a Box at all dealers or upon receipt of price from

THE ELECTRIC BEAN CHEMICAL CO., Ltd., OTTAWA.

10 Scotch Shorthorn Bulls 10 FROM 10 TO 14 MONTHS OLD

The Princess Royal, Secret, Bessie, Village Maid families are represented in lot. First-class herd headers and farmers' bulls for getting market-topping steers. Prices very reasonable.

JOHN MILLER, BROUGHAM, ONT. Clarendon Station, C. P. R., three miles.

Maple Lodge Stock Farm 1854-1910.

A lot of choice young SHORTHORN BULLS, and a splendid lot of LEICESTER rams and ewes for sale.

A. W. Smith, Maple Lodge, Ont.

GEORGE D. FLETCHER, BINKHAM P. O., ONT.

Offers a few choice Shorthorn Cows at bargain prices, bred to stock bull, Benachie (imp.) = 69984 =, also Shorthorn heifer calves. Three Clydesdale fillies 1 and 2 years old; and Yorkshire sows ready to breed. Erin Shipping Station, C. P. R.

Spring Valley SHORTHORNS We have for sale Newton Ringleader (imp.) = 73783. A good bull, with first-class breeding. Also a Canadian-bred 15-months-old bull of the choicest quality. Phone connection. Kyle Bros., Agr. Ont.

A HIGH-CLASS YOUNG Shorthorn Cow FOR SALE, sired by imp. Ben Lomond; also a heifer calf of good quality. Prices reasonable. Stewart M. Graham, Port Perry, Ontario.

GOSSIP.

Official records of 162 Holstein-Friesian cows were accepted by the American Holstein Association, from November 13th to November 30th, 1910. This herd of 162 animals, of which two-fifths were heifers with first or second calves, produced in seven consecutive days, 62,671.8 lbs. of milk, containing 2,154.171 lbs. of butter-fat, thus showing an average of 3.44 per cent. fat. The average production for each animal was 386.8 lbs. of milk, containing 13.297 lbs. of butter-fat, equivalent to 55.3 lbs. or 26 1/2 quarts of milk per day, and over 15 1/2 lbs. of the best commercial butter per week. Many of these records were made while the cows yet had frosted pasture grass as a part of their ration, and so are not as large as they might have been; and it will be noted that the best results in dairy husbandry are always obtained when the animals are stall-fed, thus giving the feeder entire control of the ration.

CUMBERLAND-CLYDESDALES FOR CANADA.

Another valuable consignment of six Cumberland Clydesdales has been sent by John Kerr, Red Hall, Wigton, to the order of Mr. Berry, of Henshall, Ontario. These consist of the remarkably well-bred five-year-old stallion, Glenturk (13506), that has left some fine stock in Cumberland, and last year travelled the Annapolis District of Dumfriesshire; also the five-year-old mare Broomhills Boss, a daughter of the great breeding sire, Royal Champion (8956), recently purchased from Mr. Murray, Bushgillhead; another foal mare, Blossom, by Speciality (11547), bred by Mr. Fell, of Torpenhow Hall, out of his noted old mare by Lord Lothian (5998); an extra good two-year-old, Lady Snodwick, also by Speciality—a mare which should make a name for herself in Canada; a three-year-old filly, Lady Cowan, by King Thomas (12625), the stallion Mr. Berry got from the Red Hall stud four years ago; and a two-year-old, Lofty of Mealsgate, bred by Mr. Barnes, Harby Brow Tower, and by Hillhead Chieftain (12176), this year's Cleveland premium horse, to which district he is going back next year. Glenturk is a very well-bred horse, his sire being Baronson (10981), the sire of the champion Oyama, and his dam was by the great champion horse, Prince of Carruchan (8151)—Scottish Farmer.

IMPORTED SHORTHORNS BY AUCTION.

The signs of the times would indicate that 1911 will be a red-letter year in the Shorthorn history of Canada, registering the return of an active demand at remunerative prices for the world's greatest dual-purpose breed of cattle, and the first sale of the year will in all probability be the greatest that 1911 will see in the matter of choice individuality and excellence of breeding. We refer to the dispersion by auction of the entire herd of John Brydome, of Milverton, at the farm. This move is necessitated owing to the settlement of the estate, which in the past has been jointly run by the Brydome Brothers. Outside the large herds owned by wealthy importers, this is unquestionably the best bred, and it has probably cost more money for foundation stock than any other one herd in Canada. The first purchase consisted of twelve imported females, and that well-bred bull, Imp. Sittylon Victor, and this is the kind of breeding that will be sold, without reserve or side-bidding. The farm is only two miles from Milverton Station, C. P. R. and G. T. R. Morning trains from Toronto will arrive there about 10 a.m., and the sale will commence at 12, sharp, to get through in time for visitors to catch the afternoon trains. Conveyances will meet all trains. The terms will be cash, unless otherwise arranged for. Catalogues on application. Look up next week's issue for the announcement of this sale.

Todgers—Ah, Count, allow me to introduce you to Mr. Saton.

Count—It does a great pleasure for me to meet a musician like you, monsieur. I hear zat you and your family play ze music.

Saton—Mr. —, why, I don't know anything about music.

Count—Non? Zey tell me all round zat you play second fiddle to your wife!

The Great Canadian Annual Sale of SCOTCH SHORTHORNS

Will be held at

THE UNION STOCK-YARDS, TORONTO, ONT., Wednesday and Thursday, Feb'y 8-9, 1911

The Sir George Drummond Estate will consign their whole herd. Miller Bros. will consign all their heifers of 1909. Senator Edwards will consign the whole crop of bulls and heifers of the year. W. G. Pettit & Son will consign ten choice heifers. John Miller will sell five of his best young things. J. A. Watt will consign eight as good as he has ever had. John Miller, Jr., will consign ten better than ever before. And Robert Miller will consign nine of his best.

Every animal in the sale will be a select one. There will be 100 head that for quality have not been equalled in any sale in Canada; that for breeding cannot be surpassed in any country in the world. There are bulls and heifers fit to take the male end of any herd with credit, or to strengthen the female end of the best herd in any country.

There are Lavenderst, male and female, as good as gold. There are Broadhooks, bulls and heifers, of a high class. There are Butterflys that have won championships, and will again. There are Nonpareils, a credit to the family. There are Village Girls of the richest breeding. There are Augustas, the purest and best. There are Princess Royals that have won prizes. There are Duchesses of Glosters, as good as ever. There are Marr Madges, Bessies, Stanfords, Bessies, Claras, and Goldies, both male and female, a credit to Uppermill. There are Strathallans that show they come from champions. There are Lovelys, Marchionesses, Secrets, Wimples, Jilts, and some of the real Duchesses, with Cruickshank tops.

100 selected Scotch Shorthorns, from eight of the best herds in Canada, means something, especially when each contributor asks to be rated by the cattle he is putting in this sale.

It is the great Shorthorn event of the year in Canada; try to save the dates so as to be present.

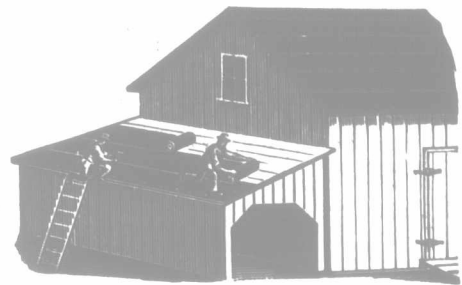
This space and more will be used to give pictures and pen-pictures of the cattle by unprejudiced men.

Get your name on the list for illustrated catalogue.

ROBERT MILLER, STOUFFVILLE, ONTARIO

Manager of Sale.

Mica Roofing



For steep or flat roofs, waterproof, fire-proof; easily laid; cheaper than other roofing. Send stamp for sample, and mention this paper.

HAMILTON MICA ROOFING COMPANY, 101 REBECCA STREET HAMILTON, CANADA.

WILLOWDALE SHORTHORNS

We have for sale some exceptionally good heifers from 6 months to 2 years old. Also a few extra young bulls, Joy of Morning and Broad Scotch blood.

J. H. M. Parker, Willowdale Farm, Lennoxville, Que.

ELMDALE SHORTHORNS AND SHROPSHIRE

We are offering some choice heifers in call to that king of sires, Prince Gloster; also one extra nice young bull. High-class Shropshires of both sexes, from imported stock. One yearling Clyde stallion, a show proposition, and some extra nice ponies.

THOS. BAKER & SONS, Solina P. O. Oshawa station, G. T. R.

SALEM STOCK FARM

Young bulls fit to head the best herds; are priced reasonably. Can suit you in SCOTCH SHORTHORNS of any age. Elora, G. T. R. and C. P. R., 13 miles from Guelph. J. A. WATT, SALEM, ONT.

PLEASANT VALLEY SHORTHORNS

For Sale: 1 red, 1 roan, 2-year-old show bulls. Several good bull calves, also some yearling heifers. Some show propositions among them. If interested, write or call and see us before buying. GEO. AMOS & SONS, MOFFAT, ONTARIO. Farm 11 miles east City of Guelph on C. P. R. 1/2-mile from farm.

Maple Leaf Shorthorns and Hampshire Hogs

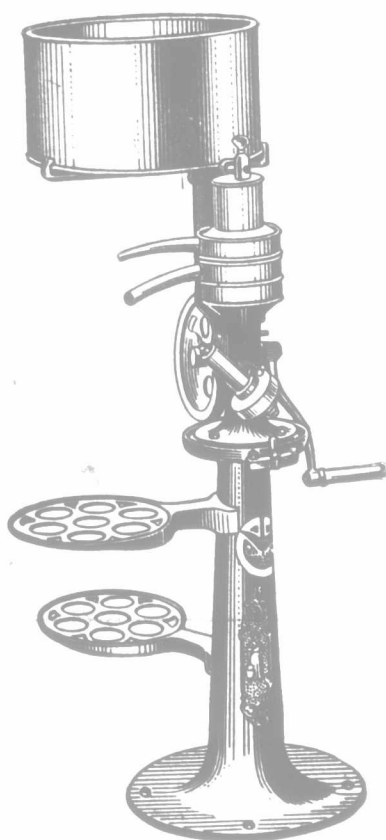
Offering for sale Shorthorn bulls and heifers and young Hampshire pigs. PORTER BROS., APPLEBY P.O., BURLINGTON STA. Phone.

SPRINGHURST SHORTHORNS

Excellent lot of Scotch-bred bulls fit for service (bred for beef and milk), also heifers, for sale. H. SMITH, HAY P. O., ONT. FARM ADJOINS EXETER ON G. T.

INTENSIVE DAIRYING

demands that you get the utmost cream out of every drop of whole milk. Good cows do not yield their fullest returns except through



The Capital

The separator that gets 999-1000 of all the cream. Send for our little book that tells why The Capital skims closer—why it wastes less than 1-5 the cream than other separators waste, how its gears run in oil, how they mesh perfectly and run so easily—about its wing cylinder and 3½-pound—7,000-revolutions-a-minute bowl.

Better send for this book, before the edition is exhausted.

The National Mfg. Co.

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Head Office: OTTAWA, ONT.

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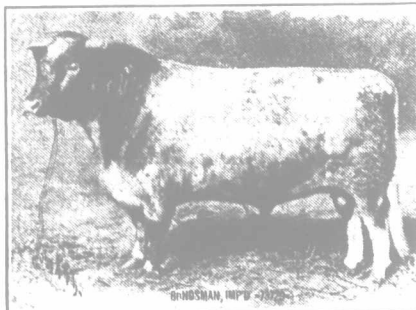


OIL CAKE

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.

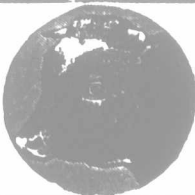


Scotch Shorthorns

125 head in herd. Headed by the imported bulls, Handsman, Village Duke and Braemar Champion. For sale: One choice imp. bull, his dam sold for \$1,400 at dispersion of Uppermill herd; 14 young bulls ready for service, some show material among these; 50 young cows and heifers, all of noted Scotch breeding.

Farm ¼ mile from Burlington Jct. Sta., G. T. R.

MITCHELL BROS., Burlington, Ont.
(Formerly R. Mitchell & Sons and J. F. Mitchell.)



H. CARGILL & SON

have to offer at the present moment an exceptionally good lot of young bulls, which combine all the requisites necessary for the making of superior stock sires, viz.: Quality, Size, Conformation and Breeding. If interested, come and make your selection early. Catalogue on application.

John Clancy, Manager, Cargill, Ontario.

Scotch Shorthorns

Eight extra good young bulls, from 19 to 15 months old; 20 choice cows and heifers, forward in calf or with calves at foot. Prices reasonable. Inspection invited. Farms close to Burlington Junction, G. T. R.

W. G. PETTIT & SONS, Freeman, Ont.

ELMHURST SHORTHORNS and BERKSHIRES

FOR SALE: Scotch Shorthorns of superior type and breeding, heifers and young bulls, Berkshires of both sexes of breeding age and younger, high-class and good quality.

H. M. VANDERLIP, Gainsville P. O. and Station
Also Langford Sta., B. & N. Electric Line

SUNNY SLOPE SHORTHORNS

I breed Scotch Shorthorns exclusively. I have some choice young females safe in calf and some choice young bulls for sale at present at prices covering long-distance phone.

A. EDWARD MEYER, BOX 378, GUELPH, ONT.

Irvine Side Shorthorns

ELORA STATION, G. T. R. & C. P. R.
J. WATT & SON, SALEM, ONTARIO

GOSSIP.

John Semple, of Milverton, Ont., whose past importations of Clydesdale stallions and fillies found such favor with critical buyers, owing to their choice quality, reports a more than successful fall's trade, his big, early fall importation being well cleaned up, three of them going to the Provincial Government of British Columbia. He has still left on hand three yearling fillies and one two-year-old, which he is pricing very easy to clear, as he is making arrangements for another trip to the land of his birth for another importation, due notice of which will be given in these columns. Those on hand are an extra big, well-bred lot, of a quality most attractive to Canadians.

Henry Arkell & Son, Arkell, Ont., importers and breeders of Oxford and Hampshire sheep, are offering in their advertisement a nice lot of yearling and two-shear ewes of both breeds, by imported sires, and bred to imported sires. They are a good, healthy lot, in fine breeding condition; will lamb in April. We have retained since the beginning of June, between 60 and 70 rams, and over 100 ewes. They have gone to Nova Scotia, Prince Edward Island and Quebec in the east, and to British Columbia in the west, with our usual trade in the U. S. A. In Ontario, our trade last year exceeded that of other years. In car lots, we have sold 200 rams and 70 ewes, thanks to "The Farmer's Advocate." We have found it one of our best advertising mediums.

J. Watt & Son, Salem, Ont., have recently sold from their herd of Shorthorns to Alex. McTavish, Shakespeare, Ont., an extra good young Marr Red or Roan Lady bull, sired by Imp. Pride of Scotland, and out of a daughter of Imp. Good Morning; to Andrew Thomson, Fergus, Ont., a nice roan, by Imp. Pride of Scotland, and out of a Crimson Flower cow, by Imp. Royal Sailor; to Dan K. McRae, of Glencoe, Ont., the eight-year-old Imp. Pride of Scotland. He has proved himself an extra good sire; his get are turning out just about right, and he is sure to do Mr. McRae a lot of good. Messrs. Watt have two left, both ready for service. One is a good roan Marr Red or Roan Lady, the other is out of an imported cow, and both are sired by Imp. Pride of Scotland. They will price some nice young cows of the best of Scotch breeding. They are pricing a two-year-old Clydesdale mare, from Imp. St. Clair (half-brother to Baron's Pride), and out of an imported mare. She is the makings of a right good one, and is going to have lots of size.

MORE CLYDESDALE FILLIES FOR SMITH & RICHARDSON.

The unprecedented demand for Clydesdale fillies experienced by Smith & Richardson, of Columbus, Ont., by which their fall importation was soon sold, determined them to make another importation, as inquiries were continually coming in for big, choice, well-bred ones. In this lot are twelve head, all two-year-olds. If size, draft character, choice quality and right breeding are in demand, then this lot can certainly fill the bill, several of them are safe in foal, and among the lot is much show material when properly conditioned. The pedigrees of practically all of them show four, five and six registered dams. Two of them are the get of the noted H. & A. S. first-prize horse, Pride of Blacon, with dams by the good breeding horses, Up-to-Time and Royal Chief. Two are by the famous Flash Sturdy, with dams by Balmedie Prince, one by the H. & A. S. first-prize horse, Ruby Pride, dam by Royal Blantyre; one is by Knight of Albion, a son of the £3,000 Prince of Albion, with dam by King James; another is by the famous breeding and premium horse, Mercurio, dam by The Observer; mother is by that noted sire of high-selling stock, Blacon Sensation, and dam by The Prior, one is out by that great breeding son of Baron's Pride, Bosland, Pride, dam by the renowned £1,700 Lord Colum Edmund; others are by such good breeding horses as Lord Lark, Windsor Stuart and Bosland, each sired by the great Sir Oswald, P. O. Station, and MacVingie. The lot consists of 12, and class in type and breeding and value at a moderate cost.

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 St., Toronto, Ontario

GLENGOW SHORTHORNS

Have on hand four young bulls from 10 to 13 months old; also a number of choice heifers. For particulars write:

Wm. Smith, Columbus, Ont.
Sunnyside Shorthorns

With 45 head to select from, of Scotch-bred Shorthorns, we can meet the requirements of anyone looking for choice females of any age, or a herd-header fit to be called such. Write us your wants.

Estate of Late JAS. GIBB, Brookside, Ont.
W. E. GIBB, Manager.

Shorthorns, Clydesdales, Oxford Downs
A number of red and roan bulls, 6 to 12 months, by Blossom's Joy—7341—some with imp. dams, Heifers 1 and 2 years. Clydesdales of both sexes, Oxford Down ewes. All at reasonable prices. Phone connection. McFarlane & Ford, Dutton, Ont.

BARTLETT'S "FARMER BRAND"

Cotton-seed Meal

Produces Milk
BARTLETT'S "FARMER BRAND" Fancy Choice Cotton-seed Meal has six times the feeding value of corn, and costs less. Contains 41 to 48 per cent. protein.

Make your own balanced rations and double your milk profits.

A little of this meal added to the home-grown feed will double the quantity and improve the quality of milk.

Full directions with each order. Guaranteed satisfactory or money back. Ask for our booklet, "Successful Feeding." Mailed free.

PRICE: \$32 per ton f.o.b. Windsor.
\$33 per ton f.o.b. Woodstock.
\$34 per ton f.o.b. Toronto.

Mail check for trial order to:

THE BARTLETT CO'Y
Detroit, Michigan.

ARE YOU IN WANT OF A Choice Bull

To head your herd? We are offering choice bull calves sired by Fountain's Boyle, who won first prize at Toronto, London and Ottawa, who also headed first-prize herd at Toronto and Ottawa. Also offering some choice heifers.

D. Duncan, Don, Ont. Duncan Station, C. N. O.

BRAMPTON Jerseys

CANADA'S GREATEST JERSEY HERD

We are offering for sale one 2-year-old bull and four yearlings, fit for service; also six bull calves; females of all ages. Come and see them or write.

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

High Grove Jerseys No Better Blood in Canada. Present offering: Two choice young bulls about fourteen months old. Will be sold right, before going into winter. ARTHUR H. TUFTS, P. O. BOX 111, TWEED, ONTARIO.

Why Use a Pure-bred Bull?

The dairyman who is after the dollars needs better cows of the dairy habit to help him in his business. To raise better cows he must use a sire who can transmit the dairy habit, from ancestors bred for generations for dairy purposes, to his offspring.

MONROE & LAWLESS,
Elmdale Farms, Thorold, Ontario

CRAIGALEA AYRSHIRES

have won more money the last four years than all competitors combined. They are heavy producers and high testers; records of production given. Stock of both sexes for sale of show-ring form. H. C. HAMILL, BOX GROVE P. O., ONT. Markham, G. T. R. & C. P. R. Bell phone connection from Markham.

GOSSIP.

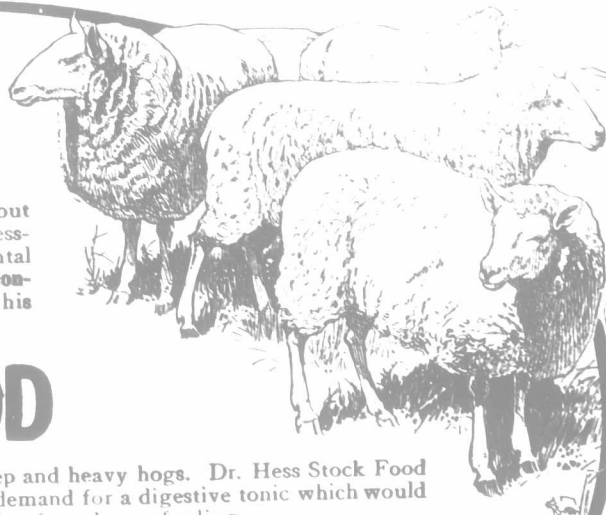
FAIRVIEW BERKSHIRES.

At Guelph, this year, in competition stronger than was ever before seen at this great Winter Show, representatives of this great herd won considerably more than the lion's share of the awards. Up to a high standard of excellence, type and breeding, this herd will stand comparison with any in the country, the property of John S. Cowan, Donegal P. O., in the county of Perth, about four miles from either Atwood Station, G. T. R., or Milverton Station, C. P. R. The main stock boar, Concord Blucher, has been shown five times, and won five first prizes. He is a massive hog of rare type and quality, and as a sire it is only necessary to say that his get won every first prize hung up throughout the local circuit this year, and that in heavy competition. Twelve brood sows are doing duty as breeding matrons, and several of them from imported stock and winners of many prizes. For sale are young sows, bred and ready to breed, and others younger. Young boars coming on.

COMMERCIAL OATS FOR SEED.

Few reports filed by magistrates who are called upon to deal with complaints under the Seed Control Act furnish more conclusive evidence of wrong-doing on the part of grain merchants who sell seeds than is contained in the report from the magistrate's chambers at Sherbrooke. When called before the Court, the defendant, who conducts a local seed business in a small town adjacent to Sherbrooke, produced quotations which he had received on a printed form from the Alf. Denis Company, Ltd., of Edmonton, Alberta, on which printed form was advertised, in red type-writer type, oats "for seed, English Abundance, Early Swede, Banner," at 45c. per bushel, f.o.b. Fort William. On these representations and quotations, the defendant had ordered by telegram 1,200 bushels English Abundance seed oats. In due time the oats were delivered in bulk in C.P.R. car, No. 20,626, the invoice reading, in part, "40,800 pounds seed oats, English Abundance." Further investigation revealed the information, from the records of the grain inspection at Fort William, that this car lot of so-called seed oats had been loaded out on the order of a prominent Winnipeg grain merchant, who put in a warehouse receipt to the Consolidated Elevator for 1 C.W. oats, to be shipped to the order of A. Denis Company at the Quebec address. This car was taken from an ordinary bin of 1 C.W. oats, and specially cleaned by the usual screens of the Consolidated Elevator. The grain inspectors had no knowledge that it was wanted for seed, neither was anything said about its being English Abundance seed oats. The grain merchants who sold this commercial grain, representing it to be seed of a definite variety, were surely in possession of the information that all commercial grain contained in elevator bins at Fort William consists of mixtures of many kinds and varieties. In the work of seed inspection in the Province of Quebec, Western-grown oats are commonly found exposed for sale for the purpose of seeding under definite variety names, the name of the variety given being the one which at the time is the most popular within the district, and recommended by the experimental farms. Inquiry usually elicits the information that such stated variety had been ordered in good faith by the local seed vendor. It is seldom, however, that seed inspectors are able to procure the information necessary to enable them to trace the origin of the seed. The information obtained from this shipment is presented as a sample of what is believed to most commonly occur when seed dealers in Eastern Canada purchase seed grain from grain merchants instead of seed merchants, and as a warning to farmers, in Quebec in particular, that if they are to obtain good results from their grain crops, they must cease to depend on such importations of seed grain, which are usually contaminated with noxious weed seeds, and consist of a mixture of many varieties that will not ripen uniformly.—Geo. H. Clark, Dominion Seed Commissioner, in Census and Statistics Monthly.

The Principle of Feeding



The man who feeds sheep, cattle or swine, so as to bring about rapid growth and a short fattening period, never goes by guess-work. With him, feeding is a science based on one fundamental principle, viz: **A strong animal digestion means economical food consumption.** To accomplish this—to make the digestive function of his feeding stock unflinchingly active—he gives regular daily doses of

DR HESS STOCK FOOD

in the grain ration and reaps his reward in fat, sleek cattle, plump sheep and heavy hogs. Dr. Hess Stock Food was formulated by Dr. Hess (M. D., D. V. S.) in response to a general demand for a digestive tonic which would prevent failing appetite and stomach derangements resulting from heavy feeding.

This way of managing farm stock is called after the name of its originator—"The Dr. Hess Idea," and proves conclusively that "a poor ration, well digested, is better than the best ration, poorly digested." Dr. Hess Stock Food is sold on a written guarantee. It makes a milch cow increase her milk; shortens perceptibly the time necessary to fatten a steer, hog or sheep; puts horses in A 1 condition and relieves all the minor stock ailments.

100 lbs. \$7.00 Smaller quantities at a slight advance. **DR. HESS & CLARK**
25 lb. pail \$2.00 Duty paid. **Ashland, Ohio, U.S.A.**

Also manufacturers of Dr. Hess Poultry Pan-a-ce-a and Instant Louse Killer. FREE from the 1st to the 10th of each month—Dr. Hess (M. D., D. V. S.) will prescribe for your ailing animals. You can have his 28-page Veterinary Book any time by asking. Send 2 cent stamp and mention this paper.


DR. HESS POULTRY PAN-A-CE-A

makes poultry keeping a successful venture for the man or woman who wants a nice, quiet, home business. It acts on the digestive organs of the hen and converts the greatest possible proportion of her food into large, full-meated eggs, wards off common poultry ills and pays for itself many times over. Ask your dealer for Dr. Hess Poultry Pan-a-ce-a.

1 1/2 lbs. 35c; 5 lbs. 85c; 12 lbs. \$1.75; 25 lb. pail \$3.50. Duty paid.
Send 2 cents for Dr. Hess 48-page Poultry Book, free.

INSTANT LOUSE KILLER KILLS LICE

BURNSIDE AYRSHIRES!



Fresh importation just landed in quarantine of 60 head. I have the choicest lot of 12 young bulls I have ever imported. From the best herds in Scotland, such as Auchenbrair, Osborne, Netherhall, Bargenoch, Barr of Hobsland, Mitchell of Lochfergus. All fit for service. A number of cows, 3-year-olds, 2-year-olds, and 20 choice yearling heifers. All are for sale.

R. R. Ness, Howick, Que.

Ayrshires and Yorkshires!

We still have a few choice individuals of almost any age on hand in Ayrshires, and are always ready to price any. Other breeders in this section. Bull calves from Record of Performance cows. A few young Yorkshires on hand.

ALEX. HUME & CO., MENIE, ONT.

Ayrshires

Bull calves, from 4 months to 9 months, from imported sire and Record of Performance dams. Records 50 to 63 pounds per day.

N. Dymont, R. R. No. 2, Hamilton, Ont.

Stonehouse Ayrshires

All imported or out of imported sire and dam. For sale: females of all ages. Am now booking orders for bull calves.

Hector Gordon, Howick, Quebec.

Stockwood Ayrshires

Imported and Canadian-bred. High producers and high testers. Females of all ages for sale; also several young bulls, from 8 to 13 months old. Imp. sires and out of imp. dams. Right good ones, and bred from winners.

D. M. Watt, St. Louis Station, Quebec.

The Maples Holstein Herd

has still on hand for sale three sons of King Posch DeKol. All choice individuals and fit for service. All from Record-of-Merit dams. Seventeen females in the herd in calf to King Posch DeKol, bred to freshen between September and February. Calves of either sex, from any of these, for sale at reasonable prices.

Walburn Rivers, Folden's, Ont.

Fairmount Holsteins.

Have sold 29 head of cattle the last few months, but must still sell 9 or 10 more to make more room for spring calves. Also have two bull calves left, which will be priced right to quick buyers.

C. R. GIES, Heidelberg, Ont.

LAKEVIEW HOLSTEINS

Bull calf born April 2nd, 1910; mostly white; sire Count Hengerveld Fayne De Kol, who is a brother of Grace Fayne 2nd's Homestead—35.55 lbs. butter in 7 days, and of De Kol Creamelle 10,017 lbs. milk in 100 days. The dam of this calf is sired by De Kol Hengerveld Bruce, who has 21 A. R. O. daughters, one of which has a 30-lb. record, and 10 of which have records over 20 lbs. Several others for sale. Write for particulars.

E. F. OSLER, BRONTE, ONTARIO

Homewood Holsteins

Headed by Grace Fayne 2nd Sir Colantha. His sister and sire's dam each made over 35 lbs. butter in 7 days; nearer related to the two greatest cows than any bull in Canada. Young bulls and cows in calf by him for sale. Prices right.

M. L. HALEY, M. H. HALEY, Springford, Ont.

Maple Hill Holstein-Friesians

Females all ages. Write for what you want, or come and see them.

G. W. Clemons, St. George, Ont. Bell Telephone.

Centre and Hill View Holsteins

We have added to head our herd a young bull from King Segis, world-record sire, and a 26-lb. 4-year-old dam. Have 2 bulls born in January from Bonheur Statesman. Their granddams have over 21 lbs. butter in 7 days. Also younger ones from good A. R. O. dams. These will be sold right, considering their backing.

P. D. Ede, Oxford Centre, Woodstock Sta. LONG-DISTANCE TELEPHONE.

Holstein - Friesians

FAIRVIEW FARM offers young bulls, sired by Pontiac Korndyke and Rag Apple Korndyke, without question the two greatest Korndyke bulls in the world, and out of cows with large A. R. O. records and testing 4 1/2 fat. Come and see them or write.

E. H. DOLLAR, Hevelton, N. Y. Near Prescott.

WOODBINE FARM HOLSTEINS

Offers a number of fine bulls and bull calves, sired by Sir Creamelle, who is a direct descendant in two different lines of the great cow, Duchess Ormsby, 24.44 lbs. butter in 7 days, dam of five daughters with records that average 20 lbs. of butter in 7 days, the greatest producing family of the breed. Write for prices. Telephone connection. Shipping stations: Ayr, C. P. R.; Paris, G. T. R.

A. KENNEDY, AYR, ONTARIO.

Glenwood Stock Farm—Holsteins and Yorkshires.

Holsteins all sold out. Have a few young Yorkshires sows, about 2 months old, for sale cheap. True to type and first-class. Bred from imported stock.

Thos. B. Carlaw & Son, Warkworth P.O., Ont. Campbellford Station.

DON'T

Buy a HOLSTEIN BULL till you get my prices on choice goods from eight months down, from best producing strain. "Fairview Stock Farm." **FRED ABBOTT, Harrietsville, Ont.**

Evergreen Holsteins

For sale: 5 young bulls out of R. O. M. dams, and sired by Sir Mercena Faforit, whose two nearest dams' records average 24.60 lbs. Can also spare a few females. **F. E. PETTIT, Burgessville P.O. and Sta. Oxford Co.**

Elmwood Holsteins

Choicely-bred calves for April and May delivery. Sired by imported Ykema Sir Posch and Pontiac Sarcastic, a grandson of Sarcastic Lad. Registered. Delivered. Express paid. Safe delivery guaranteed.

E. D. GEORGE & SONS, PUTNAM, ONT.

Holstein Cattle

The most profitable dairy breed. Illustrated descriptive booklets free. **Holstein-Friesian Ass'n of America, F. L. HOUGHTON, Secy, Box 127, Brattleboro, Vt.**

Ridgedale Holsteins

I have left three bull calves that will be priced right for quick sale; their dams are heavy producers, and their sire was bred right.

R. W. WALKER, Utica, Ont. Phone connection.

Holstein Bulls!

Maple Grove offers a few richly-bred bulls fit for service. For particulars and breeding write: **H. BOLLERT, CASSEL, ONT.**

A BAD COLD

Developed Into
BRONCHITIS.

Neglected Bronchitis is very often the direct cause of Consumption, and on the first symptom appearing Dr. Wood's Norway Pine Syrup should be used and the Bronchitis cured.

The symptoms are, tightness across the chest, sharp pains and a difficulty in breathing, a secretion of thick phlegm, at first white, and later of a greenish or yellowish color, coming from the bronchial tubes when coughing, especially the first thing in the morning.

Mrs. Dan. J. McCormack, Cleveland, N.S., writes: "My little boy two years old caught a bad cold which developed into Bronchitis. He was so choked up he could hardly breathe. Reading about your wonderful medicine, Dr. Wood's Norway Pine Syrup, I decided to try a bottle and with such good result I got another which completely cured him, without having a doctor. I cannot say too much in its praise; I would not be without it in the house as I consider it a sure cure for Colds and Bronchitis."

The price of "Dr. Wood's" Norway Pine Syrup is 25c. It is put up in a yellow wrapper. Three pine trees is the trade mark. Be sure and accept no substitute for Dr. Wood's.

Manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

Worth Looking Into

When it becomes necessary to buy feed, it will be well to keep in mind the word

"CRESCENT."

"Crescent" is a mixed chop, with the Government analysis on every bag. One of the largest dairy herds in Ontario recently ordered a carload, and the order was placed after thoroughly testing its value as a dairy feed. Ask your dealer about it. If he does not know, write us. We can give you a close price on a carload.

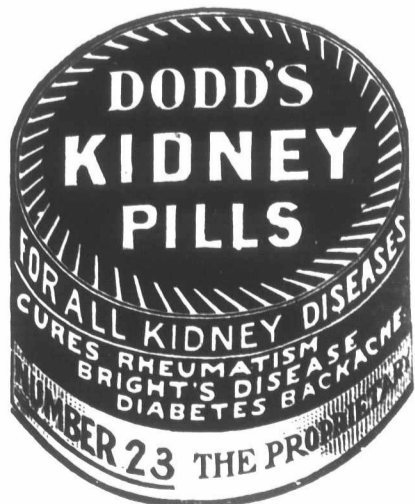
THE CHISHOLM MILLING CO., LIMITED
"A." Jarvis Street, Toronto, Ont.

Highest Quality LEICESTERS We are offering 8 shearing rams, 25 ram lambs, 10 shearing ewes and 15 ewe lambs. Big in size, very heavy covered and choice quality. Flock headers and show stock a specialty. **C. & E. Wood, Freeman, Ont.**

Springbank Yorkshires and Oxfords. Young sows, 8 months. Right good ones. Also ewe lambs and shearlings. Prices are right.
Wm. Barnet & Sons, Living Springs P.O., Ont.
Fergus, C. P. R. and G. T. R.

Shropshires For two weeks at reduced prices. Ewe lambs by imp. ram, and also shearling ewes. **L. G. Clarke, Alton, Ont.**

"Every time the automobile breaks down I notice you examining your State license."
"I do that for encouragement. The license says I'm competent to operate the machine."



QUESTIONS AND ANSWERS.

Miscellaneous.

LUMP JAW.

Bull, within the last month, has a lump coming on the under side of jaw. If it is lump jaw, would it be advisable to breed stock from him? If he was fed for beef, would a person be allowed to put it on the market? This lump seems to be firm on the bone. Is it lump jaw? He seems to have a good appetite.

A. R. C.

Ans.—This is probably lump jaw. Taken in the early stages, a cure is generally effected by the following treatment: Give iodide of potassium in bran or in a pint of water as a drench; commence with one dram three times daily, and increase the dose by ten grains daily until he refuses food and water, fluid runs from the eyes and mouth, or the skin becomes scurfy. When any of these symptoms become marked, cease giving the drug. Repeat treatment if necessary in three weeks. The disease is not supposed to be hereditary. It is unlawful to offer for sale the flesh of an animal affected with this disease, though all but the part locally affected is probably safe to use.

VARIETIES OF APPLES.

Taking the following list of varieties of winter apples, which would you consider the three most profitable, and which the four most profitable varieties: Spy, Baldwin, King, Greening, Fameuse and McIntosh Red. Also which is the most profitable variety of fall apples, and which are the two most profitable?

A SUBSCRIBER'S SON.

Brant Co., Ont.

Ans.—The selection of varieties of apples to plant in a young orchard is a matter which requires very careful consideration, as there are so many factors to be taken into account. For your district, you would make no mistake in selecting any of the varieties you have mentioned. If I were limited to a selection of three of those named, I would plant Spy, Baldwin and King, and for a fourth would add Greening. Among the fall varieties there is nothing better than Fameuse and McIntosh. If I had to make my choice between the two, I would select McIntosh. With a good selection of varieties of this kind, the profits from the orchard will depend largely upon the care and management given, and the business ability shown in disposing of the crop.

O. A. C.

H. L. HUTT.

GRAVEL OR CRUSHED STONE FOR WALL—HOLLOW BUILDING BRICK.

1. In building a basement wall for a barn, is crushed stone and gravel stronger than cement and gravel, and, if so, in what proportion should they be mixed, and what sized crushed stone is preferable?

2. Are hollow building brick suitable for a basement wall. Would they be strong enough, and how would they last?

A. B.

Ans.—It depends mainly upon the strength of the aggregate. If the crushed stone is stronger than the gravel, it will, other things being equal, make a stronger wall. A suitable size is 1 to 1 1/2 inches in diameter. Five parts clean gravel, three parts crushed stone and two parts sand, to one part cement, would serve fairly well, and is recommended by a concrete machinery man. For our part, we would incline to add a little extra cement. Crushed stone and sand may be used without any gravel at all. Enough sand must be used to fill the interstices. Probably five parts crushed stone to two parts sand would be found about right. Thus mixed allow one part cement to eight parts crushed stone.

2. In many respects, these hollow building brick are ideal, being a dry, well insulated wall, which, if properly constructed, prove fairly durable. They are not however, extra strong, and will stand up to horses kicking, and other things, if used. They should be protected against such mishaps. A well supported plank behind the wall, and a good top rail, will all be used and the wall will stand up to anything that may be put against it. If you are hesitating

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We teach you right at home, by mail, how to mount all kinds of birds, animals, fishes, game heads, tan skins for rugs and robes, etc. Only school of its kind in the world. Expert instructors, latest and most approved methods. Success absolutely guaranteed or no tuition. Pleasant, fascinating work for men, women or boys. Quickly and easily learned in your spare time. Decorate your own home with the unique specimens of your own handiwork or make beautiful gifts for your friends.

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SPORTSMEN and NATURALISTS— You can quickly learn in just a few lessons how to mount your own specimens and trophies as well as a professional.

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NORTHWESTERN SCHOOL OF TAXIDERMISTRY
501 Elwood Building OMAHA, NEB.

I have big, thick and woolly rams and ewes, mostly lambs, but some yearlings, both

Shropshires and Cotswolds

Have also the best lot of young SHORTHORN BULLS have ever bred, sired by one of Whitehall Sultan's greatest sons. They will be sold worth the money. You should write soon. **ROBERT MILLER, STOUFFVILLE, ONT.**

SOUTHDOWNS

Alloway Lodge Stock Farm

First-prize Canadian-bred flock at Toronto, 1909 and 1910. Your choice of the best lot of rams I ever owned. The prices are right.

Long-distance phone **ROBT. McEWEN,**
Railway station, London. **BYRON, ONTARIO.**

LABELS

Metal Ear Labels for Cattle, Sheep and Hogs.

The old standby for all who have stock liable to stray, or to dispute as to identification or ownership; for herd or flock records, or for general convenience. Send for free circular and sample. It may save you much trouble. Write today.

F. G. JAMES, BOWMANVILLE, ONTARIO.

FARNHAM FARM OXFORDS AND HAMPSHIRE

CHAMPION FLOCKS OF BOTH BREEDS.

We are offering at reasonable prices a limited number of yearling and two-shear ewes by imported sires, and bred to our two champion imported rams. Long-distance phone in the house. Central Guelph. Telephone Guelph. Guelph, G.T.R. **HEVRY ARKELL & SON, ARKELL, ONT.**

Oxford Down Sheep, Shorthorn Cattle, Yorkshire Hogs—Present offering: Lambs of either sex. For prices, etc., write to **John Cousins & Sons, Harrison, Ont.**

Shropshires The right quality to breed from. Choice animals of both sexes for sale. Also White Wyandotte cockerels. **W. D. Monkman, Bond Head, Ontario.**

MAPLE VILLA OXFORD DOWNS AND YORKSHIRES

Are ideal in type and quality. Present offering is a grand lot of ram lambs for flock headers, also a number of shearing ewes and ewe lambs, sired by imp. Hamptonian 22nd. Yorkshires of both sexes and all ages. Right good ones. Satisfaction assured.

Bradford or Beeton Station. J. A. CERSWELL, Bond Head P.O., Ont.

STOP! LOOK!! READ!!! FAIRVIEW SHROPSHIRE!!!!

Home again, and are feeling well. Ready to start making good for another year. Conditions seem right for constant progress. We are determined to lead, follow who may.

J. & D. J. CAMPBELL, Fairview Farm, Woodville, Ontario.

Maple Leaf Berkshires

For sale: Young sows bred and ready to breed; boars fit for service; also young pigs eight to ten weeks old. Imp. sires and dams. Pairs not akin. C. P. R. and G. T. R. Bell phone.

Joshua Lawrence, Oxford Centre, Ont.

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. & Stn.

PINE GROVE BERKSHIRES!

Sows bred and ready to breed. Nice things, three and four months old.

W. W. BROWNIDGE, Milton, C. P. R. Ashgrove, Ont. Georgetown, G. T. R.

Elmfield Yorkshires Am now offering both sexes, from 3 to 4 1/2 months of age, sired by S. H. Albert 2nd. Imp. in dam, and out of imp. and imp. in-dam sows. True to type and of choice quality. **G. B. MUMA, Agr. Ont.** Phone connection.

Swine OF ALL BREEDS FOR SALE. I breed Yorkshires, Tamworths, Berkshires, Hampshires, Chester Whites, Poland-Chinas and Duroc-Jerseys. I have constantly on hand both sexes of all ages. Show stock a specialty. **John Harvey, Frelighsburg, Que.**

PINE GROVE YORKSHIRES At the late Guelph Winter Show we won more prizes than any two exhibitors, including all the firsts and sweepstakes for best dressed carcasses, both at Guelph and Ottawa Winter Fats-stock Shows of 1908-09. Young pigs for sale, mated not akin, all the progeny of imported stock of superior excellence. **Joseph Featherston & Son, Streetsville, Ont.**

DUROC-JERSEY SWINE

Choice young sows, bred and ready to breed. Young pigs 8 to 10 weeks old. Also a few Jersey Hogs. **Mac Campbell & Sons, Northwood, Ont.**

White Hampshire Hogs

Mac Campbell & Sons, Northwood, Ont.

LARGE WHITE YORKSHIRES

Have on hand at the present time a choice lot of boars ready for service, and a fine lot of young bred sows for the fall trade. Young pigs all ages. Pairs supplied not akin, from large imported stock. Write, or call on

H. J. DAVIS, WOODSTOCK, ONTARIO
Long-distance Bell phone. C. P. R. and G. T. R.

MORRISTON TAMWORTHS

A grand lot of boars from 2 to 10 mos., also young sows (dandies). Some just bred. Some in farrow to first-class boars from a best herd in England. Prices right. **Charles Currie, Morriston, Ont.**

Newcastle Tamworths and Shorthorns

For sale: Choice young sows bred and ready to breed. Boars ready for service, nice things, 2 to 4 months, by imp. boar. Dam by Caldwell's Choice Canada champion boar, 1901-2-3-5. Two splendid young Shorthorn bulls and six heifers bred. Prices right. Bell phone.

A. A. COLWILL, NEWCASTLE, ONTARIO

FAIRVIEW BERKSHIRES

Ontario's banner herd. Prizewinners galore. For sale are: Young sows bred and others ready to breed, and younger ones. A number of young boars coming on. **JOHN S. COWAN, Donegal, Ont.**

HILLVIEW YORKSHIRES

High-class young stock of both sexes for sale, sired by Cragsbrook Duke, imp. 1905. Out of large mature sows. It will pay you to get our prices. G. T. R. and C. P. R. **W. F. DISNEY, Greenwood, Ont.**

Willowdale Berkshires

FOR SALE: Some choice young sows bred and ready to breed; young pigs 8 to 10 weeks old. Nice things, 3 to 4 months. Long-distance phone. **J. J. Wilson, Importer and Breeder, Milton P.O., G. T. R. & C. P. R.**

HASTINGS BROS. Crosshill Ont.

Free to Stock and Poultry Raisers



At a cost of only two-thirds of a cent a day per Animal, Royal Purple Stock Specific makes each Animal worth 25 per cent. more.

You never heard of any other Specific, or "Stock Food," doing likewise.

Royal Purple will permanently cure the Colic, Worms, Skin Diseases and debility, and restore run-down Animals to plumpness and vigor.

It will increase the milk-yield three to five pounds per cow a day inside of from two to three weeks. It makes the milk richer than ever before.

MR. ANDREW WEGRICH, of Wainlett, Ont., says: "This is to certify that I have tried your Royal Purple Stock Specific for two weeks, on one cow. On the 16th I weighed her milk as 17 pounds. I noticed a change after 5 or 6 days, as there was an extra weight of milk. On the 29th, I carefully weighed the milk, and she gave 22 pounds. I am giving an order for 5 boxes, as I consider it the best I have ever used."

"Stock Food" will not do this. Because "Stock Food" is nothing more or less than a mixture of the very things which you, yourself, grow on your own farm.

It is not more food your Animals need. They must have something to help their bodies get all the nourishment from the food they are getting. So that they will fatten, and stay fat, all the year 'round.

They need something to prevent disease, to cure disease, and to keep them in the best of health, all the time.

Not a Stock Food

Royal Purple is not a "Stock Food," a "medicine." It is a Conditioner.

It does not contain Grain, nor farm products. Nor does it contain "Dope," or any other injurious ingredient. Royal Purple does not merely temporarily bloat or inspire the Animal. It fattens and strengthens it, permanently.



No other Specific known adds flesh so quickly as Royal Purple. It makes 6-weeks-old Calves as large as ordinary-fed Calves are at 10 weeks.

Royal Purple makes naturally-thin Animals fat

and heavy. And it builds up the health and restores the former plumpness and vigor of run-down stock, in little or no time.

The very best time to use this Conditioner is NOW. It digests the hard food properly and prevents the animals getting indigestion or losing flesh.

50 per cent. Cheaper

One 50-cent Package of Royal Purple will last one Animal 70 days. This figures a little over two-thirds of a cent per day.

Most "Stock Foods" in 50-cent Packages last but 50 days, and are given three times a day.

But Royal Purple Specific is given only once a day, and lasts 50 per cent. longer.

(A \$1.50 Pail, containing four times the amount of the 50-cent Package, lasts 280 days.)

So, you see, it is only necessary to give Royal Purple Specific once each day.

Just think of making each Animal worth 25 per cent. over its cost! What will that mean to you, Mr. Stock Owner!

Royal Purple

STOCK AND POULTRY SPECIFICS

Royal Purple creates an appetite for food, and helps nature to digest and turn it into flesh and muscle.

As a Hog fatterer, Royal Purple has no equal.

Never Off Feed

Dan McEwen, the horseman, says: "I have used Royal Purple Stock Specific persistently in feeding 'The Eel,' 2:02 1/2, largest winner of any pacer on Grand Circuit in 1908 and 1909, and 'Henry Winters,' 2:10 1/4, brother of 'Allen Winters,' winner of \$36,000 in trotting stakes in 1908.

"These horses have never been off their feed since I started using Royal Purple Specific. I will always have it in my stables. Your Cough Powder works like magic."

For Poultry

Royal Purple Poultry Specific is our other Specific. It is for Poultry—not for stock.

It makes the Hens lay Eggs in Winter as well as in the Summer.

MRS. WM. BURNHAM, Sanford, Ont., says: "Dear Sirs,—This is to certify that I have used two boxes of your Poultry Specific for my hens. They laid so well while feeding it to them, I wondered if you would mind sending me word how or where I could get some this winter. I bought it from your agent last winter. I had 32 hens, and some days I got two dozen eggs a day in February and March, while feeding them the Specific."

Royal Purple Poultry Specific prevents Poultry losing flesh at moulting time, and permanently cures every poultry disease. It makes their plumage bright and keeps them always in prime condition.

It makes your Poultry worth more than they could ever be without it.

Yet one 50-cent Package will last 25 Hens 70 days. Or a \$1.50 Pail will do 25 Hens 280 days. This is four times more material at only three times the cost.

Make This Test

Every ounce of Royal Purple Stock and Poultry Specific is guaranteed.

To prove that Royal Purple has no equal, we want you to make this test:

Feed Royal Purple to any one of your Animals for four weeks. And at the same time feed any other preparation to any other Animal in the same condition.

If Royal Purple does not prove to you, by actual results, that it is the best you ever used, we'll return your money.

And we'll ask no questions—make no excuses. You will be the judge—not us.

This is an honest test, isn't it? We ask you to make it because we know that Royal Purple is the best Conditioner on the market.

If you are not satisfied, after testing it, you don't lose anything, do you?

Gowanda, Ont., Feb. 7, '10.
The W. A. Jenkins Mfg. Co., London, Ont.:

Gentlemen, We have been using Royal Purple Poultry and Stock Specific for the last three weeks, and must say that results are remarkable. Am feeding the Stock Specific to two milking cows, and they have increased 30 per cent. in their milk. The poultry results are even more marked than this. We have about 60 hens, laying age. When we commenced feeding, we were getting five and six eggs a day, and in the last five days the same flock of hens laid 150 eggs, almost an average of 31 each day, and those five days have been the coldest this winter.

You can see results plainly in two or three days after the use of "Royal Purple," and the poultry have the same lustre and appearance now as in the summer time. With cows and poultry, am using exactly the same feed and care as before starting to feed "Royal Purple."

When farmers and stockmen get acquainted with Royal Purple, it will have a greater demand than all other tonics and stock foods on the market combined.

Yours truly, ANDREW HICKS.

Aug. 28, 1911.

W. A. Jenkins Mfg. Co., London, Ont.:

Gentlemen,—Last Fall we had in our stables a young mare belonging to Miss Clouston, of Montreal. We could not feed her any bran on account of causing violent scouring, consequently causing her to become weak and thin. We commenced using your Royal Purple Stock Specific, and the results were wonderful. After using it three weeks, we found we could feed the animal bran or any other soft feed without scouring her, and she actually took on in this time twenty-five pounds of flesh, we working her at the same time through the hunt. I can heartily recommend your Stock Specific.

TOM SMITH.

Trainer for the Hon. Adam Beck.

We also manufacture:
Royal Purple Lice Killer..... 25c.
Royal Purple Gall Cure..... 25c.
Royal Purple Sweet Liniment..... 50c.
Royal Purple Cough Cure..... 50c.

Our Cough Cure will cure any ordinary cough in four days, and will break up and cure distemper in ten to twelve days.

If your dealer cannot supply you with our Royal Purple Brands, we will supply you upon receipt of \$1.50 a pail, prepaid, for either poultry or stock, or if you want any Liniment, Gall Cure or Cough Powder, we will send it by mail, postpaid, upon receipt of price.

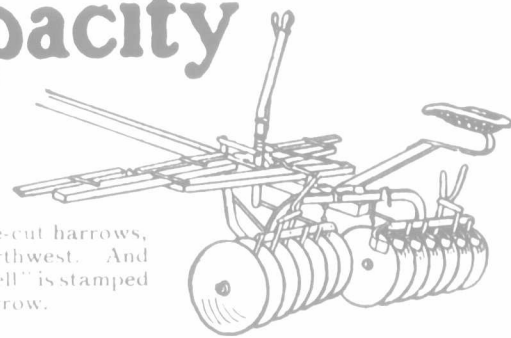
W. A. JENKINS MFG. COMPANY, LONDON, ONTARIO

The "Bissell" has wonderful capacity

Test the "Bissell" In-Throw Harrow on your land, and you'll see what a harrow designed by a specialist will do. Our Mr. T. E. Bissell has been personally connected with the manufacture of disc harrows for nearly a quarter of a century, and is recognized as an authority on disc harrow construction.

The "Bissell" In-Throw stays right down to its work no matter how tough the land. It doesn't rock or sway. The plates stir the soil thoroughly. The gangs stay tight. There is no neck weight, therefore the horses do more work. It has wonderful capacity—wins every field competition.

The construction is simple, durable and trouble-proof. Send to Dept. W for booklet describing both our In-Throw and Out-Throw Harrows, and our 16-plate wide-cut harrows, which are so popular in the Northwest. And remember that the name "Bissell" is stamped on every genuine "Bissell" harrow.



T. E. BISSELL CO., LTD., ELORA, ONT.

Newest Designs
Best Materials
Carefully Made

BEATH
IMPROVED

Strongest Construction
Easiest Running
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FEED AND LITTER CARRIERS

Awarded Medals and Diplomas Toronto Exhibition.
Made in Two Styles. Live Agents Wanted.

Write for Catalogue A and Prices.

W. D. BEATH & SON, LIMITED TORONTO

Anything from a BERRY PLANT to a SHADE TREE is waiting your



No better stock or value offered than at the old reliable CENTRAL NURSERIES. We ship direct to customer with satisfaction. Send for priced catalogue before placing your orders. It will pay. If you have not had good results from others, TRY OURS—1st YEAR.

The new hardy Hydrangea HILL of SNOW, a Beauty; the New Snow Queen Rose; Baby Rambler, in bloom all summer, by mail, 35c. each

Apple, Pear, Plum, Cherry, Peach and Ornamental Trees
Roses, Shrubs, Seed Potatoes, etc.

A. G. HULL & SON,

St. Catha

This 5-Ton Scale Is Easy To Buy—

You need not club with your neighbors to equip your farm with the scale you need—the CHATHAM Pitless Scale. **COMES READY FOR USE** You can afford to buy it yourself. It will save you more than its cost in one season. Up to five tons it will weigh accurately all you buy or sell. You can erect it ready to use in a morning. **YOU HAVE NO BOTHER**

**No Pit to Dig
No Extras to Buy**



Your CHATHAM Pitless Scale will be YOUR Scale, that you can take with you when you move. You can always get for it what you paid for it. And you need no skilled help to set up the CHATHAM—it comes to you complete, with plain directions. Built wholly of heavy steel. Nothing to rust, decay or go wrong. Government guarantees its absolute accuracy. Tested before it leaves the factory. Warranted fully.

This is the Complete Scale

Bear in mind that you have no hard work to do in setting up a CHATHAM. It is all solid steel, stands on its own feet above ground—no pit to dig, no fussy preparation needed before you use it. Comes to you so you can be weighing on it in a few hours after you get it. No skilled mechanic necessary at all.

Special Compound Beam—No Extra Cost

This season we include our new Compound Beam with each CHATHAM Pitless Scale without adding a cent to the price of it. You can find no bigger bargain, yet the price is away down low. In sections where we have agents we



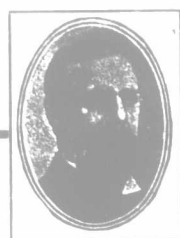
This is Your One-Ton Scale

CAPACITY 2,000 POUNDS

offer special long-time credit terms to those who would rather try the Scale before they pay for it. Write us and ask for full details.

You'll Never Wear it Out

Main frame is one solid and very heavy casting. Levers are specially heavy and strong, so they won't spring under excessive strains. Bearings align themselves, because pivot rests on bearing loop; tilt the scale and it will still weigh right. And the price is very small.

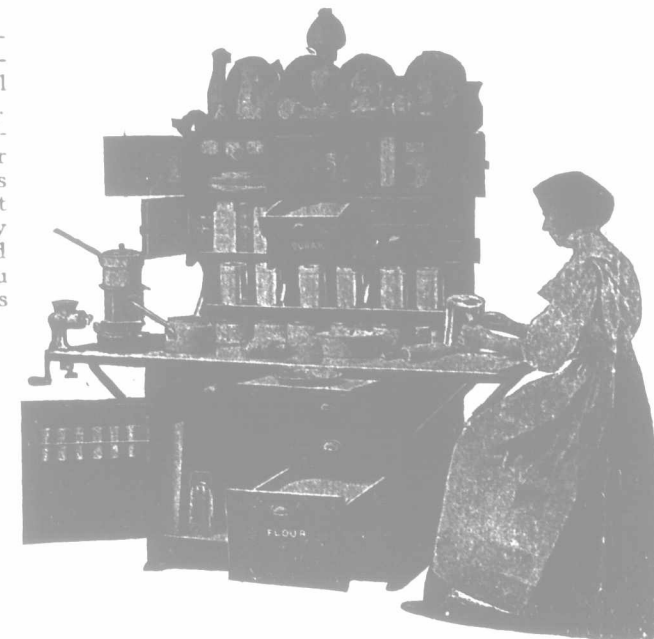


I personally vouch for every statement this advertisement makes, and I further guarantee that my Chatham Pitless Scale is the biggest scale value you can buy for money in this or any other country. Write me about it and I will see that this is proved to your complete satisfaction. Write now.

MANSON CAMPBELL
President.

SAVES MONEY—TIME—WORK—AND REALLY COSTS NOTHING

You can easily afford this handsome, practical kitchen necessity. For our special offer (please send for details of it) lets you pay for it out of what it actually saves in lessened grocery bills. You should ask us about it at once.



Whole table-top one heavy sheet

OF BRIGHT ALUMINUM

You cannot begin to know the CHATHAM by this picture. For the picture cannot show even one of its most pleasing and valuable features—the SOLID SHEET OF BRIGHTLY-POLISHED HEAVY ALUMINUM that forms the covering of the table-top and extension leaves. This ALUMINUM is extra-heavy weight, pure metal—LOOKS LIKE SILVER—LASTS LIKE STEEL—cannot rust—won't gather dust or dirt—easily cleaned—simply perfection! And this is the ONLY kitchen cabinet you can buy with an aluminum top—which ADDS FULLY FIVE DOLLARS TO ITS VALUE. Yet you pay NOTHING EXTRA for it!

You must see it to know it

You must see the Chatham Kitchen Cabinet to appreciate how handy, compact, sensible it is. Exterior of specially-selected black ash, hard as rock and beautifully polished. Panels of golden chestnut. Bake-board, drawers and flour-bin of snow-white basswood. With the CHATHAM everything you use in cooking is at your fingertips. You can get meals ready sitting down. Your flour-bin (metal lined—holds 75 pounds!) is right under your hand in easy reach. Sugar-bin (opened or closed by a touch) is just in front of you. Six air-tight canisters (free with every Chatham Cabinet) stand in the shelf-rack. Big, dust-tight drawers hold spoons, egg-beater, funnels, strainers, etc.; ample closets for kettles, pans, and the like.

Everything in its place Easily moved to sweep under

place provided for all the things you now walk back and forth for, between pantry and table. The CHATHAM spares you all those countless steps. Cupboards for jams and tinned foods; three roomy drawers (besides the two large ones) for small packages. High top makes a fine shelf for dishes—enclosed on three sides, and a rod at the back as a plate rack. Fine French plate mirror in center door—fix your hair in a second if anyone comes.

The CHATHAM is mounted on ball-bearing castors. You can readily move it when you are sweeping up. Yet it is most solidly built—nothing shaky nor wobbly about it. Whole thing is dust-tight, mouse-proof—a permanent, durable, satisfying kitchen help.

You should now investigate

Yet, with all these conveniences—features found in nothing else—the cost of a CHATHAM is probably less than you imagine. You should write us for the address of our agent nearest you. He can name you a price that will surprise—and he will gladly show you the Cabinet and point out its merits.

Allow us to send you illustrated explanatory

**FREE BOOK
JUST ADDRESS**



And I know we build it so well it can safely be GUARANTEED to you.
Manson Campbell, President

We use one of my Cabinets in my own home; and the women-folk say frankly that they simply could not get on without it. It certainly does cut kitchen-work square in half.

Manson Campbell Company, Limited, Chatham, Ontario.

of the famous Chatham Fanning Mill.

Quebec Agents: Wm. Gray & Sons, Montreal, Que.