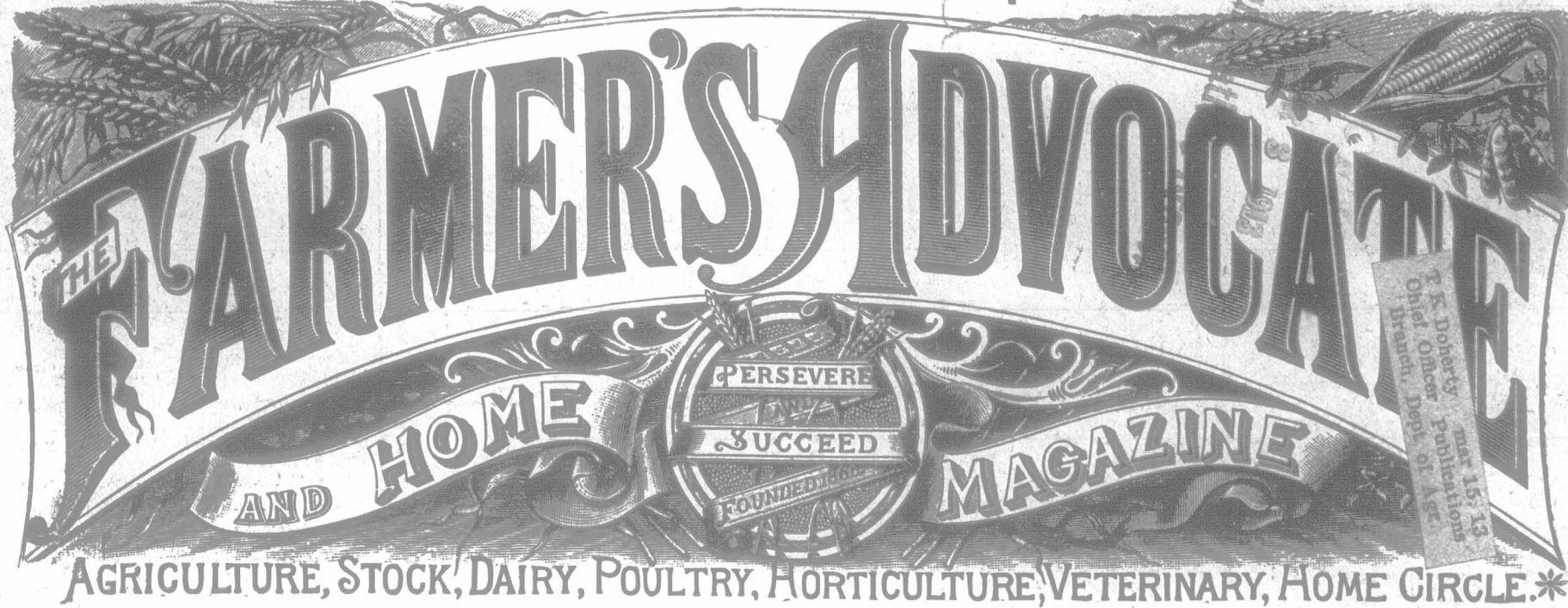


PUBLISHED EVERY WEEK. \$1.50 PER YEAR.



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

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VOL. XLVIII.

LONDON, ONTARIO, FEBRUARY 27, 1913

No. 1066

# Free to Stock and Poultry Raisers

We will send absolutely free, for the asking, postpaid, one of our large sixty-four page books, with insert, on the common diseases of stock and poultry. Tells how to feed all kinds of heavy and light horses, colts and mares, milch cows, calves and fattening steers; also, how to keep and feed poultry so that they will lay as well in winter as summer. No farmer should be without it.

NOW is the time to use Royal Purple Stock Specific. At a cost of only two-thirds of a cent per day per animal, it will increase its 25 per cent. in value. It permanently cured Bots, Colic, Worms, Skin Diseases and Debility. Restores run-down animals to plumpness and vigor. It will increase the milk yield three to five pounds per cow per day and make the milk richer.

Royal Purple is not a stock food. There is no filler used in its manufacture, and we import from Europe all the seeds, herbs, barks, etc., and grind them on our own premises. Therefore, we can guarantee it to you as being absolutely pure. We do not use cheap filler to make up a large package. We give you the best condition powder ever put on the market in a concentrated form.

A tablespoon levelled off, once a day, is sufficient for a full-grown animal. It prevents disease, keeps your animals in perfect health, and is absolutely harmless. It makes six-weeks-old calves as large as ordinary calves at ten weeks. You can develop six pigs ready for market in just one month's less time than you can possibly do without it, at a cost of only \$1.50, saving you a month's work and food.

A 50c. package will last a horse 70 days. A \$1.50 pail or air-tight tin, containing four times as much as a 50c. package, will last an animal 280 days.

If you have never used it, try it on the poorest animal you have on your place, and watch the result. If it does not produce better results than anything you have ever used, or give you satisfaction, we will refund your money.

Toledo, Ont., July 1, 1910.  
W. A. Jenkins Mfg. Co., London, Canada.

Gentlemen,—I have used a part of a package of your "Royal Purple Stock Specific." I fed it to one cow according to directions. She gained six pounds of milk while using part of a package. The rest of my herd reduced in milk while this one gained. I consider it has no equal.

T. G. BELLAMY.

Bondhead, Ont., Aug. 31, 1912.  
The W. A. Jenkins Mfg. Co., London, Ont.

Gentlemen,—After experimenting with a great many stock foods, I was about convinced that there was very little virtue in any of it, but your dealer insisted on the trying Royal Purple Stock Specific, saying it was different from all others. I have since used a great lot of it, as I keep from ten to twenty horses and about the same of cattle. This Specific, in my opinion, is certainly in a class by itself as a conditioner, and is the best I have ever used.

GEORGE MAPES.

Clear Creek, Ont., Sept. 19, 1912.  
W. A. Jenkins Mfg. Co., London, Ont.

Dear Sirs,—Your "Royal Purple" Stock Specific is the best stock conditioner I have ever had in my stables, and am never without it. I had a brood sow that had milk fever very bad. Your "Royal Purple" saved her life. Put her on her feet in three days. I had three calves last spring that got scouring very badly. Could not get it stopped until I used "Royal Purple." It did the work O.K.

Yours truly,  
H. B. MOULTON.

Saskatoon, Sask., Sept. 20th.  
The W. A. Jenkins Mfg. Co., London, Canada.

Gentlemen,—Some months ago we bought some of your Royal Purple Stock Specific from Mr. Vogan here. We have been using it ever since, and we find it the best conditioner for driving horses we have ever tried.

H. F. MCCALLUM, "The Palace Livery."

In using our Stock Specific, we guarantee you better results by using the ordinary food grown on your farm, such as good hay, oats and bran, and so forth, than you can possibly obtain by using any of the many patent foods on the market. In these the percentage of nutrition is usually very small for the amount of money paid for the same. You know exactly what hay, oats, bran, chop or any farm products cost you, and ROYAL PURPLE makes animals digest these foods properly.

What we wish to impress on your mind is that we manufacture nothing but pure, unadulterated goods. Our booklet gives over 300 recommendations for our different lines from people all over Canada. While we give you above the names of a few who have used it, our best recommendation is for you to ask any person who has ever used any line we manufacture.

**W. A. JENKINS MANFG. CO., London, Ont.** AN ASSORTED ORDER AMOUNTING TO \$5.00 WE WILL PREPAY.

Scott, Sask., May 22nd, 1911.

The W. A. Jenkins Mfg. Co., London, Ont.

Dear Sirs,—Do you want a man to represent your Royal Purple goods in this district. I am from Ontario, and have fed your Stock Specific—got it from Mr. J. Corbett, of Brownsville. My cows, while using it, made the largest average, and tested five points over average at C.M.P. at Brownsville. I know your goods are the highest class Stock Specific on the market, and take great pleasure in representing you in this district.

NORMAN G. CHARLTON.

## Royal Purple Poultry Specific

will make your hens lay in winter, as well as summer, and yet a 50c. package will last 25 hens 70 days, or a \$1.50 pail or air-tight tin, containing four times as much as a 50c. package, will last 280 days. It prevents poultry from losing flesh at moulting time, cures and prevents all the ordinary diseases, makes their plumage bright, and keeps them in prime condition.

Port Colborne, May 11.

W. A. Jenkins Mfg. Co., London, Canada.

Dear Sirs,—This is to certify that I have used one \$1.50 tin of your "Royal Purple" Poultry Specific, and there is nothing that can equal it. I wanted yours again and your agent did not have any, so he gave me another brand, and I can assure you it was not worth carrying home, for my hens layed better without it. I have been from 12 to 15 dozen eggs short every week since I have not used your "Royal Purple."

CHARLES RICHARDSON.

Sherbrooke, Que., Aug. 1, 1910.

W. A. Jenkins Mfg. Co., London, Canada.

Dear Sirs,—I have used your Specific for one year, and have given it to my birds with good results. See my winnings at the different fairs, which will tell the tale.

MISS GEORGINA CAMIRAUD.

## Royal Purple Cough Specific

During the last four years there has been an epidemic cough going through every stable in Canada, which has been a great source of annoyance to horsemen. Our Royal Purple Cough Cure will absolutely cure this cough in four days, will break up and cure distemper in ten days. Absolutely guaranteed. 50c. per tin; by mail, 55c.

## Royal Purple Gall Cure

will cure all sorts of open sores on man or beast. Will absolutely dry up and cure scratches in a very few days.

Mr. SAM OWEN, coachman for the Hon. Adam Beck, says: "By following directions, I find your Royal Purple Gall Cure will cure scratches and make the scabs peel off perfectly dry in about four or five days." Price, 25c.; by mail, 30c.

## Royal Purple Sweet Liniment

will reduce lameness in a very short time. Mr. John M. Daly, coalman in London, says: "We have nine horses constantly teaming coal, and have all kinds of trouble with them being lame at times. I have used your Sweet Liniment for a year back, and have never known it to fail to cure sprained tendons, etc." Price, 50c., 8-ounce bottles; by mail, 60c.

## Royal Purple Lice Killer

This is entirely different from any lice killer on the market. In order for you to understand the process of manufacture of this lice killer, you will have to send for one of our booklets, as we give you a full history of it there. It will entirely exterminate lice on fowls or animals with not more than one or two applications. It smothers them. Price 25c.; by mail, 30c.

## Royal Purple Disinfectant (Sheep Dip)

In this line we give you the largest value for the money of any disinfectant on the market. A tin containing 1 3-8 qts. Imperial measure will cost you only 50c. Also put up in 25c. tins.


## Royal Purple Roup Cure

Mr. Dulmage, the great breeder, of White Rocks, tells us that he has never used a Roup Cure that will give relief so quickly to hens suffering from Roup or kindred diseases. Our book tells you all about it. 25c. per tin; 30c. by mail.

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For animals. 25c. per tin; by mail, 30c.

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Send for free catalog. Ask about our farm and poultry fencing, also our ornamental fence and gates. Agents nearly everywhere. Agents wanted in open territory.

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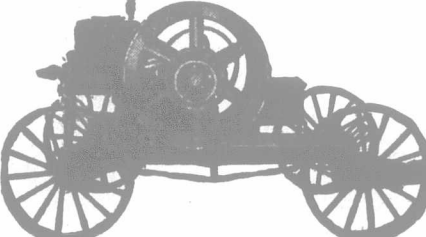
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Gilson quality gives full value for your money—dependable service, great durability, highest economy and perfect satisfaction; freedom from trouble, delays and expense.

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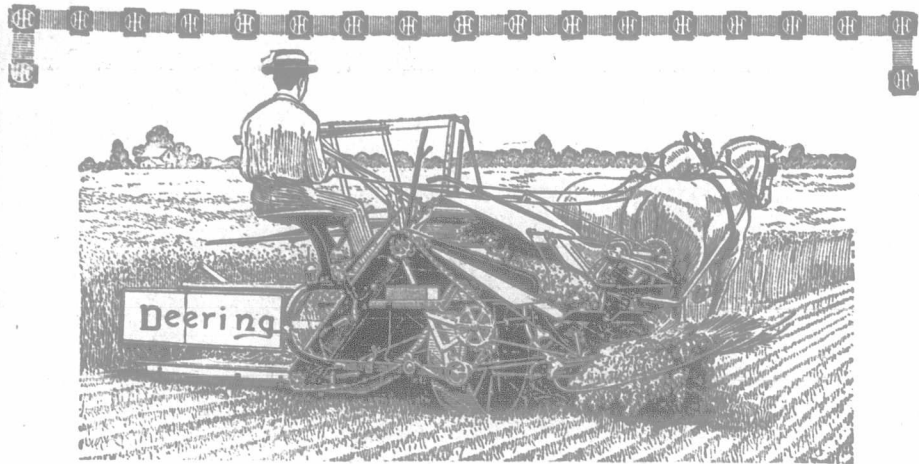
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Deering quality has a name the world over, but the machines themselves are changed to meet the conditions of various countries. For the work in Eastern Canadian harvest fields certain features are added which make the New Ideal binder particularly efficient.

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Other strong features as well as these will be explained to you fully by the I H C local agent. Drop in and see him, or, write for a catalogue to the nearest branch house.

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Ottawa, Ont. St. John, N. B. Quebec, P. Q.

These machines are built at Hamilton, Ont.



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If your dealer does not handle the "EUREKA," do not take a substitute but write us for catalogue.

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Sold under the guarantee that if they do not entirely satisfy you on arrival, you may ship them back at our expense. We buy most of our seeds direct from the farmers here who grow them.

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do all of the sowing, hoeing, cultivating, weeding, furrowing, ridging, etc., in any garden with better results, far less work and some real pleasure for the operator. 38 or more combinations at \$3.00 to \$15.00. Ask your dealer about them and write us for new booklet. "Gardening with Modern Tools" also copy of our paper "Iron Age Farm and Garden News"—both are free.

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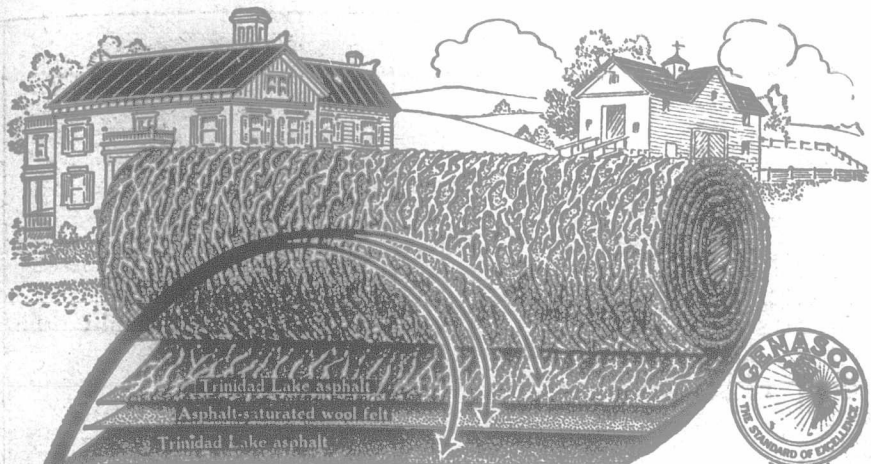
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Largest producers of asphalt, and largest manufacturers of ready roofing in the world.

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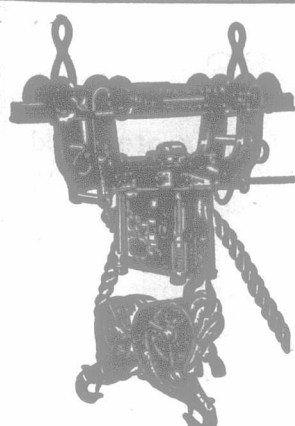
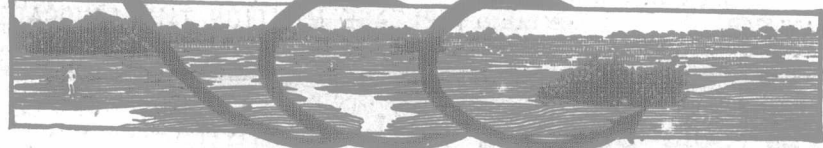
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It is not a complicated machine. Its simple construction assures no expense or time lost in repairing.

The team can elevate and the car can easily handle 2,000 lbs. per draft. Team can be stopped at any point and the load will be sustained instantly

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WRITE us, giving measurements of your barn and we will quote you price on a complete outfit. We carry in stock: Carriers, Pulleys, Slings, Steel Track and Hay Forks. Ask for Catalogue No. 1

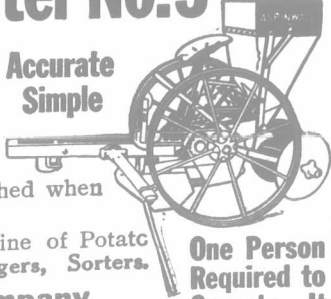
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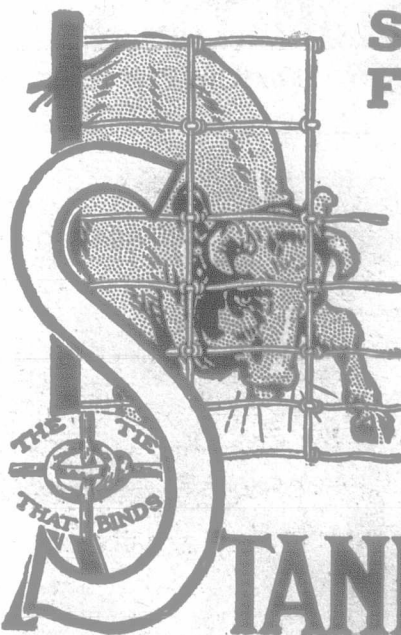
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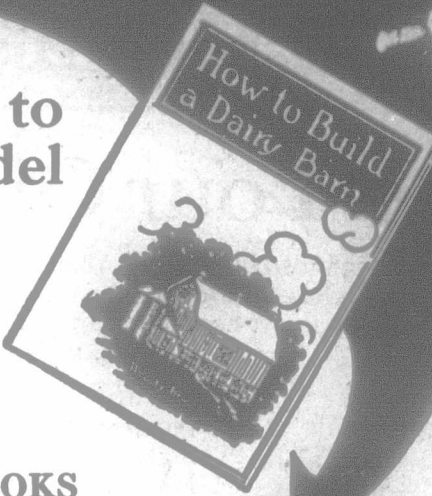
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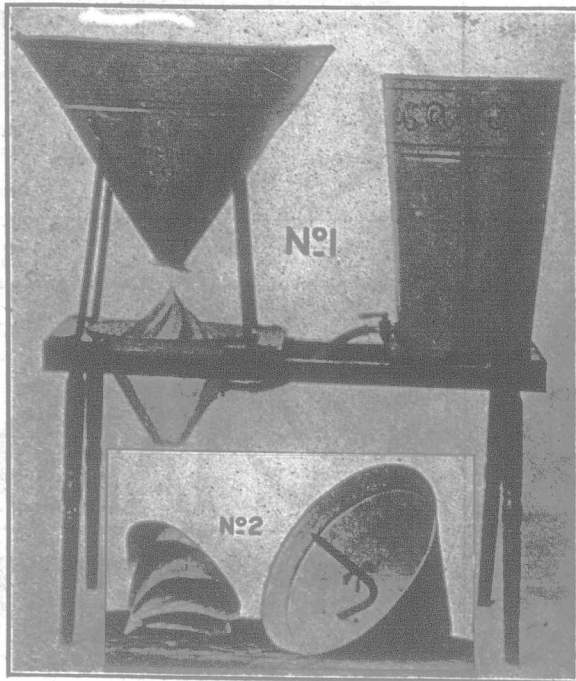
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This Seed Grain Pickler is a self-operating machine, supplying its own power by the force of the grain as it leaves the hopper, falling on the turbine situated in the low-r hopper, causing a quick revolution of the turbine.

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The pipe, which is shown in the centre of the hopper in cut No. 2, delivers the liquid to the interior of the turbine, and it is then forced by gravity to pass through openings in the bottom outer edge, spraying the grain.

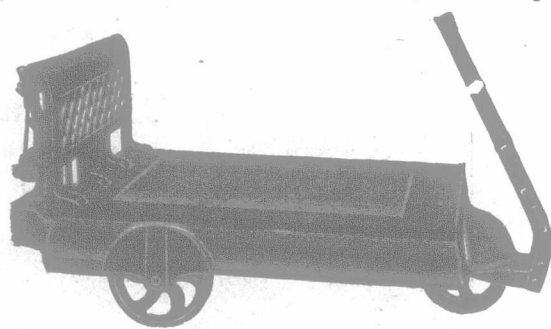
Full capacity: Wheat, 135 bushels per hour; peas, 115 bushels per hour; barley, 100 bushels per hour; oats, 90 bushels per hour, and other grain accordingly, but can be regulated to lessen the capacity as required. The machine can also be used for mixing grain.

We guarantee this machine to give perfect satisfaction or money refunded. Prices on application.

Directions for using.—Use 10 ozs. of liquid formaldehyde to 30 gals. of water, and thoroughly moisten the grain with the solution. Oats, barley and millet will require more water than wheat or peas. The best method is to apply at night. Throw the grain in a heap, cover with a blanket, and bag in the morning. This method gives the gas a chance to penetrate the grain. Manufactured by

**THE DOMINION SPECIALTY WORKS, STRATFORD, ONTARIO**  
D. A. McCLOY, Manager. Residence, 15 Douglas St. Works, 35 Douglas St.

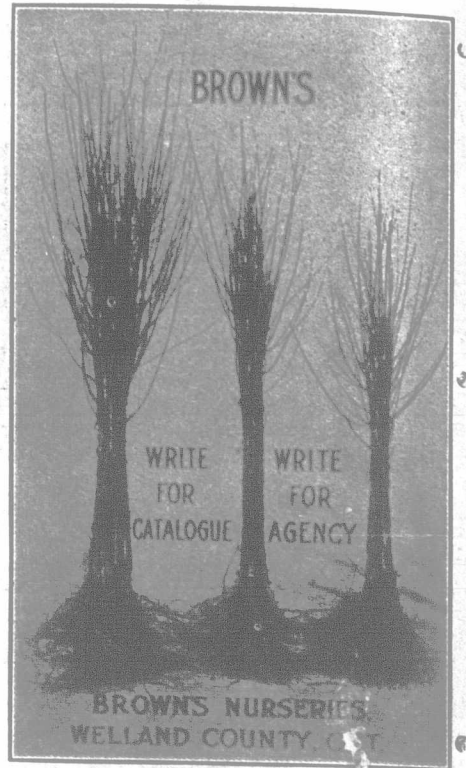
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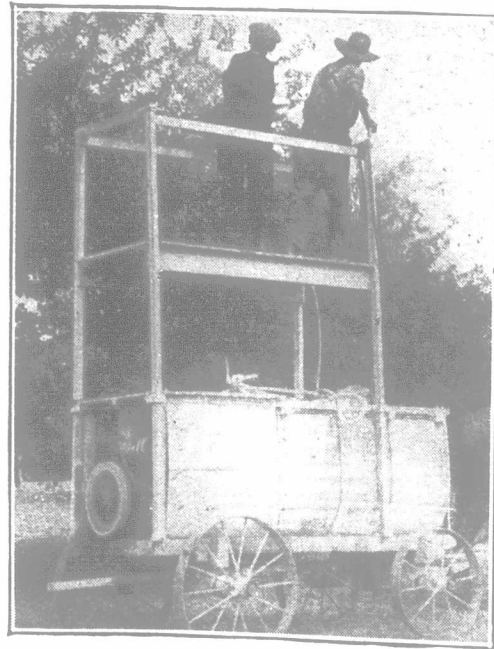
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# The Farmer's Advocate and Home Magazine

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No. 1066

## EDITORIAL.

The poet of Ingersoll will now lower his coach to the Shakespeare of the speed.

Sentiment without profit is not a very satisfactory thing for our labor on the farm, or anywhere. Neither is profit without sentiment. Some of each is best.

Enthusiasm tends readily to exaggeration. To say that alfalfa is, in every respect, the equal of wheat bran is overstating the argument for our most nutritious forage crop. The chemist may find it so, but the feeder who relies upon that claim will be almost invariably disappointed. Call it worth three quarters as much as bran, and the case for alfalfa is still quite good enough.

During the last census decade the rural population of Canada decreased one per cent., our growth of over two millions in population having been exclusively in the cities and towns, observed Oliver Wilcox, M. P., addressing the Ontario Corn Growers at Windsor. It will take a good many ten-million-dollar grants for agricultural education to stem this cityward drift, so long as the economic conditions which induce it remain undisturbed.

Hon. Jas. S. Duff, Minister of Agriculture for Ontario, delivered himself of sound logic when, in addressing the corn growers at Windsor, he emphasized the importance of each man finding out what his particular locality and personal aptitude are best adapted for, and then making the most of opportunities in that line. Essex and Kent farmers specialize on corn, hogs, tobacco and beans; Norfolk on apples, Niagara Peninsula on small fruits, Eastern Ontario on dairying, and other counties on mixed farming, while east of Toronto is an area ten miles square containing more men engaged in the pure-bred stock business than any similar area on the continent. Wide diversity of opportunity is presented by the premier Province. It is for each farmer to discern his main chance and make the most of it.

The ordinary railway cattle "guard" is a joke. It fulfils the letter of the law and is cheap. The claims' agent of a leading railway is said to have declared recently that his company paid out \$25,000 a year in claims for killing cattle; but so long as the railways were allowed to put down the cheap slat guard, they would be unlikely to adopt any other. An inventor of a steel oscillating-slats surface guard (a guard the slats of which rock from side to side when stepped upon) complains that, though demonstrated to be successful, the railroad companies refuse to use it. Personally, we know nothing of the cost or efficiency of the new guard, but it is claimed to be very effective, cattle absolutely refusing to cross it. The question is, are readers of this paper satisfied with the guards in use? A vigorous expression of opinion on this point might do good.

## "Mr. Farmer, Get Busy."

Repeatedly in substance, if not in so many words, the above counsel is being tendered farmers from the seats of the mighty in trade and commerce. That it is given in all sincerity, we doubt not, and under pressure of the widespread apprehension of the rising cost of living most keenly realized and expressed in the abnormally increasing populations of Canadian cities and towns. In soliloquizing on "The Farmer's Day," "The Mail and Empire" sees in the constantly enlarging home market for farm products that which makes the future for the Ontario farmer bright and makes this a time for buying rather than selling Ontario farming land. We commend the attitude, but let no one run away with the notion that the farmer's outlay for living remains at the old easy ebb. Because he happens to grow things to eat, they do not come to him without money and without price. If his land goes up in value, the assessment and taxes are likely rising. If his hay sells for twenty dollars per ton or his potatoes for a dollar a bag, it is costing him more to feed his horses and his family. The remuneration of hired help, when he can secure it at all, has gone up like that of other captains of industry, and his own time is worth more. Good prices do not mean just as much "found money." No, friend townsman, just get the idea firmly embedded in your noddle that the farmer's outgo for existence and for comforts has been on the rise like your own. These things are not coming to him as a donation party, not even Government help, however happily conceived, for the benefit of his immediate or ultimate interests. We do not propose to return any railing accusation against the worthy gentlemen who are advising us in the back townships to "get a move on" and team in more stuff. "The Farmer's Advocate and Home Magazine" is in tolerably close and constant communication with farmers in all parts of the country pursuing different branches of husbandry, and also by experience and observation we are under a very distinct impression that the farmer is just about as busy and probably works as long hours and puts in as much overtime in the effort to "fill orders" as any manufacturer or purveyor of food products. If this is disputed, let some of the doubting Thomases accumulate a little experience by trying single-handed to carry on the operation of a hundred-acre farm, which is the situation in some localities. We are too few. It is probably within the mark to say that farming is to-day the most seriously undermanned Canadian industry of any consequence; and it is not altogether a question of wage, as we shall presently see.

Hon. Martin Burrell, the Dominion Minister of Agriculture, in a notable speech in the House of Commons lately, disclosed how keenly he realized the alarming trend of population away from rural pursuits. To the future of the State it means a serious menace, to counteract which, in some measure, is the purpose of the proposed outlay of about a million dollars a year for ten years to further the interests of agriculture by various educational means. That the expenditure will tend to betterment need not be argued, but that it will have any early or appreciable effect, as some newspapers are expecting, in re-

ducing the cost of living, will likely prove a dream.

The causes of present conditions are many and deep-rooted. Industrial tendencies that have been gathering strength and momentum for thirty years are not so easily diverted, nor are tenaciously entrenched educational systems very readily moved. With large outlays, the currents of immigration have been set running our way, and the material attractions of Canada will keep them coming, but multitudes of those intended to people the land are soon swept into the industrial maelstrom of the towns, which outbid the farmer. And, accelerating the whirl, we have the "boosting" organizations of one town rivalling its neighbors in the hot race for industries and population.

In the face of this, a disposition is undoubtedly growing in rural quarters to take the attitude of producing what can be done in comfort. "Why," queries the man on the farm, "should I make a slave of myself because the hurrying crowds elect to live in town?" He is told to follow more intensive farming, which means more work on fewer acres, but in many cases the trend is to till fewer acres and do more grazing of cattle and sheep, except in those areas where the returns from canning crops, fruit and dairying are yet a sufficient stimulant to effort; but a few years of the latter becomes over-wearying, even if the milk checks are large. Ominous enough it certainly looks when supplies of our old staple, beef, run low and when a country like Canada, where so much public aid has been devoted to dairying and poultry raising, has to import butter and eggs. Growing rich through the rise in the price of land is hardly farming, and the true friends of Western farming by precept and example are warning the settler against the perils of exclusive cereal growing, which is still booming.

It is idle, therefore, to bid the farmer get busy. He is busy now, and already overwrought amid forces and tendencies that are sweeping his children on to the pursuits of the city and luring away his imported help. The Mail and Empire rightly sees that rural conditions are growing more inviting, but "back to the land" is yet rather a real-estate slogan than a real current of population. To establish that will take time.

What, then, is to be done? A lowering of prices would only immediately aggravate the situation by further discouraging production. Does there not seem scope for such re-adjustment of fiscal and monetary conditions as will tend to restore the equitable distribution of population between city and country? Then public school systems must recognize the pre-eminence of agriculture and qualify for its pursuits, at least on a parity with others. The unified efforts of federal and provincial governments to stimulate agriculture focus public attention upon its conditions, and will, in time, compel the more speedy realization of long-needed and overdue fiscal and educational reforms. In the farm home let there come a wholesome recognition that its life and character constitute the true ideal rather than the almighty dollar and the city whirl. Let the heads of every farm house strike a new note of respect for the farm and domestic life with their substantial and enduring advantages, preserving in the country a worthy type and character of its own. The public security of Canada rests not in sky scrapers. Its foundations abide on the farm.

## The Farmer's Advocate AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL  
IN THE DOMINION.

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JOHN WEILD, MANAGER.

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### Something More Than Dollars.

In emphasizing one point there is always the danger of appearing to discount others. Addressing the Ontario Corn Growers' Convention this month, Prof. R. A. Moore, of Wisconsin, argued strongly in favor of more ample cash returns as an effectual means of keeping boys on the farm. This is all very well for, as Hon. Mr. Duff remarked, when a farmer isn't making a little money he gets discontented, as why shouldn't he? But to disparage sentiment utterly, and hold up profit as the sole magnet of attraction in country life, is to create a wrong impression and instill a false ideal. The opportunity to grow seed corn at three dollars a bushel may appeal to the Wisconsin farmer's son as a better job than running a street car, but the better class of farm boys will not be held in the country even by the prospect of growing three-dollar corn, unless there are some other motives conjoined with this. The fact may as well be faced squarely that a bright, wide-awake boy, with keen business ability, can make more money in the city than he can ever hope to make in the country, and if money were the only thing worth living for we might as well cease trying to keep the bright boys on the farm. But money is not the only thing worth while. Sentiment plays a part, and good living, under natural conditions, is worth far more than a few extra hundred thousand dollars to will to one's heirs. Money is not the only thing Prof. Moore lives for, else a man of his calibre would not be drawing a professor's salary of two or three thousand a year. We are very sure that he will agree with this paragraph, and that he would be one of the last men to advocate sordid ideals. He is quite right in urging the opportunities for enhanced profits that come from the practice of an enterprising line of agriculture, but we think he would do well, at the same time, to avoid laying quite so much stress upon mere money getting. We all like profit, and the accumulation of a reasonable competence is praiseworthy, but there are better things about farming than the dollars that are in it. The man who lives for money lives in vain.

### Nature's Diary.

By A. B. Klugh, M. A.

#### CROWS.

A common winter bird in Southern Ontario is the crow. In Central, Northern and Eastern Ontario it is one of the earliest birds to arrive in the spring.

In winter the total crow population of a locality resort to a single "roost" for the night. Sometimes immense numbers of crows congregate in such "roosts," which, as a rule, consist of a dense pine grove. One "roost" at Haines Port, New Jersey, covered 20 to 30 acres, and contained from 200,000 to 300,000 crows. Another, Davis Grove, Pennsylvania, covered about twenty acres, and was resorted to by about 200,000 birds.

About an hour before sunset stragglers begin to appear near the "roost," and in the course of half an hour the flocks begin to arrive in lines and detachments from all quarters. They usually descend to some spot about a quarter to half a mile from the "roost." More and more crows arrive, and they all keep up a terrific clamor. At sunset they all rise and fly to the "roost," taking up their positions in the trees.

At dawn the crows keep up a tremendous "cawing" for about an hour, a few then leave but soon resume their perches, until just before sunrise they fly away to all points of the compass in detachments.

The crow is a great conversationalist, and a little of his "language" can be understood by those who have studied him at all closely. The crow is conventionally supposed to say "caw," but to my ears at least it very rarely does, and "rawr" sounds much nearer the mark. We can distinguish the slow "rawr-rawr," which, when uttered means "Here I am, and everything all right," the quick "kuh-kuh-kuh" which apparently indicates suspicion, and the long-drawn "raw-awr-raw-awr" with a rising inflection on the last syllable, which says "fly for your lives." When, during the hours of broad daylight, we hear a bunch of crows fairly screeching, both in unison and discord, it nearly always means "owl" or "fox." A flock of crows if they discover a great horned owl in the daytime will fly at it, and scream at it, and worry it so that it takes flight. But flight is of no avail, for the crows follow it in a long string and whenever it settles down it is again harassed and "cursed," and so it goes on until the owl manages to escape its tormentors in a thick piece of woods or until darkness intervenes.

The crow is an omnivorous bird, its food being about one-third animal and two-thirds vegetable. Among the animals eaten are the cottontail rabbits (usually young ones), meadow mice, young wild birds of various species, young poultry, young turtles, snakes, frogs, toads, newts, salamanders, crayfish, land snails, clams, and insects (largely beetles and grasshoppers). The other animal food taken is largely carrion.

Of the vegetable food the main constituent is corn, the rest being made up of oats, wheat, cultivated cherries, cultivated strawberries, and such wild fruits as acorns, beechnuts, wild cherries, blackberries, raspberries, berries of poison ivy and sumac, elderberries, junberries, dog-wood berries, etc., etc.

Considering, now, the economic value of the crow, we find that the destruction of the meadow mice, crayfish, and the eating of carrion are a gain. The eating of grasshoppers and some of the beetles also is beneficial, but some of the beetles taken are beneficial predaceous species.

On the other hand the eating of young birds, poultry, snakes, toads, corn, oats, wheat and cultivated fruits are a loss. The main harm being the destruction of sprouting corn, of young poultry, and of the eggs and young of wild birds. Crows show much cleverness in securing young chickens. Sometimes a crow will walk round and round near a hen with a brood, and try to make the hen pursue it for some distance, when the crow will fly quickly back and grab one of the chickens before the hen can return to her brood. Or sometimes two crows approach a brood, and while the hen is pursuing one the other secures a chicken. Many losses from the poultry yard, which, are usually attributed to hawks, are undoubtedly due to crows.

Thus we see that the crow does both good and harm, and my belief is that the harm is in excess of the good, and while I should not care to urge a total extinction of crows, there is no danger in recommending that crows be killed whenever possible, as the crow is well able to look after itself.

Young corn may be protected in three ways,—by hanging dead crows in the field, by tarring the seed corn, and by putting poisoned meat or corn in the field.

Crows are notoriously hard to shoot, but once one has learned how he can always get them. The secret is to learn to "call" like a crow in distress, a low half-choked "rawr-rawr-rawr," then hide under a thick tree, and on uttering this call the crows will come in numbers

and perch in nearby trees, so that often two or three may be obtained at a shot.

The most practical method of protection is tarring the seed. To do this the corn should be placed in a tub, enough warm water poured on to moisten it, and enough tar stirred in to give each kernel a thin coating. Corn thus treated is too sticky to run through a planter, but if any dry powder, such as ashes or finely-ground earth, is stirred in until each kernel is well coated, it will work well in the planter.

### The Dairymen's Business Interest.

In this issue of "The Farmer's Advocate" we are honored with two communications from Prof. H. H. Dean, of the Ontario Agricultural College. At least, one is from Prof. Dean; the other, signed A, B, C and D, was produced by him, we understand, in collaboration with W. C. Coo, official reporter of the Western Ontario Dairymen's Convention. The first letter, by way of a reply to an Editorial, entitled "Cows, Prices and Profits," which appeared in "The Farmer's Advocate" of January 30th, 1913, and in which we had questioned the logic of urging organized effort to increase dairy production, as Prof. Dean seemed to have done at the Western Dairymen's Convention, whilst in the next breath assigning unremunerative prices for dairy products as a partial explanation of our declining exports. In the letter now under discussion Prof. Dean states that he was not arguing for a larger number of cows on Ontario farms, but was merely trying to show the importance of refilling the stalls of cull cows being slaughtered. We hope that was all he meant, but such was not the implication of what he said, when, with fine declamatory effect, he asserted that there was in this province (or country) no active organization having for its purpose to bring about an increase in the number and improvement in the quality of our dairy cows. Does that not imply the desirability of organized effort to enlarge production?

Having intimated that we had drawn an unjustified inference from his remarks, our correspondent goes on to argue against effort to bolster prices by combining in order to restrict production—something "The Farmer's Advocate" has always discountenanced, and something not under discussion at all. Combination to restrict production and thereby enhance prices, is no more justifiable than efforts to boost production, thereby tending to slump prices. There is really just one sound point in the letter. That is a warning that when the number of cows in a cheese-factory or creamery district falls below the number where it is profitable to operate the cheese factory or other plant, the factory must close. It is sound business from the individual producer's standpoint to see that the make in his particular district does not fall below the point where his factory can be economically operated; but it is not especially to his interest that the total number of factories in the country should be maintained or increased. Prof. Dean says it is childish to concentrate effort on improving quality and securing maximum individual profit, leaving supply and demand to regulate production and letting statistics take care of themselves. Well, perhaps; but, from our point of view, it looks like good business, and we think the vast majority of Canadian dairymen will agree with us.

As for the second letter, we can only express unqualified admiration of its literary genius. Having first of all exhausted the resources of a Thesaurus dictionary, to the limit of "ambages," the joint authors availed us with a hint of the lawsuit we so narrowly escaped, lamented the alleged submergence of the editor's poetic fancy beneath an uninteresting plane of realism, and then proceeded to unite the dramatic talent of two or more Canadian cities upon a dire plot to malign the reputation of Canadian cheese abroad. As a spell-binder, it would be hard to beat. All we can add that if the play proves as entertaining as the description, we shall instruct our dramatic critic to lay aside utterly any prejudices he may have formed and acclaim the new production deservedly as a master-piece of histrionic art.

**HORSES.**

Be kind to the stallion, but never play with him.

Feed the stallion a few roots, but not too many.

Stallion owners and mare owners should now concern themselves about the coming breeding season. "Condition" means a good deal to both horse and mare.

An insufficient supply of food may cause abortion, so also may overfeeding. The brood mare requires a little more attention at the feed-box than the working gelding. Avoid all musty feed, and above all things feed regularly as to time, kind, and quantity.

Begin early to condition the work horses for the spring rush. It generally requires more time to put flesh on the horses than it does to work it off them. Seeding must be done quickly. Good horses, fit and ready to do the best work they are capable of, mean extra bushels in the crop.

The average price of the different classes of horses on the Chicago market in 1912 was as follows: Draft horses, \$210; Carriage pairs, \$473; Drivers, \$177; General-purpose, \$160; Bussers and Trammers, \$175; Saddlers, \$195; Southern chunks, \$97. In all but two classes—viz., Carriage pairs and Drivers—these averages are the highest on record. Even carriage horses and drivers sold high. The horse is still the fore, despite other means of transit.

Activity is now general in horse circles. Many stallions are changing hands. Importers and breeders are distributing an excellent lot of sires through the country. Many stallions will yet be bought for various localities before the season opens. Prospective buyers should consider carefully before buying a stallion the class of mares in their localities. Mixing of breeds is being carried too far in many districts. If a good horse is available of the same breed as the largest percentage of the mares to be bred, he should be a safer proposition and is surely of more value to the mare owners and to the man whose money he represents than a stallion of another breed. If more unity of purpose were shown by districts, Canada's horse breeding would reach a higher plane.

Scratches, also called cracked heels or mud-fever, can be prevented by careful stable management, according to Dr. H. Preston, of St. Paul, Minn. Cases are rarely met with in well kept barns, but are often seen in dirty, poorly drained stables. Dryness and cleanliness of the floor of the stall are the two most important factors in the prevention of scratches.

Horses should not be allowed to stand in piles of manure and decomposing urine. These irritate and inflame the thin skin in the fold of the ankle, just below the fetlock. The skin then becomes thickened, due to the inflammation, and breaks or cracks if it appears, and if allowed to go untreated, the condition grows gradually worse. The affected area grows larger, the cracks become deeper, and the animal is in an unsightly and painful condition.

Owners of horses can prevent the trouble, in the majority of cases, by doing two things. Do not allow manure to accumulate behind your horses, and see that your stalls are so constructed that the urine will drain away promptly. If your horses show any tendency toward the condition, apply a small amount of carbolyzed vaseline, benzoinated lard, or zinc oxide ointment, well rubbed into the affected parts. These remedies will soften the skin and protect it from external moisture and irritating substances. During wet weather, or when the roads and streets are muddy or slushy, extra precautions should be taken to prevent the condition. Do not wash cracked heels, as water and rubbing only aggravate the condition.

**More Exercise.**

Galvayne, in his Book on the Horse, says, "I am strongly of opinion that the failures of many stud-farms are attributable to the owners' misconceptions with regard to the real nature and physical requirements of the animal they are breeding. They confine brood mares separately in loose-boxes, overlooking the fact that the animal is extremely gregarious by nature; and—a more serious mistake still—they do not allow them half the amount of exercise which is ab-

lutely indispensable. The horse's stomach capacity is relatively very small, and it must be almost continually feeding to obtain the necessary sustenance to keep it in perfect condition; and thus continuous feeding is effected (under natural conditions) while the animal is moving about, which it will do for at least twenty hours out of the twenty-four. It follows, therefore, that abundant exercise is one of the horse's most essential requirements. If a stallion is not in the habit of travelling for stud purposes, he should be led for the sake of the exercise for a distance of at least six miles twice every day."

**Wants Ontario Stallion Enrolment Universal in the Province.**

Editor "The Farmer's Advocate": As you always take a great interest in anything pertaining to agriculture, I would draw your attention to the Stallions Act, chapter 67 (1912). While I very highly appreciate the Act, in a general way, and if such an Act had been passed years ago, we would have had a better class of horses to-day, there is one clause or section in the Act which should not have been there at all. I have reference to sec. 16 of said Act. Please read it. Why should not these districts enjoy the same privileges as the other parts of Ontario in place of being excepted, and consequently all the culls from this inspection will flock to these parts of Ontario, which are cut out by said section? No doubt, these culls will travel the country and work at a lower price than a first-class horse, and will be patronized by a great many owners of mares on that account, which should not be allowed. What is good for one part of Ontario is good for the whole, and on this account I would say cut sec. 16 out of the Act altogether. A petition to this

No doubt, the Government thought they were acting wisely in exempting these districts from the workings of the Act. The principal cause for this exception was likely that the Government did not consider that enough horses were being bred in these districts to warrant their being put under the rules of stallion enrolment. It is more than likely that the legislature did not believe that there were many good breeding horses in these districts, and as horses of some kind were needed to do work in developing the country decided not to apply the Act to these newer sections. Again, where the stallions are so scattered and the districts so large, much difficulty would be experienced in inspection, and as the Act was simply a beginning organized effort on the part of horsemen in these districts, to have the Act apply to them will likely accomplish the object.

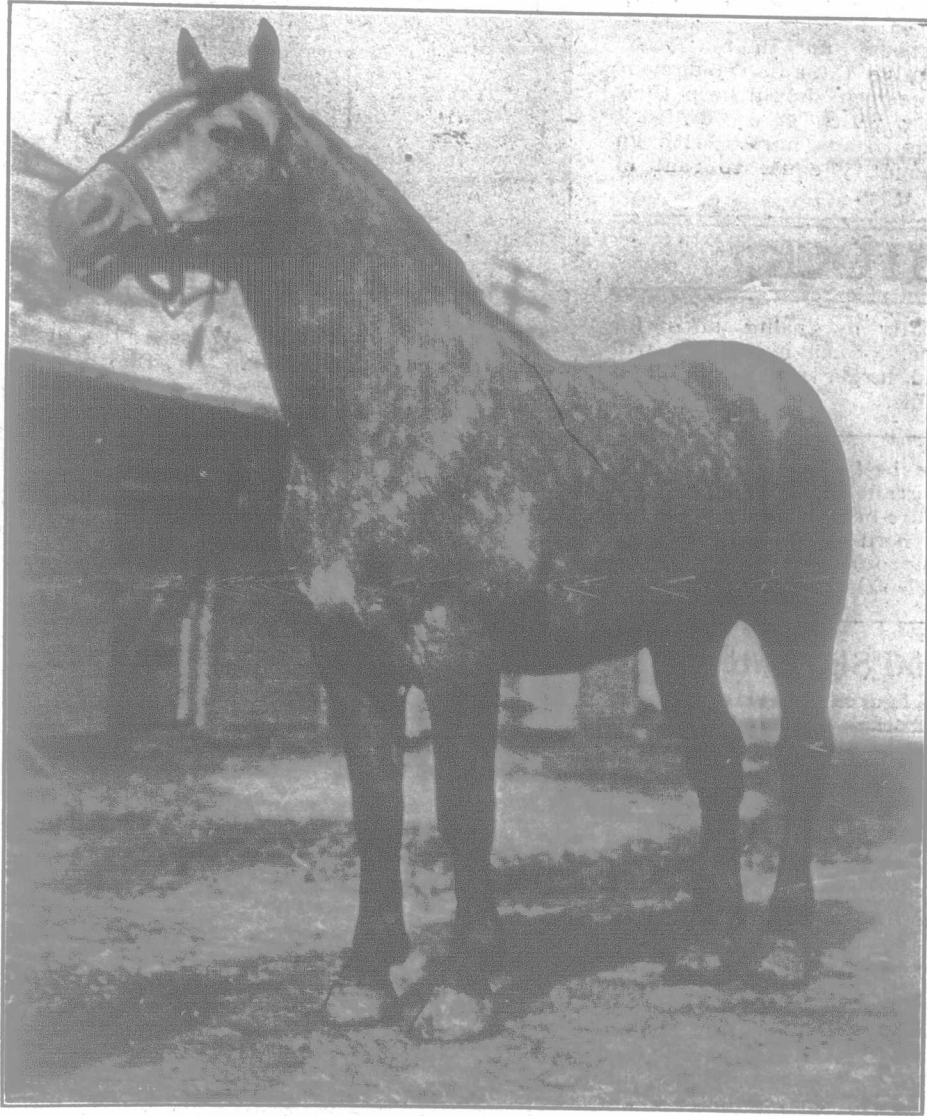
There may have been good reasons for leaving these districts as they were at the time the Act was passed, but it does seem as though our correspondent is taking a reasonable stand in the matter, and as inspection is not compulsory as yet, and provided the stallions can be gone over without too much inconvenience, these districts should be included as soon as possible—that is, if, as our correspondent says, the horsemen in these districts desire the legislation to apply to them. The Government should, at any rate, interest themselves in the matter. What do horse breeders think?—Editor.)

**No Pony-boned Drafters Wanted.**

Discussion has been going on for some time in "The Scottish Farmer" regarding bone in Clydesdales. One writer says: "There is no doubt breeding has become too fine. It won't do. Its day world's call is for stronger bones, and everything else in proportion." Another writer pays a compliment to Canadian Breeders' judgment thus: "What I advocate is (what the Canadians advocate)—the breeding of horses with more bone, not round bones, but flat, flinty bones, deep chest, and good feet and pasterns. Every breeder of Clydesdales knows that inbreeding produces smaller-boned horses—what is termed quality bones—and every Canadian purchaser I have spoken to will have nothing to do with small pony-boned Clydesdales."

The Canadian market seems to be held in high esteem in the home of the Clydesdale, for the writer referred to concludes with: "We have to breed for our best market."

Bone is one of the most important considerations in draft horses, no matter what the breed. A massive horse never looks just right if set upon limbs which would be more fitting to a



Jokai.

Three-year-old Percheron stallion, imported by T. D. Elliot, Bolton, Ont.

effect has been circulated in some parts of these districts, and very unanimously signed, asking the legislature to cut out said section. In the township in which I reside we have three pure-bred Clydesdales, and good ones, too. For all that, there are several culls which travel through the country and are largely patronized on that account. I say, stop them. One of them will take any fee he can get; have known him to work for as low a fee as \$4; now, I would say, stop him.

A 35-YEAR RESIDENT OF THESE DISTRICTS, Parry Sound District, Ont.

(Note.—Section 16 of the Act here referred to reads: "This Act shall not apply to the Provisional Judicial Districts nor to the Provisional County of Haliburton.")

Thoroughbred, Standard-bred or General-purpose horse. Bone is the framework of the animal, and to withstand the great strains to which it is subjected in the the draft horse it is necessary that it be clean and flinty, for this denotes quality and strength. But clean bone does not necessarily mean light bone. Besides being hard and of finest quality, there should be comparatively large bone in the horse intended for moving great weights. The legs must carry the heavy animal as he "pounds" over the road or land, and must withstand, at the same time, the great strain of pulling a heavy load. It looks reasonable that the horse with most bone, provided it is of equally high quality as that of his lighter-boned mate, should be able to do the heavy work required of him with less danger of injury to his

underpinning than the horse although of equal weight but having the lighter legs.

In all stock breeding there seems to have been a tendency during recent years to turn to "quality" rather than substance. Of course, this is not meant to infer that high quality animals are lacking in substance. Many of the best quality horses and cattle in the country are particularly strong with respect to constitution and substance as well, but there is a trimness or, if you choose, a fineness about much of the present-day high-bred stock which was not so evident in the earlier days. Quality and substance, whether it be strength of bone or depth of middle or chest, must go hand-in-hand to insure the greatest success in draft horse breeding. The stallion required to produce the heavy geldings which bring the top prices of the market must have size. No pony-boned individual, with small effeminate head, is likely to be a success in this particular line of breeding. Canadian importers and breeders have not lost sight of the fact that size and substance, coupled with quality, are necessary in every draft horse "to fill the bill." Quality alone falls short of the mark, as also do size and substance if the former requisite is lacking.

Inbreeding has been blamed for the decrease in size of some breeds of stock, and particularly in certain branches of breeds, even to the Clydesdale horse. Breeders who practised it in the past came to the conclusion that it tended towards fineness of texture, lightness of bone, smoothness, evenness and polish, but at the expense of robustness, strength, vigor and power. Crosses of practically unrelated blood in the breed are always to be desired. Cross families of the breed, but do not cross breeds. The evils of inbreeding accumulate slowly, but they surely come in time. The evils of violent cross-breeding are also many.

We are pleased that the breeders of horses in Scotland recognize Canada as their "best" market, and that they value Canadian judgment so highly. Canadian horsemen should keep their eyes set upon the drafter which is a "drafter" in body and limb. This means horses with an abundance of bone and quality equal to that of the finer or pony-drafter type.

## LIVE STOCK.

Feed cattle economically by using silos for winter and summer use. Such a course will cause larger profits, and larger profits mean increased production in time.

Breeding stock of the beef breeds is now reasonable in price. Good grade cows and pure-bred bulls, or better still pure-breds of both sexes, may be had to found a herd for beef production without an unreasonable outlay. It looks like a good time to commence raising beef cattle.

### The Sacrificial Slaughter.

According to official figures the slaughter of calves has increased in the United States by 600 per cent. in the last twenty-two years. We know that it has increased in this country also at almost alarming proportions. Beef cattle are scarce. So say the feeders and drovers, and yet the calves go to the block. Why should this be? Many calves, from cows kept exclusively for milk production, never even reach the block as veal. All the value these calves have, in the eyes of the cows' owners, is to cause the maternal instinct in their dams to become active in the form of well-filled milk cans. The cry for more milk in the centers of population has diverted attention from beef production. It is human nature to rush from one extreme to another. Beef became comparatively cheap and the demand was light; milk became scarce, and the demand grew. Many turned their attention entirely toward milk production. Calves were vealed or discarded as almost valueless. The main goal was increased milk production. But now beef is scarce and prices are better, and likely to soar higher. A reasonable profit may now be made from beef production economically managed. The producer cannot get the beef without the milk. This milk and beef combination looks like one which should escape even the "Sherman law." Why not make money from beef as well as milk? It is worth a trial, and in doing so use good bulls in place of the "scrubs," intended for no other purpose than to impregnate cows and stimulate milk flow. No cow, no matter how nondescript, is so inferior that it matters not what class of bull she is served by. Use good bulls of a milking strain of a beef breed, and if you do not desire to feed the calves to mature beef animals, let some feeder have them for his feed lot. If they are the right kind they will sell readily. By all means stop the loss to the country of the over-slaughtering of calves.

### Pigs, Grain and Fruit.

Editor "The Farmer's Advocate.":

The accompanying illustration shows Harry A. Smith, Welland Co., Ont., feeding his drove of swine, consisting of seventy head at the time this was taken, though not all are to be seen in the illustration.

Along with the hog industry Mr. Smith raises some excellent crops of grain.



Come Early and Avoid the Rush.  
Lunch-time in the hog paddock.

In the background will be seen the orchard being prepared for spraying. Mr. Smith has but a small orchard, but by spraying last season he barrelled about 375 barrels, chiefly of No. 1 apples, besides hauling to the evaporator 1,000 bushels or more, which goes to show that it pays to spray.

Nothing is denied to well-directed labor. Nothing is obtained without it. Fungi or insects cannot dwell where spraying is practiced. Alert farmers spray their orchards. Are you one of them?

Welland Co., Ont.

W. B. MARR.



H. Smith, Hay, Ont.

Recently elected President Dominion Shorthorn-breeders' Association.

### Some Steer-Feeding Experiments.

In steer feeding experiment in Alabama during the winter of 1909-10, 60 grade Hereford, Aberdeen-Angus, and Shorthorn steers from two to three years old were fed for 84 days. During the first 28 days, each lot received a daily ration of 4.64 lbs. of cotton-seed meal per head, which was increased to 6 lbs. for the next 28 days and to 7.73 lbs. for the last 28 days. In addition, all lots were fed cotton-seed hulls during the whole period, and for the first 56 days Lot 1 was fed corn silage, and Lot 2 Johnson grass hay for the full period. At the end of 56 days, when the silage supply gave out, the average daily gain per head for the silage-fed steers was 1.86 lbs., which was made at a cost of 7.98 cts. and a consumption of 2.87 lbs. of cotton-seed meal per pound of gain. The lot fed Johnson grass hay had gained 1.43 lbs. each daily at a cost of 11.88 cts. and a consumption of 3.72 lbs. of cotton-seed meal per pound of gain. The lot fed the cotton-seed meal and hulls had gained 1.89 lbs. each daily at a cost of 8.8 cts. and a consumption of 2.8 lbs. of cotton-seed meal per pound of gain. For the whole 84 days the daily gains per head were for Lot 1, 1.8 lbs.; Lot 2, 1.54 lbs., and for Lot 3, 1.71 lbs.

#### WINTERING PREPARATORY TO GRASS FATTENING.

In continuation of this work, and to ascertain the best methods of feeding steers in preparation for grass fattening, thirty-five 2-year-old grade Shorthorn and Aberdeen-Angus steers weighing about 616 lbs. each were used. The winter rations, which were intended to carry the steers through in condition to be fattened in summer, were: For Lot 1, 2.35 lbs. cotton-seed meal and 13.29 lbs. cotton-seed hulls each daily, and for Lot 2, 2.35 lbs. cotton-seed meal, 6.82 lbs. cotton-seed hulls and 5.5 lbs. Johnson grass hay. On these rations for 116 days the steers in Lot 1 made an average daily gain of 0.64 lb. each at a cost of 12.05 cts. per pound, and those in Lot 2, 0.59 lb. at a cost of 14.71 cts. per pound. In the spring of 1910 these two lots were combined and fattened on a sandy loam pasture that afforded an abundance of grass. In addition to pasturage, they were fed per head per day 2.19 lbs. cotton-seed cake at the beginning, which was gradually increased to 6 lbs. toward the end of the period. During this period, 147 days, the steers made an average daily gain of 1.14 lbs. each at a cost of 7.06 cts. per pound. For the whole period, winter and spring, the steers of Lot 1 were fed at a loss of \$4.97 each, and those of Lot 2 at a loss of \$5.95 each.

In another test 43 common steers of the neighborhood, from three to four years old, weighing 565 lbs. each, were used. These steers cost in the fall of 1909 \$2.25 per hundredweight. During the winter they had the run of a 20,000-acre range and received no additional feed. Under these conditions they made an average daily gain of 0.08 lb. each. At the close of this period these steers were divided into two lots and fattened on pasture for the late summer market. In addition to pasturage, Lot 1 was fed 2.94 lbs. cotton-seed cake each daily, which was gradually increased to 5 lbs. toward the close of the period; Lot 2 received nothing in addition to pasturage. During this period, 113 days, Lot 1 made an average daily gain of 1.42 lbs. each at a cost of 4.82 cts. per pound, and Lot 2, 1.33 lbs. each at a cost of 1.55 cts. per pound. A profit of \$6.97 per steer was realized on Lot 1 and \$11 per steer on Lot 2. In figuring the cost of gains, profits, and losses, cotton-seed meal and cake were charged at \$26 each; cotton-seed hulls, \$7; and Johnson grass hay, \$11 per ton; pasturage, 50 cts. per steer per month, and range nothing.

#### SHORT VERSUS LONG-FED STEERS.

Further work was done with two hundred and twenty-four steers fattened on pasture during the three years, 1909-11. The steers were mostly grade Aberdeen-Angus, Shorthorn, Hereford, and Red Polled, though a few had the predominance of Jersey and scrub breeding. The steers in the long-fed lots were given from 2.21 to 2.88 lbs. of cotton-seed cake at the beginning of the tests, while those in the short-fed lots received from 3.24 to 3.40 lbs. each daily. At the close of the test each steer in the long-fed lots was consuming from 3 1/4 to 4 lbs. of cake, while those in the short-fed lots were consuming an average of 5 lbs. daily. An abundance of pasture was supplied for each lot, the short-fed steers being put on pasture and marketed earlier than the long-fed steers. The average daily gain of 35 short-fed steers in 1909 was 1.96 lbs. at a cost per pound of 3.76 cents and a profit per steer of \$8.25. In 1910, 30 short-fed steers gained 2.21 lbs. each daily at a cost per pound of 3.32 cents and a profit per steer of \$9.90, and in 1911, 25 head gained 1.96 pounds daily at a cost of 4.02 cents per pound and a profit per steer of \$6.81. The 90 fed made an average daily gain of 2.04



lbs. at a cost of 3.60 cents per pound and a profit per steer of \$8.30.

The long-fed steers, 75 in number, in 1909 gained 1.88 lbs. daily at a cost per pound of 3.24 cents and a profit per head of \$6.91. Thirty-four head in 1910 averaged 1.96 lbs. gain daily at a cost of 3.24 cents per pound and a profit per steer of \$11, and 25 in 1911 made a daily gain of 1.72 lbs. at a cost of 3.7 cents per pound and a profit of \$6.48 per steer. The total, 184 head of long-fed, gained 1.87 lbs. each daily at a cost of 3.33 cents per pound and a profit per head of \$7.73.

**Feed the Young Lambs.**

The lambing season is close at hand, and has even commenced in some flocks where early lambs for show-ring purposes or for the early spring market are desired. All such lambs must be fed well as soon as they are old enough to eat, in addition to getting a liberal supply of milk from a well-fed, heavy-milking dam. But the bulk of the lambs weaned each spring are not required to satisfy either of the aforementioned trades; they are kept to be sold in the fall or spring following, or to be added to the breeding flock. The question is should they be fed any great amount besides the milk ration which they naturally get. Under nearly all conditions the answer is, by all means, feed the youngsters. Build a small "creep," a small pen to which the lambs have access and from which the ewes are barred. A well-known writer says, "There is nothing like crowding the little fellows if you want to make big fellows of them." Let them eat all they will, and coax them to it. Success with early lambs depends largely upon the feed and manner of feeding. Place a small trough in the "creep," and in it keep a few finely pulped roots with a little oat chop and bran on them. If it is desired to make the lambs fat, add some finely crushed oil-cake and reduce the amount of bran. A little well-cured clover hay should be in the rack in the lambs' small pen at all times. Always keep this a fresh supply, and see that it is the choicest hay from the mow. Keep the troughs sweet and clean. Under no circumstances allow the feed to sour. While these precautions are being taken with the lambs the ewes should not be neglected. Give them all the roots they will eat, and a liberal allowance of oats and bran to stimulate milk flow. Feed clover hay liberally. It will pay just as well to keep the "lamb fat" on the young lambs as to keep the "calf fat" on calves. Try it and be convinced.

**Where the Beef Industry Stands.**

The forty-seventh annual report of the Union Stock-yard & Transit Company, of Chicago, Ill., puts forth the fact that the scarcity of beef is not confined to United States nor to Canada nor to America, but is world-wide. The populations of all civilized countries are said to be growing faster than the meat food supply. The relatively low prices which have obtained the past season in Canada were, according to the report, due to abnormal conditions, which it claims may not occur again in twenty years.

The population of the United States, according to government figures, has increased 26 per cent., while the supply of beef has declined fully 20 per cent., and during the same period the slaughter of calves has increased 600 per cent.

Here is the outlook—"With the decline of the ranges, cut up and partly occupied by settlements, restricted by legislation, both state and national, advance of sheep raising, depleted by drouths and closely marketed by reason of good prices; with the big cattle outfits nearly gone and small settlers not ready to take their places in cattle growing, because they must raise quick cash crops until their land and improvements are paid for before they can hold crops and borrow money to buy cattle with, so as to raise, graze and hay-feed or feed them for market; and because corn-belt farms and pastures have not yet begun to supply the deficiency, but are face to face with the greatest scarcity of feeders ever known, nothing but a continued shortage of beef may be looked for during the year 1913."

The demand for cheap beef since the near panic at the close of 1907 is given as another cause of shortage. To meet this demand the stock of cows and heifers has been greatly depleted, and this deficiency has caused packers to draw heavily upon the supply of young steers that should be in the feed lots.

Fewer cattle have gone to the feed lots because of the increased demand for light and medium steers for slaughter, which demand has drained the country. Farmers and feeders have been forced to buy their cattle on the larger markets, because they could not get them anywhere else. This has served to bring the farmers and feeders in direct competition with the packers, and the latter usually out-bid them, consequently the shortage in the feed lot has

resulted. The movement of cattle is now more from the market to the ranges than from ranges to the feed lot. The decrease of this feeder-cattle movement from five markets in the United States, during the first eleven months of 1912 as compared with the corresponding period of 1911, was over 158,000 head. Drouth also forced prematurely to market vast numbers of young and female cattle, thus reducing the number of breeding cattle. The report says there are not enough breeding cows to keep up the supply of beef steers, and predicts that in not less than seven years will an adequate annual production of beef result.

Spasmodic seasons of temporary over-marketing may depress values for short periods, follow-

three cross bedpieces projecting about six inches on each side of the bottom plank. These preserve the bottom corners of the trough from decay, and also prevent the hogs from overturning the trough when rooting it around, as they commonly do.

**The Sources of Beef of the Future.**

Answering the question "How will beef be grown on the arable farm?" Professor Thos. Shaw, writing in "The Farmer's Advocate and Home Journal," of Winnipeg, gives three ways which together will, he thinks, solve the problem.

First, it will be obtained from dairy cows; from these it will come from two sources. The

first of these will include essentially cows of dairy blood though not purely-bred. These will reach the market at the age of about one year or less. They will be reared largely on a ration composed mainly of skim milk and adjuncts during the milk period, and of carbonaceous foods later. The adjuncts to the skim milk will be mainly oil meal and other meal as that of barley and peas. These grains will also be the chief foods fed at a later period. The animals must be pushed rapidly on and kept in a high condition of flesh, especially during the later stages of the feeding. Such animals should not usually be kept much beyond the age mentioned, for the reason that as they become older the dairy form becomes more pronounced. The supply from this source is not likely ever to form a very large factor in the beef supply, but it will be an aid.

The second source from dairy cattle will include those from straight beef sires used on cows the progeny of which are not to be retained for the dairy. The progeny will possess in a very considerable degree the characteristics of the sires. They may, therefore, be grown into really good beef, especially if sold at a comparatively early age. The age need not, however, exceed 18 to 30 months. These also will be grown on skim milk and adjuncts during the milk period. They too must be pushed on quickly from birth until they are ready for slaughter.

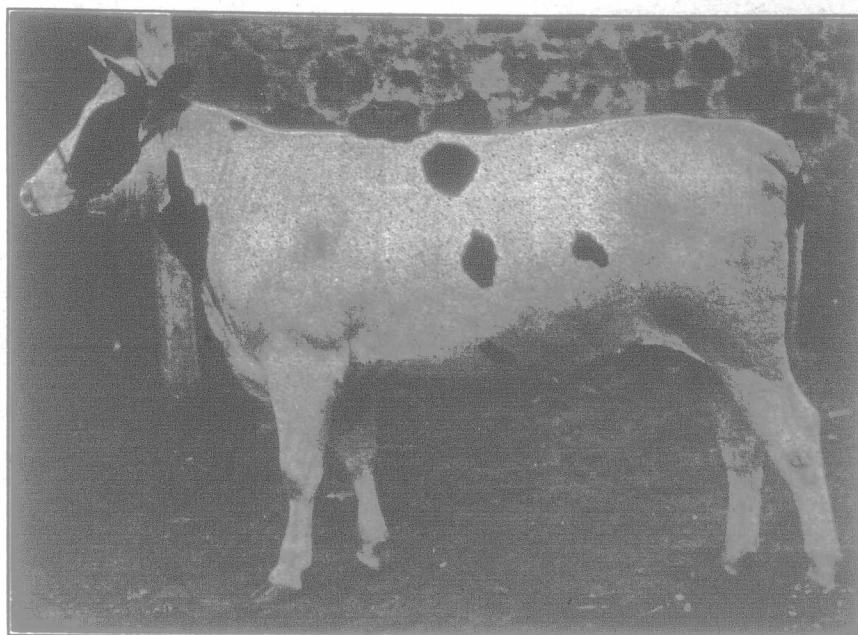
The second source from which beef will be obtained on the arable farm will be from the dual cow, that is, the cow that furnishes a goodly supply of milk, and that will produce a good calf that may be profitably grown into beef. These also will be reared during the milk period on skim milk and adjuncts, as it is too costly to grow them at that period on new milk. Cattle of this class may be sold at any age desired, but the most desirable age and also the most profitable to turn them off, will be under the age of 30 months. Up to that age meat is made much more cheaply than later.

The third source from which beef will be obtained is from straight beef cattle. The dams of these will suckle their young. The calves will be pushed rapidly along and will be sold as high-class beef, which always commands a relatively high price. In some instances two calves will be suckled by one cow when the extra calf can be obtained. Beef thus grown will not be so profitable as beef grown from cows of the dual type. It will cost considerably more to grow it during the milk period.

**THE FARM**

Among the large number of distinct forms of alfalfa collected, mainly through the United States Office of Foreign Seed and Plant Introduction, some of the plants have revealed underground rhizome-forming characters which seem to be correlated with drouth and cold resistance. Modifications of these characters have been found in some of the cultivated strains, such as the Grimm, Baltic, Turkestan and Mongolian alfalfas.

In the more tender alfalfas, such as the Peruvian, these characters seem to be absent. Many crosses have been made between recently discovered rhizome-forming alfalfas and some of the standard varieties, not so much to improve the strains of alfalfa now growing in the alfalfa regions as to provide pasturage farms which will grow in areas not suited to the needs of the standard varieties.



Silver Creek Belle No. 9967.

To be sold at A. H. Teeple's sale, Woodstock, March 11th.

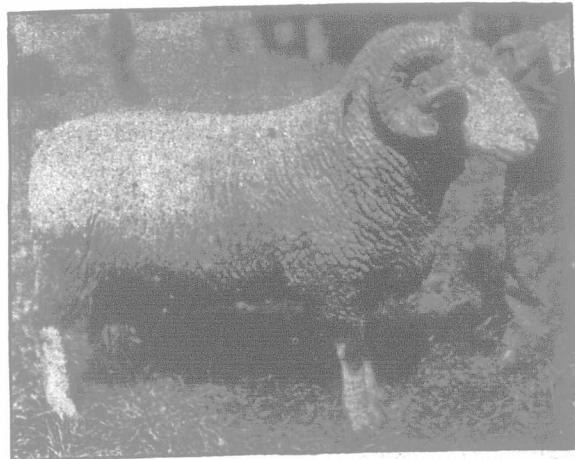
ed by severe scarcity and abnormally high prices.

The valuation of the cattle sold on the Chicago market in 1912 was \$197,246,984; value of calves, \$5,989,260; value of hogs, \$124,908,614, (average weight 226 lbs.); value of sheep, \$30,849,836; value of horses, \$17,200,745.

While the foregoing refers mainly to United States conditions, we can well concern ourselves in Canada. The outlook is much the same here, and practically the same causes of depletion have been operating.

**Dry Meal for Hogs.**

An increasing number of pig feeders seem to favor the plan of feeding the meal and drink separately. F. W. Hodson lately described to "The Farmer's Advocate" the system now practiced on his farm in Ontario County. Separate troughs are provided for meal and water, the latter being before the hogs each day from about



Dorset Horn Ram.

First at London in 1912, as a yearling. Shown by J. A. Orchard, Shelden, Ont.

10 a. m. to 3 p. m. In the morning the pigs are, first of all, given a good feed of pulped mangels or other roots, and each pig is allowed as many pounds of meal as he consumes of roots. With this system of feeding satisfactory gains have been obtained with a minimum amount of labor, while, in Mr. Hodson's opinion, a very firm and desirable quality of bacon is produced.

A style of hog trough suitable for feeding dry meal was thus described. With a wide plank as bottom a trough is made four inches deep and six feet long. Across the end and along the sides strong wire is stretched about two inches from the edges of the trough. This prevents the pig's snout pushing the meal out over the side of the trough while eating. Under the trough are

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**Seventeen Years Alfalfa Experience.**

Abstract of an address by Prof. R. A. Moore, Wisconsin Experiment Station, at the Ontario Corn-growers' Convention, Windsor, 1918.

Fourteen years ago we had not fourteen acres of alfalfa in the State of Wisconsin and had not fourteen men who believed it could be successfully grown there. Ex-Governor W. D. Hoard was the only man raising it successfully. We have now been working seventeen years on alfalfa at the Wisconsin Station, and there are at present no less than fifty thousand acres in the State. For one experiment alone we sent out last year nineteen tons of seed, and are now planning to send out forty tons.

From the average of many years' experiments conducted at the Station, we find that an acre of alfalfa yields us three times as much protein as an acre of clover, nine times as much as an acre of timothy, and twelve times as much as an acre of brome grass. The alfalfa produces four cuttings per annum, the clover two, and the grasses one each. When land is worth \$100 or \$160 an acre, we can't afford to fool around on a quarter of a forty-acre lot growing as much protein for our dairy herds as can be grown on one acre under alfalfa.

Alfalfa, by means of the bacteria working up on its roots, enables us to use the free nitrogen of the air, building it up into valuable proteid compounds to take the place of expensive cottonseed meal and other concentrates which our Wisconsin dairymen have been teaming home to balance the rations for their dairy herds. Some experts have figured out that we have been removing nitrogen from the soil at such a rate that in fifty or seventy-five years we would have this continent so poor we couldn't live on it. But we have been farming only the top foot of the soil. Let us, by sending down alfalfa roots, farm the twentieth, twenty-fifth and twenty-sixth foot of our land. If you were to turn the roots of an old alfalfa field upside down, you would have a forest so dense you couldn't get through it. Many of our experimenters are getting six to six and a half tons per acre from four cuttings.

Don't think you're going to jump into this alfalfa game all at once. As a rule, the man who makes the best success with alfalfa is the one who starts four or five years before he expects to grow very much. It is a good plan to put a quart of alfalfa seed into every bushel of the clover and grass seed mixture as a method of inoculating the whole farm with bacteria. A common mistake made by beginners in seeding alfalfa is to shift the crop around from one field to another. The opposite plan should be followed. When you sow a field to alfalfa and it turns yellow the first summer, weakens and partly dies out, break it and put alfalfa right back on that same piece of land. Assuming that the field was well chosen in the first place, your second attempt will have better chances of success right there than on another field, because the land will have been inoculated by the first seeding.

In Wisconsin we have been sending out sacks of soil from the Experiment Station sufficient to inoculate eight or ten square rods of land, and these areas afterwards supply soil for inoculating fields.

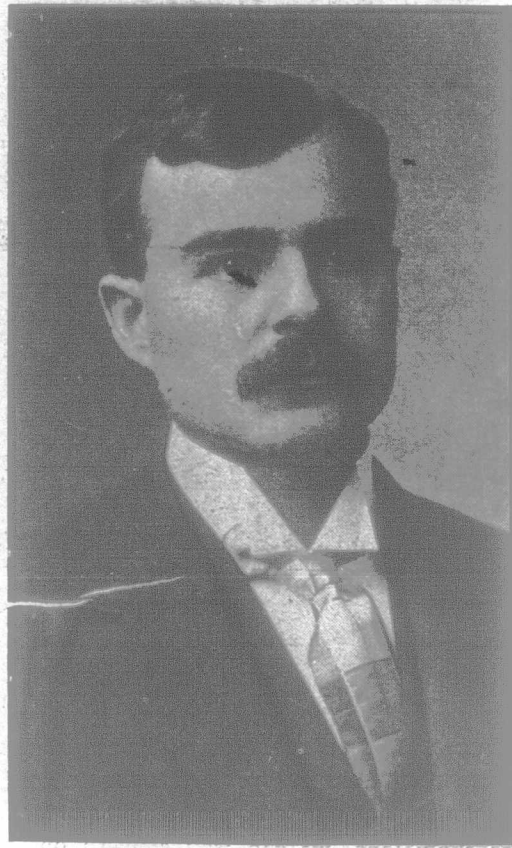
That common roadside weed, sweet clover, has proven a great precursor for alfalfa. When it first came into our State, it was declared to be a noxious weed, and efforts were united to banish it forever from the State. But instead it kept spreading

northward. It has never become a serious field weed, but, on the contrary, wherever it went alfalfa has followed in its train.

We want to sow alfalfa on a well-drained soil, and we like it a little rolling so as to give a run off for surface water. Alfalfa will stand more cold than our common clovers, but it soon smothers under a sheet of ice.

Our seventeen years' experience at the Wisconsin Station indicate that in seeding alfalfa it is best, first of all, to go through a weed-killing process, sowing the alfalfa early in June without a nurse crop.

The second best plan is to sow in early spring with a nurse crop of a bushel of barley per acre. In a field not perfectly clean a nurse crop has the one advantage of helping to keep down weeds. Nevertheless, at the Wisconsin Station



Prof. R. A. Moore, University of Wisconsin.

fields of alfalfa seeded years ago alone are still producing well, while others seeded with a nurse crop are not growing alfalfa any more, grass and weeds having come into the fields. It is best to kill the weeds first. Put a mulch on your field in the early spring to check evaporation, and the land will warm up promptly, causing countless weed seeds to germinate. Then go over with the harrow from time to time, and every second with the harrow on that field you will be killing thousands of weed-seeds. With this plan of summer seeding, if the season is favorable, we count on getting one good cutting the first season. After that it is not difficult to secure three and four cuttings per annum, if one will observe the cutting stage. If cut in, early bloom, the plants spring up vigorously again. We have had alfalfa grow an inch and a half in a day.

Our practice in haying, when weather permits, is to cut in the morning, ted after dinner, then cock up and put under cover, using hay caps which not only protect from rain, but also prevent bleaching by dew or sun.

Q.—How many varieties of alfalfa are there?

A.—There are a great many, some for which they are charging a dollar a pound. I don't approve of these new and high-priced varieties. We have had best results from high-vitality, high-testing samples of the common alfalfa. We haven't found that the Grimm alfalfa gave us any better results than seed grown in the North-western States.

Q.—How about seed production?

A.—As a rule in Wisconsin we have not been able to produce seed very successfully, our very best yields being about 3 or 3½ bushels per acre.

Q.—Will the roots of alfalfa give trouble in tile drains?

A.—We have been growing alfalfa on tile-drained land, and, as yet, have experienced no trouble from the roots getting into the drains.

Q.—Do you recommend pasturing?

A.—I wouldn't recommend pasturing alfalfa the first or the second year. After that it might be done with care. We have so far advocated putting alfalfa on a field by itself, and leaving it out of the regular rotation.

Three years ago we took over a farm that had been practically run out. We sowed it to alfalfa, afterwards breaking the alfalfa and putting in rye, and reaped 49½ bushels of rye per acre.

Alfalfa will pay on an investment of \$500 per acre.

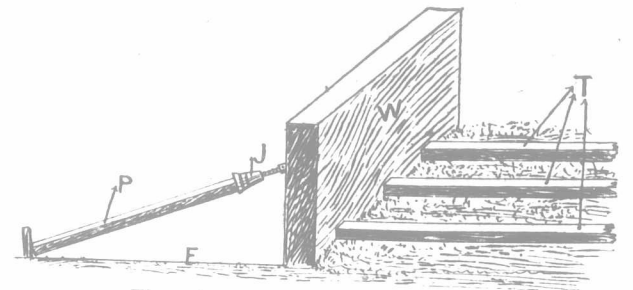
**Taking Down a Concrete Wall.**

Editor "The Farmer's Advocate":

Replying to R.C.A. as to possibility of taking down concrete walls and using the material again, I wish to say I took down and removed a wall which had been up seven years. Length of wall, 250 feet; height, 9 feet; thickness, 1 foot; footing, 18 inches to 2 feet.

Remove all window and door frames, taking off the top piece of each frame and drawing sides of frame away from concrete, shove frame out. Place timbers or posts flat on the ground about four feet apart on the outside of wall, taking in whatever length of wall there happens to be between two doorways. The larger the section the more complete the work. Take two or more jackscrews, place as shown in sketch, taking care to place them at the solid part of wall, away from window openings, etc.

Place jacks against wall about 2 feet up from surface of floor. Start all jacks at same time. Wall invariably broke at every timber crossways and in many places lengthwise at the same time.



Throwing a cement-concrete wall.

W—Section of wall.  
T—Timbers on which wall falls.  
P—Wooden prop against which jacks are placed  
J—Jackscrew between wall and prop.  
F—Floor of concrete into which a hole may be cut for prop.

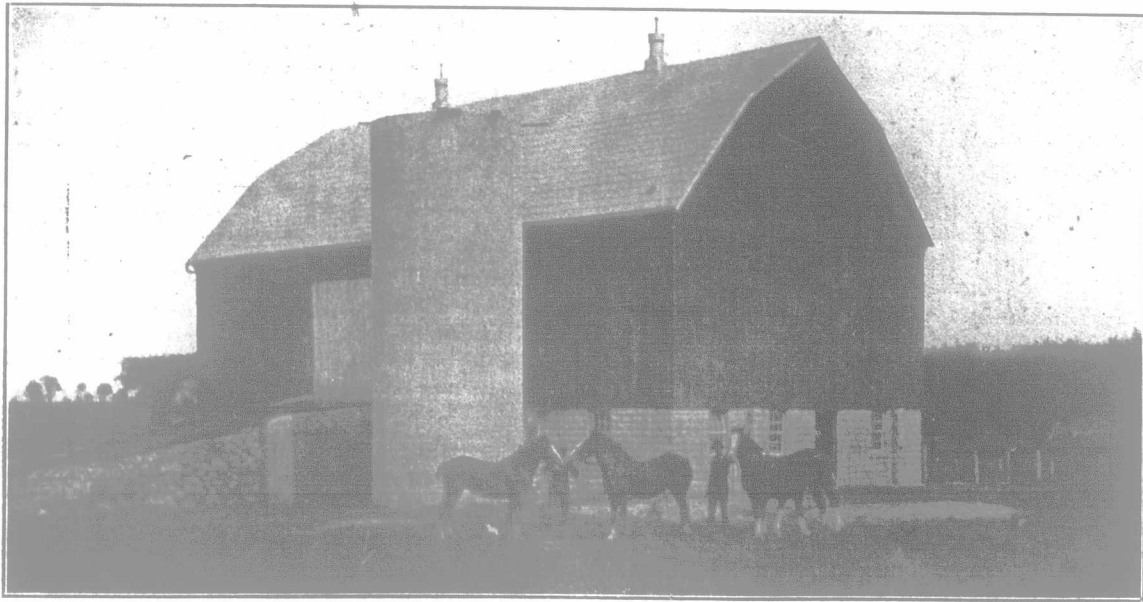
Loading.—Back stoneboat between timbers on ground, on which concrete now lies, and shove concrete on with crowbars and rollers, if necessary. These pieces of broken wall, varying in size from 1 x 4 feet to 4 x 5 feet, may be further reduced in size by using a sledge and heavy wide-pointed chisel, striking on the seams where the layers came together when the wall was just first made.

I have sold some of the material, and the mason had no difficulty in making a good wall out of the pieces.

I also took up the concrete floor and used it in my cow stable. By placing a pry underneath and raising gently, at the same time striking with a heavy sledge at the place desired and then marking the edges with paint, we placed them back in the same position they formerly occupied, including stall, floor, gutter and passage behind. After laying, all in joints with thin cement. A casual observer would notice the difference between it and a floor in one complete section.

I was told before I started I would never get this wall down without using explosives. York Co., Ont.

FRED MULHOLLAND.



A Perth County Barn.

This new barn is situated on the farm of Charles Barnett, Perth Co., Ont. A severe gale destroyed it while in course of construction, but it was rebuilt. It is modern and well ventilated through the buttresses.

**Silos in the Canadian Corn Belt.**

An interesting discussion on silos and silage was introduced by an address during the corn show at Windsor, given by W. H. Porter, District Agricultural Representative in the County of Lambton, who remarked that he knew of but one man in his county who was adverse to the silo, and he had tried it only for a single year. On the other hand, many cattlemen were staunch in its advocacy. Mr. Porter referred to J. A. McBean's 124 silage-fed grass-finished steers, a bunch of which were illustrated in "The Farmer's Advocate" July 4th, 1912. He mentioned several types of silos in one neighborhood, and submitted figures of the cost of one solid cement silo 14 feet by 40 feet, with walls 16 inches thick at the bottom and 7 inches at the top. [10 inches to 6 inches, on an 18-inch foundation, with a well-drained site, would be plenty if properly reinforced, and made with good gravel and cement mixed 7 or 8 to 1.—Editor.] This silo, as constructed, cost \$235, not counting the hauling of the gravel, which was handy. It took 60 cubic yards of gravel, and 40 barrels of cement.

The question of pea-vine silage came up, one case being cited where it did not turn out very well. It was suggested in explanation that possibly the material had not been packed very well as filled, and possibly some of it was rather dry. The ensilage of clover and alfalfa was discussed, but opinion was agreed that this was not to be recommended except, perhaps, when some third-cutting alfalfa could be mixed with corn, or when bad haying weather rendered ensilage the only possible alternative. The ensilage of thin-planted, well-matured hill corn was commended to Essex and Kent corn growers, with hogs to follow the cattle, where convenient, and pick up any whole corn which might pass through them.

Mr. Richardson, an elderly farmer with twenty years experience of silos, endorsed this suggestion, and expressed strong faith in the silo, notwithstanding the experience he cited of one or two neighbors who had given it brief and unsatisfactory trial.

Mr. Raynor told of having seen clover silage in British Columbia, which appeared to give fair results despite its strong smell. Mr. Raynor, however, is quite of opinion that corn is the great ensilage crop. In Prince Edward County the owner of one canning factory ensiles corn waste.

**SILAGE IN GERMANY.**

Otto Herrold, Manager of Bow Park Farm, described the kind of silos in use in the beet-sugar district of his native country, Germany. They are in the form of long pits, 30' up to 100 feet in length, eight to ten feet wide, and about the same in depth. As a rule, they are bricked up, except in clay soils where the brick are not needed. Into these silo pits are put sugar beet pulp, tops, cabbage, alfalfa, etc., and the resulting silage is fed with considerable satisfaction.

**To Remove Buckhorn from Clover.**

One of the worst weeds in a seed-clover crop is buckhorn or rib-grass. It is next to impossible to screen buckhorn seed out of clover. Ordinary fanning mills will not do it. A slightly tedious, but pretty effective method which any farmer may adopt to clean his own supply, has been repeatedly outlined in "The Farmer's Advocate" and is thus described by T. G. Raynor. It consists in taking advantage of the mucilaginous nature of buckhorn seed, which, when wet, will stick to canvas, and if allowed to dry, will adhere quite firmly; while clover seed, when similarly moistened and dried, will readily roll or shake off the sheet.

Take a screen door or two, or sieves, and spread cheese cloth over them. Sprinkle the cheese cloth with a sprinkling can, scatter the seed over and allow it to dry. Then shake off the clover seed, leaving the buckhorn sticking to the canvas. In a day or so one can clean up his seed supply.

**Growing Clean Clover Seed.**

If we could get a commercial supply of Extra No. 1 clover seed in Canada, as provided for by the Seed Control Act, we should have clover seed free from any noxious weed seeds and practically free from all weed seeds. But, as yet, our seedsmen can't get hold of enough seed of this quality to make it worth while cataloguing such a grade.

It is possible to grow clean clover seed which the merchants could safely brand "Extra No. 1" if we will sow clean seed on a clean chance, says T. G. Raynor. Sow the seed, say, on a surface-cultivated field on which a thoroughly cultivated hoe crop has been grown.

Foxtail and other such weeds which come in are the result of leaving killed-out patches.

To get the clean seed to sow on the clean field look around early. The farmer who does this

has the best chance of getting quality. Towards the end of the season, when stocks have run low, the seedsmen often press into requisition seed which they may have refused at first, and late purchasers get it.

Seed that has sprouted and dried up again is of no use for sowing. Its vitality is gone.

**Skill is the Greatest Source of Wealth.**

"Five Sources of Wealth" was the title of an address delivered by Prof. A. E. Chamberlain, Development Commissioner of the Great Northern Railway, before the Ontario Corn Growers' Association at Windsor. Four of these are natural sources—viz., the sea, the mines, the forest, the farm—and of the four, agriculture is the only one in Old Ontario that is now worth mentioning. The fifth source is human skill.

"I was raised down here on a farm, most of which had to be cleared," said Prof. Chamberlain. "My father and I would go out to the bush and each select a big tree that nature had taken centuries to grow and cut it up into cord-wood. The next day we would haul it to town and get \$4 for that magnificent tree and a day's work. Then the sawmill came, put three or four days' work on the tree, along with a little more skill, and realized \$15 or \$20 out of the same kind of a tree. Later on came a mill that would quarter-saw the tree, producing a value of \$40 or \$60. Then the furniture factory put a little more work and skill on the tree and converted it into a still greater value. Now the German cabinet-maker spends a year or more on such a

much is it worth a month to feed and care for her? Say thirty dollars; that \$7.50 is the return from 7½ acres of land. That kind of a cow drives a lot of boys to the town. Have you any land on which you can afford to keep that kind of a cow? A 300-pound cow would produce \$75. Allow \$40 for taking care of her, and you will still have \$35 left. This would pay interest on land worth \$150 an acre. Get up a little higher to the 350-pound cow and you can pay interest on \$207 an acre. A difference in human skill.

Look to the development of the skill of the boys and girls of Ontario, and Ontario will lead the world."

**Precautions Necessary in Cooling Meat.**

While it is almost impossible to get the best conditions for handling meat on the farm, a knowledge of the best principles may aid in getting a better quality of meat. It is very important that the carcasses be cooled soon after slaughtering, and yet that they be not allowed to freeze, says Andrew Boss, in Minnesota University Farm Press News. While the temperature cannot be well controlled on the farm, it is possible to slaughter when the weather is favorable to the proper cooling of the carcass. If during the winter season, choose a day when there is a prospect for cooling the carcass before the surface freezes. The most desirable temperature for cooling meat is 34 degrees to 40 degrees F., and an approach to these temperatures will give good results.

In summer seasons it is best to dress the animal in the evening, leaving the carcass in the open air over night and carrying it to a cool, dark cellar before the flies are out in the morning. Very often a cool room in the barn can be used for the purpose if made dark. There should be no fresh paint, tar, kerosene, or like substances around, however, as freshly killed meat absorbs such flavors readily.

Cooling is often hastened by splitting the carcasses into halves or even into small pieces. It is best, however, not to divide the carcass until the meat is firmly set unless absolutely necessary to prevent it from souring. Stripping out the leaf lard materially aids in quickly cooling the hog carcass. For the best results in cooling meat, the air should be dry, as well as of a low temperature; and free circulation aids greatly in carrying away foul odors and mold spores.

It is also important that flies and insects be kept away from the meat. If it is fly-blown, maggots will soon appear and it will be very difficult to save the meat.

**A Poor Crop of Clover Seed.**

The clover-seed crop in Ontario this year is practically a failure, both as to yield and market quality. Wet weather, doubtless, interfered with pollination of the blossoms, and then much of the late growth got frosted and the seed turned brown, as T. G. Raynor, of the Dominion Seed Branch, explained in an impromptu talk to the corn growers at Windsor. In consequence, there is not much Number 1 seed in the Province, the general appearance of most samples being poor. Some American seed is being imported, and, with careful cleaning, graded up to No. 1 standard.

The best report of 1912 clover-seed yield which has yet come to "The Farmer's Advocate" is reported by Edgar M. Zavitz, of Lobo Township, Middlesex County, Ont., a brother of Prof. C. A. Zavitz. Mr. Zavitz took eight loads of red clover from six acres and threshed fifteen bushels of fair-quality seed. Some of the heads were quite full. A catch crop of alsike yielded four bushels per acre.

These yields, however, must have been exceptional. At Weldwood the machine hulled out only three bushels from seven loads of red clover, and the thresher said that was one of the best crops he had threshed this year—which isn't saying much for the average yield.

**The Chance for Duty-free Ditchers.**

Discussing the estimate that there are 4,710,000 acres of cleared land in Ontario which need underdraining, and that at an increase of \$20 in returns per acre, the value of the field products would be raised by at least \$94,200,000 annually, not taking account at all of the two and a half million acres of slash land or the two and three-quarter million acres of swamp, marsh and waste land, the Toronto News asks how is the farmer to obtain the capital and labor necessary to underdrain, to increase his production and to add to his profits. The answer, it significantly adds, "does not necessarily involve any attack upon existing institutions or enterprises." Fortunately not, else the farmer's chances of getting what he wants—viz., duty-free ditching machines—would be very slim.



Prof. A. E. Chamberlain.

An old Essex County boy, one of the speakers at the Ontario Corn-growers' Convention.

tree, and sells it for three or four, up to five thousand dollars. Along comes the Italian, who applies a little more skill, and creates a yet higher value.

"It is the same with steel. We are paying the German every day ten dollars a pound for steel that we sell him for a penny a pound.

"You farmers raise a good many oats. An Englishman, Scotchman, Frenchman or Belgian buys half your bin of oats, feeds it to a colt, and we buy an expensive stallion from him. You feed the rest of the bin to another colt, and if you sell those oats for two cents a pound, you think you have done wonders.

"Difference of climate? No. Grass? No. It is a difference of human skill. The European colt was bred better.

Denmark, with an area about equal to that of Kent, Essex and Lambton, last year exported farm, dairy, pork and poultry products to the value of \$101,000,000.

"When you and I were boys, the Danes were about where we are now, only they were doing less talking about it than we are doing. They got hold of the idea that there were things they didn't know, and set about to learn.

"Suppose you take about four acres of land to keep a cow. If she is a 150 pound cow, she produces about \$37.50 worth of butter. How

### Specializing District Production.

To induce a locality to specialize in some one line of production and push that line, making the district famous for it, was the advice offered Ontario corn growers by Prof. R. A. Moore, who addressed them so acceptably at Windsor. Through just such effort, he explained, the district surrounding Lake Mills, Wisconsin, had become known far and wide as a Holstein centre, and a buyer wishing to obtain a carload of bulls, or forty or a hundred, might be confidently directed there. In consequence the breeders in that locality are to-day getting twice as much for Holstein cattle as can be obtained elsewhere. So with corn. Half of all the corn grown in Wisconsin is of the two varieties on which two respective sections of the state have specialized, viz., Wisconsin No. 7 and Golden Glow. Orders are now coming in from Russia and across the ocean for Golden Glow seed corn, offering \$4.00 a bushel.

If you grow a lot of varieties of corn in a section you will always have scrub corn. If the Corn Growers' Association, he urged, could take up and push only four breeds of corn, the district would be a long way ahead of where it could get with a great number of kinds. The Bailey variety, grown in Kent and Essex, is a great corn. The Association can make the country known far and wide if it will take up and push this one corn.

Commence with the best you can get, and then develop and push it. In Wisconsin they had taken Prof. Zavitz's barley, pushed that and discarded their other kinds. The barley now raised in Wisconsin has been bred up from this Canadian kind, and has produced yields five and six-tenths bushels per acre better than the best of the other barleys with which it was compared. This year there were produced some fifteen million bushels of barley, all descended from one seed selected from many. He had received one order for twelve carloads of that barley. Thus in each line of production they are seeking to make Wisconsin famous for some one thing. Throw the energy of a State along four hundred and one lines, and you get nowhere. Success comes to the man who can do some one thing extra well. If you are a superlatively good whistler, even you can make something out of it, but if you are just a common ordinary whistler you can't make anything out of it.

Growing a lot of varieties of corn is just like letting a couple of dozen fine bulls of various breeds run at large through the country.

There was a time when the flints were about the only corns they could grow successfully in Wisconsin, but their corn-growing conditions have been getting better and better, until now the dents are extensively grown, and the flints are produced only in the more Northern sections of the State.

### Small Fortunes from Pure-Bred Seed.

Digest of part of an address by Prof. R. A. Moore, at Windsor.

Last year 22,000 Wisconsin boys took part in corn growing contests, for which 47 local fair boards in 45 counties put up \$18,000. Eighty-six boys won scholarships entitling them to a week's special course at the University, covering railroad fare and board. These juvenile competitors are supplied with first-class seed corn, and this is one of the channels through which well-bred corn is disseminated over the State. The boys are then from time to time given a chance to fill orders for seed corn from the kiln-dried produce of their fields. One boy sold 300 bushels of corn for \$900, and you could not kick him off the farm. A certain poor boy came to the Wisconsin College of Agriculture nine years ago. He was an only son, whose father was set in his ways and absolutely refused to have anything to do with pure-bred stock or seed. The father eventually decided to sell the farm and give the boy \$2,000. The son used the \$2,000 to make a payment on the farm, and took hold of it two years ago, with a mortgage of \$14,000. He has already lifted the mortgage, and from this last year's crop his sales of seed had amounted to \$22,000 and will run over \$30,000. He is shipping seed all over the world. This boy is going to stay on the farm.

Very thoughtfully, according to his usual custom, the King's printer has supplied us with a forty-eight-page bulletin, entitled "Ice Cold Storage on the Farm," just as the last ice-houses are being filled. No doubt the bulletin was prepared in good time, but government printing bureaus haste for no man nor for any time or season. The bulletin in question bears the name of R. R. Graham, B.S.A., Department of Physics, O.A.C., Guelph, Ont., and may be had, free, on application to the Department of Agriculture, Toronto, Ont.

### A Great Canadian Dent Corn.

Very high praise for Southwestern Ontario corn was Prof. R. A. Moore's statement, that he had seen, in the show at Windsor, some of the best Wisconsin No. 7 corn that he ever saw anywhere. When it is remembered that Wisconsin No. 7 is a variety specialized in his own State, this is all the more gratifying. Wisconsin No. 7 is a white dent corn. The local variety, Bailey, which he praised in the highest terms is a yellow dent, a good yielder, and grows a taller stalk than most strains of the familiar White Cap Dent. From our own limited experience with it in Middlesex County, we prefer it to White Cap as an ensilage corn, and J. O. Duke, the well known seed corn dealer of Essex County and past president of the Corn Growers' Association, tells us that he does not know of any better variety for the purpose, not even the justly famous Wisconsin No. 7.

The Canadian Seed Growers' Association works toward perfection of type and commercial exploitation of the product, said Secretary L. H. Newman before the Ontario corn growers at Windsor. They are aiming at the development of seed centres in the corn-growing sections of Canada. The best corn for silage purposes in Eastern Ontario and Quebec can be obtained from Southwestern Ontario, if grown with proper care.

Experiments carried on at Rhode Island State College, to ascertain the effect of cow dung on the availability of rock phosphate, showed that no increase in the amount of available phosphorus results from mixing fresh cow dung and floats together for a number of months before applying them to the land.

A difference in yield of 170 as compared with 145 bushels of corn per acre, or an increase of 25 bushels, equal to 150 bushels on a six-acre field, is the gain reported by one Essex County farmer as the advantage from kiln drying of his seed corn.

We find by the ear-to-row method of breeding that one ear will sometimes produce twice as much corn as another.—L. H. Newman.

## THE DAIRY.

### Follow the Scotchman's Example.

Hector Gordon, of Howick, Que., in his Presidential address at the Ayrshire Breeders' meeting, recently held in Montreal, pointed out that in the excitement of making large records there is a danger of overlooking type and form, which combined with large records of milk and fat, make the dairy cow valuable. This record of performance test is, he believed, becoming more popular each year, as increased entries are made annually. This test is the best means of determining the ability of cows, and as the Canadian rules are more exacting and, at the same time, more consistent with everyday conditions than are the American rules, higher records are possible on the other side of the line. To fully appreciate the Ayrshire cow, Mr. Gordon holds that one must see her in her native heath. He urged more enthusiasm, believing that the Ayrshire has no equals in rearing calves and young stock. No scrub or immature sires are used in the good herds of Scotland. No common animals head herds. Females are allowed to come to their growth before freshening, consequently the cows in Scotland are large, well-developed individuals, profitable at production and reproduction. "The fad of having the heifer freshen at two years old is not encouraged, consequently constitutional vigor is not sacrificed to milk flow." In the matter of feeding, rearing and breeding, Canadian breeders can take a lesson from the Scotchman.

Continuing Mr. Gordon urged that only high-class animals, a credit to the breed, be sent West, and he believed that the high quality of Ayrshire milk is being recognized the country over, so that the demand for the breed should increase.

On the day following the annual meeting about sixty members of the Association took a trip to Macdonald College where they were entertained. Prof. Barton gave them an object lesson in types of farm animals, by having a number of the College's best specimens of the various breeds brought into the judging pavilion for discussion. Stonecroft farm, the farm of R. B. Angus, those of W. T. Rodden, R. R. Ness, Hector Gordon, P. D. McArthur, J. W. Logan, and Jas. Bryson were also visited by many of the members. Seeing what others are doing is a good stimulant.

### Good Feed and Good Records.

Readers of "The Farmer's Advocate" will remember the mention in connection with the articles on "Agriculture on Government Farms," which appeared in several issues last October, of alfalfa and millet being ensiled with the corn. Interested to know how the silage kept and fed out, we wrote to the superintendents of the various institutions visited. So far, Dr. English, Superintendent of the Hamilton Hospital for the Insane, is the only one to reply, but here is what he says:

"The ensilage compound of corn, millet and alfalfa, put in by us in October last, kept splendidly and was much more heartily relished by the cattle than the corn alone, and, of course, gave excellent results at the pail.

"We have now five cows entered in the 'Record of Performance Test' and the results are proving most satisfactory, and it is our intention to follow the matter up until all of our pure-bred cattle have past there-through.

"One of our grade cows, aged 11 years, is worthy of mention. She freshened late in November, and from December 1st to February 12th, inclusive, has given 5,396 lbs. of milk, or a daily average of 72.91 lbs. Testing from 3.1 per cent to 3.3 per cent butter fat.

"The two-year-old heifer of this cow has averaged 28.90 lbs. daily since April last and bids fair to equal, if not surpass, her dam.

"The daily average for the full herd of 42 cows in milking for the last month was 35.01 lbs., the highest we have yet had."

W. M. ENGLISH.

### Keep the Export Trade.

Editor "The Farmer's Advocate":

Kindly allow me brief space for a word of comment on your editorial "Cows, Prices and Profits" in Jan. 30th issue, and also on the letter of C. M. MacF., in issue of February 13th. "Your satirically humorous editorial" is dealt with elsewhere.

Dealing with the editorial first, "He argued, by implication, that we should have some active organization aiming to increase the number and improve the quality of our cows," is hardly a fair inference to draw from what was said. We were not arguing for a larger number of cows on Ontario farms, but we did try to show the importance of replacing the cows being slaughtered, as a result of the testing propaganda. If need scarcely mention, I am in full sympathy with the cow-testing idea.

You go on to say, decrease in exports was attributed to the culling process, and that a second reason for declining exports was lack of sufficient profit. Then you arrive at the conclusion—"The latter argument nullifies the first." Are you sure about this? Allow me to cite the case of the Breton fisherman recently referred to by a number of Canadian journals. In a word, these fishermen decided to restrict output and thereby increase profits. To quote an editorial in a prominent Canadian paper: "Government sanction was sought for and obtained, and the era of the restricted production with its golden hopes was ushered in. Less work, more profit. What a delightful dream while it lasted! At a distance of only three miles from the Breton fishing grounds British, German, Belgian and other foreign fishermen were getting big catches with a much-abused 'turning' net. The smaller takings of the Breton men proved to be unprofitable to the factories handling the fish. They could no longer compete with the factories having unrestricted supplies, but the fishermen refused to yield, and were supported in their obstinacy by the Government. The factories are accordingly closing down, and 50,000 fishermen will be thrown out of work."

There are two lessons in the foregoing for Ontario dairymen. One is that restriction in production does not necessarily mean more profits or higher prices. This can be the case only in a restricted market, and under a highly protected tariff. The second lesson is that if the number of cows, more particularly in cheese factory districts, falls below a number whereby it no longer is profitable to operate the cheese factories, the factories will close and we shall lose the British market for our cheese. We shall be like the Breton fishermen. We are dangerously near that point now. Prominent men in the trade are predicting that our cheese exports will be nil in from four to ten years. Rather than allow our export cheese trade to become extinct, would it not be a wiser policy to, at least, keep up our present number of cows and maintain our present cheese factories, trying to eliminate all wastes whatsoever, in both manufacture and marketing, thus increasing the profits to dairy farmers. Is this not better than to simply fold our hands and say: "let supply and demand settle that." "Look to quality and individual profits." "Let

statistics take care of themselves." I trust you will pardon me for saying, that this is a childish attitude to assume on a question of vital importance to the dairy industry of this province.

The statement about an increase of 2½ millions in the population of Canada during the past ten years is only out about half a million, so far as I have seen the figures, but this is a minor matter. I should be inclined to challenge the accuracy of the statement that milk production has increased in the Province of Ontario, at least, during the past ten years in proportion to the population.

Turning to the letter of C. MacF., who I assume is a dairy farmer, the writer of the letter says, "The dairymen of Canada do not require moving pictures or a stage and stage equipment to have impressed on them the lessons of success or failure in dairy production." May I point out that the chief trouble with farming and dairying in this country is that the "atmosphere" or environment is suffocating? People are being smothered, as they were in the days of Charles Dickens, who, by his masterly exposition and castigation of the smothering process, as carried on in the "Do-the-Boys" Schools, Debtor's Prisons and Circumlocution Offices, obtained a measure of freedom for the people of England such as they had never known before. I am not a pessimist, but have been a close student of agricultural and dairy matters for the past twenty-two years, and I have no hesitation in saying that our farming classes are being strangled by Do-the-Farmer Organizations, by Debtor-Prisons of the Modern Loan Shark Type, and by "Circumlocutions" more deadly in their effect than any which existed in the days of Dickens.

A prominent man in the adjoining County to where C. MacF. lives, and where "The Farmer's Advocate" is published said recently in a public meeting, "The farmers of this country have no more to say regarding the management of its affairs than a lot of school boys." Does C. MacF. or the Editor of "The Farmer's Advocate" believe this to be true? If so, what are they doing to remedy this condition of affairs?

The most discouraging feature of the whole matter is that the men who are most likely to be benefited by an improved "atmosphere" are the ones prone to oppose any change. A favorite recreation in all ages has been the stoning of the prophets.

"Seven wealthy towns contend for Homer dead  
Through which the living Homer begged his bread."  
H. H. DEAN.

**Dean Coos about the Drama.**

Editor "The Farmer's Advocate":  
Alert, aggressive, Albright, alarmed,  
Assumes an apt alliterative attitude,  
Adopts "alliteration's artful aid,"  
"Advocate's," advises and advertises, ambages;  
Also agapes, aghasts and agonizes at  
"Dean's Dairy Drama"  
Ambling amid an astonished audience,  
At an amphetamine admirably arranged,  
After animated, amazing announcements,  
And after approximately annihilating  
Antipathy among arid agricultural artists,  
Anno-domini 2222.

We are somewhat undecided, after reading your editorial of January 30th last, whether to enter an action for libel or challenge you to mortal combat, because you have so cruelly crushed our budding geniuses along dramatic lines as applied to Agriculture. It was heartless of you, thus, to nip in the bud our dramatic flower and prevent its full-blown fragrance sweetening the air of farm life. At one time your flow of imagination resulted in prose-poetic effusions about the "Balmy air," "the shining sun," "the nodding corn fields," "the dewy, sweet-scented clover," etc., but we are afraid that chasing the brindle cow about the straw stack on "The Farmer's Advocate" Farm and living in the (Weld) woods so much recently has damped the ardour of your poetic fancy, to the loss of "Farmer's Advocate" readers. As a tonic, we suggest a quiet reading of "Anne of Green Gables." This will revive your imagination and enable you to think less seriously of worrying farm problems. After "Anne," try "Pigs is Pigs" for a change.

Seriously, you seem to think that the first part of a dairy drama might be worked out all right, but you "hae your doots" about "thay second pairt." Have you ever stood on the upper deck of an Atlantic liner at Montreal or Quebec and watched the men loading thousands of boxes of Canadian Cheddar Cheese? If you have not, take a trip to one of our seaports in summer and watch the operation. If you do not consider yourself well repaid for the trip and do not change your mind about the dramatic possibilities of "a stack of boxed cheese," you may send in your bill for the trip to the undersigned and they will pay for it out of the profits from the first Dairy Drama.

You say, "The admission fee to this enthralling play was not settled by the author of the

idea." The fact that we proposed to make admission free, if we were millionaires, was apparently overlooked by you. That this would probably prove popular and educative is indicated by the fact that during the Fall Exhibitions at Toronto and London, and wherever tried, the people flock in crowds to watch the Buttermaking Competitions. Life in action has an irresistible attraction for mankind the world over.

To test this matter of the value of Moving Pictures, preferably of the Kinetophone type, we would like to see a series of films taken during a day at one of the farms where certified milk is produced. We venture to assert that more practical and effective education in the production of clean milk would result from the exhibition of such films in dairy districts than is accomplished by all the dairy educational agencies now at work in Canada, including the excellent editorials and contributed articles in the columns of "The Farmer's Advocate." It is not impossible to conceive of a time when books and journals, as we know them, for the masses, will be a thing of the past. By the year 2222 it is possible that Editors, Journals, and all similar agencies for educating the people will be as extinct as the Megatherium.

One other point. You seem to doubt the dramatic possibilities of "pass the cheese." Let us see how this might be worked out. Briefly:

Places.—Warehouse or Cheese Cellar in England, English Retail Shop, Cheese Consumer's Home in England.

Persons.—Canadian exporter, English importer, English retailer, English consumers—husband, wife, son Billy, daughter Harriet.

Time.—February, 1923.

Wire.—Exporter to importer: What's the matter with the cheese per s.s. Canada not satisfactory. Am writing. Cheese too hard.

of the pigs in New Zealand to make 'em hold swill.

Wife: You don't say! Then I s'pose bikon 'll be goin' up, too, 'fore long?

Shopkeeper: No doubt about it, mum. Better buy cheese to-day afore the price rises. Can let you 'ave Canadians at ten pence and Maoris at nine-pence ha'penny, the pound.

Wife: Ain't them prices steep? Lor', mister, I kin remember when we usedter buy Canajan cheddar cheese at sixpence and h'eightpence, an' New Zealanders h'at a penny, to tuppence less, the pound.

Shopkeeper: Can't help it, mum. Prices has riz an' we 'ave to pay more for the goods, wholesale. Nothin' in it for us, missus. We just keep 'em to oblige customers.

Wife: Well, hi'll take two pounds Canerdy and two pounds New Zealand on trial.

(Supper table in English workingman's home.)

Husband: Pass up the cheese, Elizabeth; h'im 'ungry.

Wife: I got some of the New Zealand cheese to-day as a trial h'order to compare with Canajan, which we 'ave h'always used 'itherto, and the New Zealand is a little cheaper. You know, I 'ave considerable difficulty in fillin' so many 'ungry mouths, though it is not so bad now since h'Alf and 'Enry went into the Canajan navy fightin' fer the Colonials.

Husband: Let's see both kinds. This 'ere is Canajan, yo' say, an' this 'ere is New Zealand. S' fur as I ken see, one's as good as 'other—mebbe New Zealand 's a little better, and ye say the New Zealand is a little cheaper?

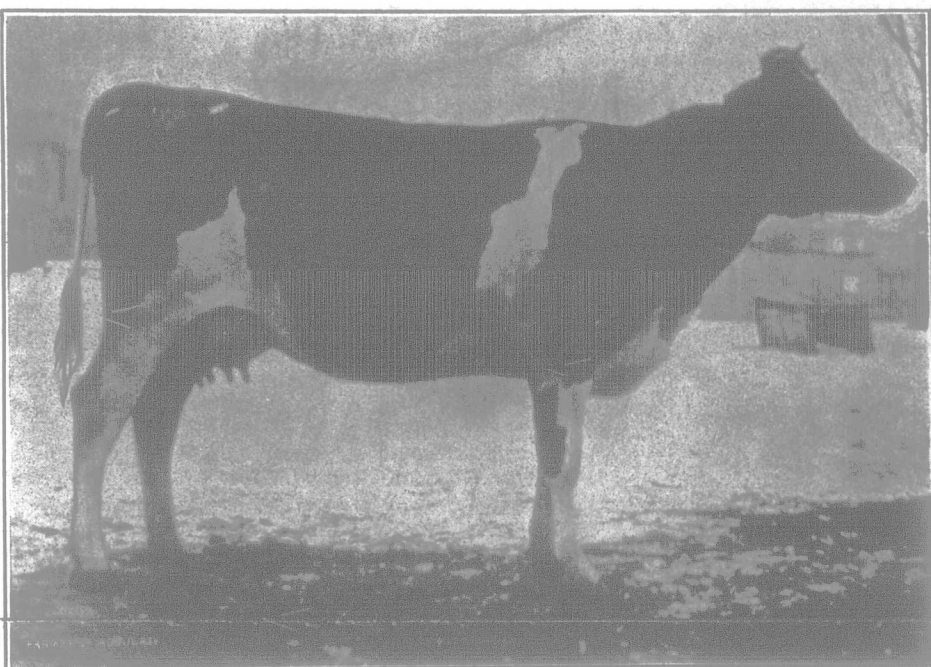
Wife: Yes, an' the shopkeeper sez as 'ow both's likely to riz in price afore long on account of the cold in Canerdy and the drought in Maoriland. What do you think about it, Billy? Which is the better cheese?

Son Billy: I sez, sez I, that this 'ere one from New Zealand is bestest, 'cause it h'aint so 'ard like

'Arriet: Me too. I likes 'em softer-like my 'Arry h'in the h'army.

Wife: H'i thot 'Arry was in the navy?

'Arriet: 'E was h'in the navy, but since them bloomin' Canajans are sayin' "Ere h'am h'i, send the h'Englishman," 'e says as what 'e h'isn't agoin' to do their fightin', and at the same time 'ave to eat their 'ard cheese—h'its too 'ard and bony like—more like them h'air Edam cheese which was used one time fer cannon balls by h'a Dutch h'admiral as w'at run h'out of h'am-mention once w'en 'e was a fightin' of



**Rhoda's Queen Princess.**

Holstein heifer under twenty-four months of age. Winner in her class in the Ottawa dairy test. Owned by N. Sangster, Ormstown, Que.

Wire.—Importer to exporter: What's the matter with the English cheese trade anyway? Canadian experts say the cheese are all right.

Retailer at wholesale cheese cellar in England: Have you any good cheese to-day, sir?

Wholesale: Yes, sir; we have English cheddar, Canadian cheddar and New Zealand cheddars. Which will you have?

Retailer: I have always purchased Canadian in the past, but somehow or other my customers are not so well pleased with it as they used to be. About ten years ago, sir, my shop used to sell nothing but Canadian cheddars, but lately we bin a 'andlin New Zealanders at a little more profit—a trifle more pence and shillin's in it, sir, for us, and I think we'll try a few Maoris along with the Canadians. What's the price of each?

Wholesale: Best Canadian Septembers, 68 shillin's; fresh landed, Maoris, 65 shillin's.

Retailer: I'll take a dozen of each. As my wife waits on shop, part of the time, I would prefer 'em not weighin' over about 60 lbs.—40 lbs. would suit me better, as big ones are 'eavy to 'andle and dries out too much afore I can get 'em sold, as our trade is not large.

(Retailer's Shop.—Enter workingman's wife to buy cheese.)

Wife: What do cheese be a sellin' at to-day?

Retailer: Zounds, woman! cheese be somewhat steep in price this 'ere Febuary. Things is all froze up in Canerdy and New Zealand's sufferin' from the worst drought h'in the 'istory of the trade. They do say, madam, as 'ow they h'are a thawin' of the milk'as h'is froze h'in the cow's h'udders in Canerdy, and they be a soakin'

the Britishers, and 'e used cheese insteads, h'as 'e 'ad a lot of them h'air round cheese a stored h'up in the 'old of the vessel fer pervisions like.

Billy: H'i say there, in the words of the h'Editor of "The Farmer's h'Advocate," "pass up the cheese," will yer!

A B C & D.

**GARDEN & ORCHARD.**

**Starting an Orchard—II.**

[Note.—The series of articles, of which this is the second, is written from the British Columbia fruit-growers' point of view. They will, however, be instructive reading for Eastern growers.—Editor.]

**SELECTION OF VARIETIES.**

Many nurseries issue elaborate catalogues, and after one has read the descriptions over he has about as much reliable information as when he started.

It is wise to find out as nearly as possible the varieties that have withstood the winters of the locality you are interested in, and then select of these the ones that appeal to the consumers on your markets. Below is given a list of apples and various points of information regarding them that may help in selecting.

It might not come amiss here to mention that it is not wise, on a ten-acre piece, to have more than three varieties of apples, and these should be selected with the fact in mind that some varieties are self-sterile, and require other varieties blooming at the same time to fertilize

them; for instance, Jonathans are better where Yellow Newtown Pippins are planted in the same neighborhood. It is also advisable to have the various varieties such that they may be harvested at different times to relieve the rush for harvesting; for instance one might have McIntosh Red, an early fall apple, Johnathan, late fall, Spy, a winter apple.

If other fruits are to be set keep each kind together, i. e., keep the apples by themselves, peaches by themselves, and plums by themselves.

In descriptions below where packing is mentioned, box-packing is the method referred to:

**Jonathan.**—Late fall; red and colors well; slightly pointed; good dessert size; packs easily; good shipper; a splendid table apple; mild sub-acid; fine grain; white, firm flesh; decided pear flavor; good retailer; at its best November 15th. Better planted with some other variety to fertilize the blossoms, Yellow Newtown Pippin the best. Tree is wide spreading; early, constant bearer, (not as good quality in the East.)

**McIntosh Reds.**—Early fall; dark red with heavy bloom; colors splendidly if the tree is properly pruned; apple is flat; essentially a dessert apple, and one of the very best, with a flavor all its own; packs well in dessert size, larger specimens pack with difficulty; good shipper; one of the best retailers; at its best October 15th till Christmas. Tree wide spreading, extra heavy foliage; early, heavy bearer; hardy.

**Gano.**—Late winter; bright red, colors exceptionally well; markedly pointed; packs well; fine shipper; splendid retailer on account of its color; not considered a first quality table apple; at its best after January 15th; constant, very heavy bearer; early bearing. Tree upright, strong wood, hardy, profitable investment.

**Spitzenburg.**—Early winter; light red; colors well; apple long; slightly ribbed; good table apple with fine grain; good shipper; not an easy packer; self-sterile; at its best December and January. Tree upright; shy bearer even with good handling; slow coming into bearing.

**Baldwin.**—Mid-winter; red with green towards blossom end; fruit often disfigured by fleshy stem; apple flat; only a fair packer; good shipper; good general-purpose apple; best after December 15th. Tree upright; strong wood; slow coming into bearing; hardy.

**Ben Davis.**—Late winter; red striped; "the apple with the sawdust flavor"; easy packer; poor commercial apple; tree a good bearer.

**Gravenstein.**—Early fall; red striped; apple flat; fine grain; has made a name for itself; good shipper; easy packer; self-sterile; at its best in September. Tree spreading.

**Spy.**—Early winter; green, with slight coloring of red; irregular surface; rather large apple; spicy flavor; flesh very firm; long keeper; well liked; good table; good cooker; packs well in small sizes, large sizes hard; self-sterile; slow coming into bearing, but materially hastened by summer pruning from the year of planting and by planting with other varieties. Tree strong-growing, very upright.

**Wagner.**—Early winter; an apple of finest quality; deep red; fine grain and flesh; delicious flavor; apple flat; medium to poor packer; at its best December and January. Tree very early bearer; spreading; shallow rooting which makes it rather risky in places subject to winter-killing of roots.

**Winter Banana.**—Early winter; large; rich delicate tints of cream and shell-pink; its coloring makes it a splendid retail apple; fair packer, but very easily bruised, requires careful handling; at its best in early December and January. Tree hardy, early bearer.

**Yellow Newtown Pippin.**—Mid-winter; good quality; greenish rather than yellow; slightly long; good packer; good shipper; at its best December 25th and on; long keeper.

**Winesap.**—Mid-winter; good keeper; good commercial apple; light-red-striped; apple of dessert size; slightly flat; fair packer; at its best December 25th. Tree constant bearer.

**Talman Sweet.**—Winter apple; November to January its best time, but an excellent keeper; firm, very sweet; a splendid baking apple and a delicious dessert; pointed; deep yellow; good packer; well known. Tree fairly hardy, upright.

**Hubbardston's Nonsuch.**—Mid-winter; at its best in late January; long yellow with red towards stem end; whole of the apple shows tendency toward red striping; good keeper; hard flesh; good packer. Tree strong grower; upright; early bearing.

**Greening.**—Mid-winter; at its best in December and January; splendid keeper; well known; color against it for retail selling; good hotel or restaurant.

**Cox's Orange Pippin.**—Mid-winter; at its best December 25th; round; fleshy stem; rich yellow with light red on many specimens; an apple of medium size; fair packer; good shipper, much in favor on English markets. Tree sturdy grower, not a wide spreader.

**Grimes Golden.**—Early winter; deep yellow;

oblong; splendid table apple; good packer; easily bruised, doesn't stand up very well in shipping, and yellow skin shows up bruises; much liked as a dessert apple. Tree hardy; sturdy grower; early bearing.

**Salina Pippin.**—Early fall; sub-acid, yellow striped with red; good packer; at its best in September; good shipper. Tree strong wood; early, constant, heavy bearer.

**Duchess.**—Early fall; yellow with red striping; very tart; good packer in dessert size; hard packer in large sizes; since it is an early fall apple it, like others of its class, will not keep long, and does not stand up very long in shipment. Tree spreading; good bearer; hardy.

**Wealthy.**—Early fall; bright red; strong seller; well known; splendid spicy flavor. Tree constant bearer; strong wood; slightly spreading; very hardy.

It is not an easy matter to decide upon the varieties to plant, but a few groups and the reasons for setting them are given as suggestions. (Fall apples in some places are a poor investment.)

#### SALINA PIPPIN, MCINTOSH RED, GANO.

The Salina is an apple picked early in the season, and, unlike most fall apples, does not need to be hurried with. Planted with these other varieties a good space of time elapses between picking it and McIntosh Red. McIntosh Red, harvesting as it does at a season not too early, does not clash with fall work. Ganos are not injured by early frosts, and, as a commercial apple, are a splendid investment. They can be held over till spring for the high prices, and are a splendid retail apple. These three make a good combination where an orchard is kept along with mixed farming.

#### DUCHESS, MCINTOSH RED, SPY.

These, like the first group, harvest in about the same order, and are well known, good selling stock.

#### GRAVENSTEIN, COX'S ORANGE PIPPIN, BALDWIN.

These harvest in good order, and include a yellow and red apple, also one variety that can be held for spring prices in case of a winter glut.

**SALINA PIPPIN, GRIMES GOLDEN, WINESAP.** Comprise a fall apple, a yellow and a red winter apple of fine commercial value.

#### DUCHESS, JONATHAN, TALMAN SWEET.

Three strong selling favorites whose harvesting doesn't conflict.

#### MCINTOSH RED, COX'S ORANGE PIPPIN, WAGENER.

Three of the finest apples grown, all home favorites with one yellow apple high in favor on the English markets.

#### MCINTOSH RED, JONATHAN, GANO.

A strong grouping, convenient harvesting, splendid sellers, with one to hold till spring in case of a winter glut. All highly colored, and it's the red apple the retailer wants.

In any of the above groups where a fall apple appears such as Duchess or Salina, the Wealthy could be substituted.

It is a good policy to have an apple you can hold till spring in case of a glut. Red apples are and always will be the best sellers, they show up in a fruit store window. It's bad policy to have all your apples ready to harvest at the same time. You may not always be able to get all the help you need. It is not wise to have many varieties; it is easier to sell a large quantity of a few varieties than a few of many varieties.

British Columbia. WALTER M. WRIGHT.

## POULTRY.

Eggs are graded in the United States as follows:

Fresh or newly-laid eggs are graded according to size, color, shape, strength of shell and cleanliness.

"Firsts" are full-size, weighing two ounces or more, strong-shelled, uniformly white or brown, of regular shape and clean.

"Seconds" are small, dirty, stained or smeared eggs, irregular in shape, thin-shelled, or extra large that so they may be broken in marketing.

"Checks" are cracked, dented and leaking. These damage others in marketing and soon spoil.

Stale eggs are shrunken, heated, moldy flavored, and watery from being too long in the nests, of those that have been washed and stored in warm, damp, poorly-ventilated places.

Rotten eggs are those partially hatched or those with dead germs. They may be old nest eggs, or from newly-found full nests on the ground.

## More Poultry Pointers.

Editor "The Farmer's Advocate":

All over Ontario and Quebec open-fronted or cotton-front hen-houses are taking the place of the old-style no-ventilation kind of building of former years. Except as a protection against foxes and other vermin, poultry-keepers are reminded that there is absolutely no necessity to close the doors and windows of poultry houses during the summer and autumn, and even now, if the house can be faced south or southeast, the windows should be open in all seasons. There is no doubt that want of ventilation is the cause of much of the low vitality in flocks, and it is quite time that the attention of the poultry-loving public was directed to the great need for fresh-air treatment. Houses which ensure a continual supply of oxygenated air are a very great boon to egg producers and will ensure healthy conditions. If outbreaks of roup in its many stages were traced back, the cause would generally be found in poorly ventilated houses, or the need of fresh air during the long nights through which the poultry are on the roost.

Where birds become overheated, as is often the case in a poorly ventilated building in the early spring months, they are in a constant state of irritation and pluck each others neck and head-feathers out. This can be avoided by remedying the cause and giving them some cooling medicine and providing them with plenty of occupation. Idle birds very quickly get into mischief, and when they have acquired bad habits, it is sometimes difficult to break them off. I have heard of cases where they pick the male birds' combs almost to pieces. In cases of this kind the male bird should be removed from the pen and treated by bathing in water, in which a few grains of permanganate of potash have been added; then, after being wiped perfectly dry, given a liberal application of carbolated vaseline. To those who are just entering the poultry business, let me sound a note of warning. When commencing with a breed of pure-bred poultry, there is often far too great a tendency with buyers to think that they can get all they require for very low prices—often little, if anything, more than killing prices. This is where the beginner fails. It may be that the birds are only required for utility purposes, and it must be borne in mind that if they are good and suitable breeders, they have been selected from the previous year's flock and kept round for the purpose, when their less perfect brothers and sisters have long ago been killed for the table, and that they are being sold just as they are coming in profit. Hence, if genuine, the breeder cannot afford to sell for a mere trifle over what they would have fetched months previously for killing. An extra outlay invested at the outset, to commence with a really good breeding pen, is amply repaid in the end. The sale of numbers of so-called cheap birds happens most frequently with a variety which, at the present time, is particularly popular as a utility breed. There will always be found unscrupulous people ready to catch the unwary and the parsimonious, but, after all, you cannot altogether blame the seller if buyers will insist on buying birds at such paltry prices and spending what little money they do invest so foolishly.

In a recent number of one of our poultry journals I noticed that rice was advocated as an excellent feed for fowl. Care must be exercised in feeding rice, as in an uncooked state it is of very little service. It is very indigestible, indeed, a large proportion passing straight through the system without the bird obtaining any nutriment therefrom. The only use of raw rice is in a dry chicken mixture, but in this case only one-sixteenth part is used. For feeding in this manner, cooked rice should be used. Cooked rice, however, is a very valuable food, indeed, for all classes of poultry; but careful preparation is necessary, otherwise it is a dangerous food. Every particle must be swollen out thoroughly, for if this is not the case, it swells after the bird has eaten it, often with serious results. To one part of chicken rice add three parts of water, and allow the two to simmer over a fire till all the water is absorbed. When being used for fattening ducklings, to a quart of rice a pound of tallow should be added.

Carleton Co., Ont.

N.

## Late-Hatched Turkeys Delicate.

Have a flock of late turkeys, most of them have swelled heads around the eyes and nose, if swelling is pierced with a knife a thick jelly-like water runs out and swelling goes down. What is the cause and treatment.

I have several times cautioned turkey rearers, through the columns of "The Farmer's Advocate," of the danger of raising late-hatched turkeys. They do not get the strong constitution necessary to combat the rigorous blasts of winter, and the numerous disease germs that are, more or less, to be found at all times. I would, therefore, say the cause of those swelled

heads was delicate constitutions, and the treatment killing and burying or burning every one that shows the slightest swelling.

This takes courage to carry out, but if you will take the advice of one who has been "through the mill" you will find it will pay well in the end.

Simcoe Co., Ont.

W. J. BELL.

## APIARY.

### Shall Farmers Keep Bees?

Editor "The Farmer's Advocate":

The above question has engaged the readers of "The Farmer's Advocate" to some extent, and, as I have taken a stand upon the matter, it may be well to make some explanation as some remarks must of necessity be made in brief.

We know what the general result has been in the past when beekeeping has been attempted by busy farmers, and the question now is, can this be avoided in the future? Have conditions become more favorable?

The farmer has not more and cheaper help—he has less. He has also found out that better methods, more thorough methods, are required, and, as we all pretty well know, although improved machinery has done much, yet, for the summer season at least, he has his hands full. In Morley Pettit's article, page 264, he puts beekeeping, I am sure, in the best possible light. Let us make an analysis. Taking the reports of 49 experimenters, with 1506 colonies, Mr. Pettit brings a neat dividend of 58 per cent. on his capital invested. Were it not that I have seen a good deal of profit figuring on that basis by beekeepers, I should be more surprised, but in Mr. Pettit's case, in view of his position as Provincial Apiarist and the right we have to expect carefully weighed and accurate statements, I am doubly surprised. If gross receipts were net profits—returns—a great many more men would be making money, but wages and expenses have to be deducted, and such figuring has brought many a man to fail. Mr. Pettit's report from undoubtedly the best beekeepers in the Province—those who reported to the honey committee, shows the following average yield: For 1910, 52 lbs. per colony; 1911, 46 lbs. per colony; and 1912, 34 lbs. per colony.

It was my privilege to come in contact with the special class in beekeeping at the Ontario Agricultural College in January. E. L. Colpitts, Petitediac, N.B., whom I have met several times in the maritime provinces when I was down there for the Dominion Government as lecturer in beekeeping, asked me what my yield had been for the last year, and when I told him, he said (letting me down lightly), "You had half a crop." "Oh! no," I said, "I had a good crop." He then said, "Why, I am told that in Ontario beekeepers get about 200 lbs. per colony." I then referred him to the reports of the best beekeepers—the same report which has been given to us in Mr. Pettit's article. Another young man in that class, in conversation with me, stated he had a poor year. I asked him what his yield per colony was. He replied, 143 lbs. I then said that was an excellent year, but he persisted that it was not, when I told him "You mean the outlook was poor, but it turned out excellent."

Let the people judge as to this matter: Is beekeeping being correctly—honestly—put before the people or not? I say it is not. From a Christian standpoint—from the standpoint of good honest action—from the standpoint of justice and wisdom—it is not.

Some may have seen statements within the last year made in a Toronto daily along such lines, and worse. I challenge the truth of them, and will give \$200 towards the Toronto Children's Hospital if they are shown to be correct.

There have been addresses given, statements made in the agricultural press, as to returns from small holdings, which, to say the least, have surprised the neighbors of these men. Bring the books, quote from them when you come to make these statements at the meetings. Many do not keep books and overestimate what they are doing quite unintentionally.

Foul brood is bad; it will be worse, no doubt, unless the Province does more than it has done. A farmer seven-eighths of a mile from me, who thought there was lots of money in bees, found his apiary rotten with foul brood. He, I was told from a dozen sources, shook them and put the brood in a room in the house, and as many told me that there was a cluster of bees like a swarm (could be seen by anyone passing along the road) on the screen door for a week—I think, weeks. It need surprise no one that I found several cases of the disease in this apiary. I understand it is the policy of the Department of Agriculture not to return to the diseased apiary to see that the instructions for treatment have been honestly and efficiently carried out.

There is a good deal more might be said. When a farmer's son or daughter, or any member of the family, specialize in beekeeping, he or she become a beekeeper, and then has ideal conditions for success. There have been many men with little or no experience write and want to buy 50—yes, 100—colonies of bees from me. I always—yes, always—I do not hesitate to make the public statement—advise against it, although their money is as good to me as anyone else's.

In closing, let me say that I do not think it a good policy to send inexperienced men, as foul brood inspectors, who have little or more experience than what can be obtained from a course, largely winter, in beekeeping. I find such men do not realize how easily robbing is started up, and they should not learn at the expense of the country. I speak from the experience of having had dozens of young men with me to learn beekeeping. Who would send such a person to work alone in a diseased apiary? Let them speak. I would not, and if there is one point which is emphasized more than another in my instruction, it is that in connection with robbing. Some one may say, "I want to be a foul brood inspector." It has already been said, "There would not be much of that work done if I had to do it."

New York State has four men engaged the year round in open weather to inspect bees; in winter, to work in connection with the Pure Food Law. They have the accumulated experience of years and are thorough. Green material, however willing, conscientious and honest, will not do. I have nothing to say against college training. I did not occupy a mean place as a student at the Ontario Agricultural College myself, but practical experience will take the pre-eminence over college training if the two have to be separated. More, more or less, education, minds, etc., have to mature at the public expense when a young man is at once elevated from a position as a student to a teacher. This is true of arts as well as agriculture. Of the public school, as well as university, this is one great wrong done to public school pupils, especially in the country, to-day, and it will not be refused until enough is paid to enable a capable man (for he can marry and keep on) can get enough to make it a life's occupation—until, like Germany, the school will have connected therewith a home, free of charge, for the teacher, where he can have a garden, some poultry, perhaps, even a cow; yes, and some bees.

Let us cease to misrepresent beekeeping by quoting gross returns for net profits, by over-estimating, and then explain away statistics by saying part or even all the Province yielded a poor crop—it is the crop. Beekeeping is a good business for one understanding it, and more, devoting the necessary time. I have no doubt as to Mr. Pettit's practical knowledge of the industry, but let us judge matters soberly and weigh well what is said. The industry will stand it; if it cannot, let it go to the wall.

Brant Co., Ont.

R. F. HOLTERMANN.

## THE FARM BULLETIN.

### Cement Duties and Prices.

From correspondence tabled at Ottawa it appears that the general manager of the Canada Cement Company had protested to the Minister of Finance against a continued or renewed remission of the duty on cement, arguing that: "The present policy of the Canada Cement Company was formed and adopted with the belief that the policy of the government was to give the cement industry in Canada adequate protection. If the cement industry is not to be protected, it will be placed in a dangerous position, and, if it can exist, will only be able to do so by changing its policy, and on every occasion, and in every market obtaining the highest possible price for its produce, in order that, should business again be depressed in the United States, we in Canada will be in a position (through having accumulated a reserve) to meet the American slaughter prices by operating our mills at cost, or less than cost, while such American prices are in effect.

"Last year and this spring American cement manufacturers were selling cement for less than its actual cost. This fall the cement business in the United States has a merited revival, and prices have advanced from 50 to 100 per cent. in different localities.

"In Canada the price has not advanced. The price to-day, delivered at Fort William, exclusive of sacks, is \$1.25 per barrel. The price in Duluth, exclusive of sacks, is \$1.40 per barrel, so that, should we be forced to change our policy, we would advance our price practically all over the country from 30 to 50 cents per barrel."

### The Grange and its Platform.

Editor "The Farmer's Advocate":

An editorial paragraph in your issue of February 6th makes the statement that the criticism of the Grange is largely destructive instead of constructive. I fail to see where the facts will bear out this statement. Suppose we take your own report of our convention, in your issue of the 30th ult., and consider the items in detail.

#### GENERAL RESOLUTIONS.

1.—Automobile regulation: Tax should be graded according to horse power. Is there nothing constructive here?

2.—The naval question: We are opposed to both policies already submitted to Parliament, a position which is only justly described as destructive when no other policy is conceivable or practicable. But Canada's traditional policy has been very satisfactory, and I do not see how anyone who desires that policy to continue and is therefore opposed to any plan calculated to change that policy should be justly termed a mere kicker. The demand for a referendum is surely constructive enough.

3.—Parcels post: A request to the Post Office Department to investigate the workings of the parcels post system elsewhere, with a view to its adoption here. Is this merely destructive?

4 and 7.—The tariff and direct taxation: We are opposed to a protective tariff, and recommend the substitution of a direct tax on land values for the indirect tariff tax as a source of revenue. Opposition to the tariff, as at present existing, is coupled with a very distinct recommendation as to how it could be done away with without interfering with the supplying of the public revenue. Is there nothing constructive here?

5.—Opposition to the policy of spending money out of the federal treasury for building transcontinental highways for automobile traffic; but no opposition to good roads. Is this merely destructive?

6.—Direct legislation: We recommend the modification of our constitutional system, so as to permit the initiative and referendum—a resolution purely constructive.

8.—British preference: We favor an extension of the British preference, so that, in the course of a few years, there will be complete free trade with the mother country—constructive again.

9.—Reciprocity with the United States: We do not think the question is dead, and hope for a referendum on it. Is this destructive criticism?

10.—Revision of Bank Act: We ask for a commission of investigation—constructive or destructive?

11.—Tax reform: We favor local option in taxation; give municipalities the right to tax improvements less than land values if they like. Is this destructive?

#### RESOLUTIONS DEALING WITH EDUCATION.

1.—Favoring continuation class work, consolidation of rural schools, and the teaching of elementary agriculture—destructive?

2.—Criticism of rigid bureaucratic control of schools, coupled with suggestion to give teachers greater liberty, and attach less importance to examinations. Is this destructive?

3.—Suggestion as to the teaching of "civics" in schools with suggested methods—purely constructive.

4.—Warning as to dangers attending the establishment of military drill in our schools—destructive if you like.

5.—Commendation of working of district representatives, and suggestion that subordinate Granges co-operate with them in agricultural education—purely constructive.

Now, the above resolutions, taken from your own report, pretty well cover the ground. How they can be interpreted, as your editorial paragraph interprets them, is certainly perplexing. Perhaps your editorial writer based his remarks upon the tone of some of the speeches rather than upon the formal pronouncements of the convention. However, that may be, I submit that your own report of our convention, which is, in my judgment, a very fair one, does not justify the criticisms which you have made.

Brant Co., Ont.

W. C. GOOD.

[Note.—The last paragraph of Mr. Good's letter indicates that he himself divines the principal ground for our criticism, which, by the way, was tendered in no unfriendly spirit. The Grange's platform of resolutions is largely constructive, but this characterization hardly applies to the tone of some of the speeches offered in discussion. These often verge toward an attitude of sweeping denunciation not always untinged with acrimony. This tendency may be partly borne of an impatience at the slow progress of public opinion toward certain radical propositions for which the Grange stands, but we believe the leaders of the Grange will agree that more is to be accomplished by patient self-restraining effort to advance public opinion by degrees toward its ideals.—Editor.]

### P. E. Island's Agricultural Short Course.

This first Short Course in Agriculture which closed on February the seventh, after a two weeks' session held in Charlottetown, was a most pronounced success.

There were in attendance in all for the full course about five hundred students, most of whom were farmers' sons of the age when they are about to begin life on their own account. The remainder were drawn from those who are and have been for years actively engaged in tilling the soil, quite a few of whom have passed the three-score and ten mark. Old and young, all were eager in the pursuit of agricultural lore that would enable them to get in line with the latest teachings of science and the most up-to-date practice in their calling.

The grand success of the Short Course was due in the first instance to its being thoroughly organized by the Commissioner of Agriculture, Hon. Murdock McKinnon; Secretary Ross, and the energetic and capable staff who had everything so arranged before the start that the different programmes were all carried out without a hitch.

Classes in breeding and management, of both heavy and light horses, were in charge of Prof. Reid, of our local Live Stock Department; C. M. McRae, of the Dominion Department, and R. Robertson, Superintendent of the Experimental Farm at Nappan. There were excellent specimens of both the heavy and light breeds. These, after being scored by the students, were gone over and placed by the experts, and the good qualities, as well as the defects, pointed out.

In the beef cattle classes, E. S. Archibald, of Ottawa, was the principal lecturer. Excellent specimens of finished beeves were before this class supplied by the P.E.I. Experimental Farm and Charlottetown butchers. This was a very interesting class to the students, and valuable information was gained by them as to the type of cattle that produced best quality of beef most cheaply.

In the dairy cattle classes Prof. Reid and E. S. Archibald were the instructors, and some of the best dairy cows in the Province were illustrating the best dairy type. They were drawn from the herds of McRae and Son, Simmons Bros. Roper Bros. and Wm. Clark. Great interest was taken in this class, as dairying is a business that interests almost every farmer here.

The sheep classes were conducted by Mr. Telfer. Sheep were judged by the students, and exhibitions of shearing, dipping, and the proper rolling up of the fleeces were given.

Hogs were also in evidence, and lessons on the best bacon type were given by Prof. Reid.

T. A. Benson had large classes in poultry, and his teaching was illustrated by incubators and models of poultry houses, also by studying the development of the germ in the egg. These, together with the drawings of model types of fowl, as well as the worst types, were a great education to the students in his class. Exhibitions in killing and plucking were also given.

The classes in cereals, grasses, clovers, and alfalfa were in charge of G. A. Clark, Superintendent of Experimental Farm, Charlottetown; Mr. Moore, Maritime Representative of the Seed Branch, and Garnet LeLacheur. These were very large classes, and great interest was manifested by the students in the study of the many different samples of grain and grass seeds, as they judged them as to purity, type, weight of hull, etc.

The fruit classes were conducted by Mr. Williams, head of our Horticultural Department; Mr. Carey, fruit packer and demonstrator, and Prof. Blair, of Kentville Experimental Fruit Station. Most of these classes were optional, and attention was given them principally by those who were engaged in fruit growing.

Instruction in the care of milk, milk testing, and the manufacture of butter and cheese was given by Harvey Mitchell and Mr. Cook, of the Dominion Dairy Department.

The most of the demonstrations were given

in the large Agricultural Building, formerly a skating rink, which has been lately acquired by the Agricultural Department and fitted up for this purpose, as well as for stock and seed shows.

The lectures and mass meetings at night were held in the spacious Assembly Hall in the Prince of Wales College.

The citizens were in hearty sympathy with the Agricultural School, and did all in their power to make matters pleasant for the students while in the city.

This was said to be the largest Short Course ever held in any province, although it was P. E. Island's first attempt, and, with larger appropriations of agricultural funds in sight, we look for double the number of students another year. This, we think, promises the dawn of a new era in up-to-date agriculture here.

W. S.

### Strength Comes from Surmounting Obstacles.

Editor "The Farmer's Advocate":

I mind o' an auld uncle o' mine, wha was spendin' his last years in keepin on friendly terms wi' the kitchen stove, sayin' tae me, "Sandy lad, gie me a match an' I'll be haein' a smoke noo while-I hae a wee bit time tae spare" So I'll be sayin' the same tae you Mr. Editor in ither words. Noo that I hae a wee bit time I'm gaein' tae write ye anither letter. As a matter o' fact, I'm no muckle busier than my uncle was when he was lettin' on how industrious he was, an' I may as weel be talkin' as daein' naething. Gin a chap as auld as I am keeps the kitchen stove gaein' he has a richt tae dae some preachin' between whiles, ye maun admit.

It's an unco guid job tae gie ye a chance tae think, this splittin' wood tae keep the auld wumman warm. There's naethin' tae interrupt ye, unless maybe a piece o' a young saw-log draps on yer toe. Of course, this will-na' stop ye thinkin', but it mak's yer thochts rin in anither channel for a wee spell. An' it may even help ye tae pit these thochts intae words. But, jokin' aside, the wood pile is no a bad place tae review yer past life an' tae tak' up the study o' philosophy in a general way, drawin' conclusions frae this or that, as it seems reasonable tae ye. An' it's wunnerfu' hoo ye can sometimes draw a lesson frae a maist unlikely subject. I was workin' awa' on my contract the ither day when I cam' tae a block o' elm that I didna' like the looks o' very weel. I tried it aince or twice, an' I found it was just as tough as it looked. I was minded for a minute tae pit it awa' for a meat-block or somethin' o' the kind, an' then I stopped for a bit an' I says tae mysel', "Sandy, ye maun be gettin' auld a'richt, when ye canna stan' up tae a thing like yon ony mair." Sae I stood it up on end an' went at it. It took me quite a wee while, an' I broke one o' ma braces, an' I got a blister between twa o' ma fingers that I'm feelin' richt noo, but I split that block. An' here's where the moral o' the story comes in. I got mair satisfaction oot o' the fact that I had done for that auld elm stick than I did frae splittin' a' the straight-grained wood in the pile. I jist sat doon for a spell tae tak' a guid look at the results o' ma work an' tae wipe the sweat frae ma face. (I'm unco' apt tae sweat when I get warm.)

"Noo," says I tae mysel', "hoo is it that a mon feels sae muckle mair satisfied when he has got over a deeficulty than he wad gin he hadna' rin intae it at a'?" "It must be," says I, "because the Lord intended us tae gae through hardship frae the time we come on the scene here until we hae said our little piece an' made oor last bow before the drap o' the curtain. An' this feelin' o' sateesfaction is the encouragement we get tae tackle the next thing o' the kind we run up against." That's it wi'oot a doot. "Come tae think o' it, what uad ony o' us be," thinks I, "gin we were in a posetion where we didna' hae tae scratch for a leevin'?" I mind o' ane chap o' ma acquaintance wha was mair than inclined tae tak' things easy when he was a young lad, an' I didna' doot but that his wife wad be takin' in washin' some day, gin he ever got roosed up enuch tae get one. But it didna' turn out as I expectit. The boy's father died an'

left him tae sink or swim wi' the auld farm. An' he didna' sink. He took hault, an' frae ane deeficulty tae anither he went on till he got the auld place oot o' debt an' a wee bit tae spare. An' anither thing he did that he wasna' aware o' at the time—he made a man o' himsel', an' I dinna' ken o' onything that did it but the hard knocks he got. He was often doon, but he wouldna' stay doon, an' the gettin' up seemed tae develop his muscles, baith moral an' physical.

This reminds me o' the time I was a wee gaffer at schule. There was ane o' the boys wha was a hantel bigger nor the rest o' us, an' he wad aye be tryin' tae get us scrappin' wi' ane anither. He wad pit twa o' the wee laddies at ane o' the older ones, or maybe he wad divide the crowd an' mak' it a free-for-all fight. Talk about hardship! We got it there. Some o' the sma' chaps wuld be cryin' some at first, but they quit that before lang, for they didna' like bein' called a "sheep," an' they wad fight tae a finish. I mind o' bein' doon, one time, wi' ma heid in the snaw till I had sic a headache that I got afeard that I was gaein' tae pass in ma checks then an' there. But there was no use o' complainin', for it was a case o' "no quarter," an' the only salvation was tae keep frae gettin' under the other chap. We a' came through it alive, however, an', wi' a' due respects tae oor teachers, I'm gaein' tae say that I believe we got mair benefit frae oor trainin' outside that schule than we did frae what we got in it. There's name o' us will forget the outside lessons onyway, for they were weel rubbed in. An' as we a' hae kept oot o' jail, so far, and are scratchin' for a livin', one way or anither, I think ye can see that these painfu' experiences did not dae us ony harm that ye wad notice, tae say the least. Noo, I'm no' sayin' that ye should try an' get intae trouble for the sake o' the discipline ye'll be gettin' oot o' it. Ye might get that far in that ye wadna' be able tae get back. The reformed drunkard has developed a guid stiff backbone during the process o' reformation, but he had a mighty close shave. The idea is tae tak' the trials that come tae us in the day's work as part o' the business, an' wi' the assurance that they will dae us guid instead o' harm gin we stand up under them. I'm thinkin' that man wisna' pit on this auld airth jist to hae a guid time an' keep oor natural products frae gein' tae waste. An' gin I'm richt it's up tae us tae quit lookin' for soft spots tae sit doon on, an' tae stick tae oor jab as long as there is ony hardship left in it. An' those of us wha are on the farm will ken that we will never need tae leave on that account. There's wark an' care enuch on the average farm tae mak' a mon oot o' the warst specimen o' humanity on tap o' the ground, providin' he has the use o' his hands an' his heid. It's the best reformatory I ken about, an' mony anither mon can testify tae the same effect. It pits yer salvation intae yer ain hands, sink or swim, an' there's na reason why ye should go under. I mind ane time o' seein' a wee chicken that was haein' a hard time tae get oot o' the shell. I thoct I wad dae him a guid turn an' save him a lot o' wark an' worry by givin' him a hand tae get oot o' the close quarters that he had got intae. Weel, ye may belive me or no', but that chicken never got tae the stage where he was self-supportin'. He had been helped oot o' the shell, an' he never got over it.

SANDY FRASER.

"The Christian Guardian," commenting upon a speech delivered by Dr. Frank W. Gunsaulus, of Chicago, puts forth this sentence: "The rural preacher is preaching to the intellectual aristocracy of the future." Dr. Gunsaulus said he himself was a farmer's boy, and that every one of Chicago's twelve greatest preachers came from the farm, while 86 of its 100 leading physicians, 81 of its 100 leading lawyers, and 73 of its 100 best engineers, all hailed from the farm.

It was brought out at the recent meeting of the General Stock Breeders' Association of the Province of Quebec that Quebec has as many breeders of pure-bred sheep as all the other Provinces in the Dominion combined, and Quebec also holds second place in the number of breeders of pure-bred swine, and first place in number of breeders of pure-bred Ayrshire cattle.

The town of Orillia, in Simcoe County, Ont., recently sent a deputation to wait on the Provincial Minister of Agriculture, asking for the grant to commence a winter live-stock show in the town on similar lines to the Guelph Winter Fair.



**Our Fox Hunt.**

By Peter McArthur.

We have had a fox-hunt after all. You may remember that when telling of the fox in the neighborhood, I mourned my lack of enthusiasm, and glanced back with regret to the days when I would have pursued it to the death. When in that philosophical mood I made the usual mistake of overlooking one important factor of the problem. It did not occur to me that the enthusiasm and faith that I had lost, might still be burning in the heart of youth. Although I had no intention of hunting the fox, I had promptings of the old hunting spirit, and almost every time I crossed a track in the woods I would follow it as long as it did not wander too far from the direction in which I was going. One of these little tracking expeditions led me to a hollow oak stump, which the fox evidently used for a den from time to time. I looked into the hollow to see if Mr. Fox was at home, but he was not. But I found evidence of his recent occupancy in the half-eaten body of a rabbit. This dispelled the last lingering doubt that the tracks were those of a fox, and when I told about my find the fat was in the fire. The boys were at once at a fever heat, and I had to promise that, as the next day would be Saturday, we would go after the fox the first thing in the morning. After that was settled they began to dispute about what they would buy with the price of the skin. As I think it over now I know I should have improved the occasion by telling them the story of the man who sold the lion's skin while the lion was still wearing it, and was eaten by the lion when he came to get it, but it did not occur to me. Somehow I never think of improving lectures at the proper time.

In the morning I was surprised to have the alarm clock go off while I was still sound asleep. I usually wake up a few minutes before it is time to get up, and simply use the alarm clock to confirm my suspicions. It is easier to have it tinkle a little than to get up and light a match to see the time. Though I felt in my bones that there was something wrong, I got up and found that the alarm clock had been tampered with. In their eagerness to get a proper start the boys had set it half an hour earlier. Being up I decided to make no protest, but to get even in another way. It was only necessary to whisper "fox" to the boys to get them out of bed and into their clothes, with a haste that would have been absolutely impossible on a school morning. Before starting we had to do the "chores," and I got even about the alarm clock by slipping in a few extra chores that had been hanging over my head for a couple of weeks, and they were all done without complaint. This taught me a little lesson about getting things done that I shall probably make use of later on. When there is a bunch of work that I want to get finished quickly and uncomplainingly, I shall organize a whale-spearing expedition to the government drain, or a wild-cat hunt among the little trees that we planted in the woods last spring. As we live we learn, and it is sometimes a great help to learn a few of the things we have forgotten about boy nature.

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When the dawn became bright enough for us to be able to see the sights on the rife, we started across the fields to the woods. There were sparrows at the stable, but we did not bother with them. We were after big game, and sparrows did not interest us.

Passing through a patch of withered woods we saw a lot of rabbit tracks and that made us pause, for rabbits are not to be despised, especially when you haven't managed to get one all season. We spent a few minutes in trying to disentangle the tracks but were finally forced to the conclusion that the rabbits had all gone home to sleep. There was a moment of excitement when we saw a red squirrel, but as it was the only one that had been seen in the neighborhood for over a year, I would not allow it to be molested. Anyway, he was a pretty wise red squirrel, for he got himself under cover within about ten seconds, and in that way settled the argument in my favor. Although red squirrels are usually impudent and saucy, this one was not taking any chances with human beings who were out so early carrying a gun. After leaving the red squirrel, we plodded straight to the woods where we found the little covering of snow full of tracks of many kinds. There were places where the black squirrels had been hunting for beech-nuts so industriously that it looked as if a drove of pigs had been rooting around. Over head in the trees a flock of blue jays were scolding and squaking, and as I could not remember whether blue jays are of the beneficial birds that should be protected we gave them the benefit of the doubt, and did not shoot at them, although they frequently offered tempting targets. A big hawk sailed out of the top of a tree before we were within range, and, anyway, we would not

have shot at him, for hawks now have an excellent reputation on account of the work they do in killing mice. We had not gone far before we found the tracks of the fox, and then the real hunt began. It might have been much more exciting had it not been for a slight thaw on a previous afternoon which enabled us to see that all the fox tracks were, at least, a day old. Still they were fox tracks, and we scouted about hunting for new ones, but without success. Beside a fence near a briar patch we found a rabbits' playground. There was a little space about a rod in diameter where the snow was beaten hard by their little feet. We remembered that in one of his nature stories Charles G. D. Roberts tells how the rabbits come to such places on moonlight nights, and jump around and slap the snow with their flat hind feet in the progress of some strange games that are popular with rabbits. Only a couple of times before have I come across playgrounds of this kind. They seem to be about as rare as the dancing floors of the elephants. But we were after the fox, and did not stay to study the exhibition. As we were unable to find fresh tracks I led the way to the hollow stump referred to above, and we held an inquest on the remains of the rabbit. The work was unquestionably that of a fox, but where was he? In feverish haste we crossed and recrossed the little patch of woods, investigating every stump and hollow log that might give shelter to a fox. Although there were tracks everywhere they did not seem to lead anywhere. At one log we found skunk tracks, but after a careful consultation decided not to visit the little housekeepers. We would just make a purely formal call, and not try to establish either friendly or unfriendly relations. None of us felt inclined to take the risk of being forced to live as a hermit—the usual fate of an inexperienced hunter who tries conclusions with a specimen of "Mephitica," sub-family "Mustelidae." We called him his scientific name and let it go at that.

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When we came to the tree where the chicken-killing hawks have had their nest for years, and persist in keeping it, although we shoot them up every summer, we were interested to find that the tree was dead, and that last summer the hawks had fooled us by building a new nest in the bushy top of a big tree near by. It seems that hawks never nest in a dead tree, possibly because it does not give them sufficient cover, or because there is a danger of the dead limbs breaking and letting the nest tumble to the ground. By this time we had been forced to the conclusion that we were not going to find the fox, and the comments of the blue jays were so insulting that it was hard to keep from taking a shot at them. On the way home we went to some brush heaps where a flock of quail had made its home all fall, and were disappointed not to see any tracks. There were plenty of fox tracks, however, and I am afraid that, although the visitor has spared the hen roosts, he has destroyed the quail. And then, and then—we headed straight for the house, and all burst through the door together asking in eager tones "Is dinner ready?" If we didn't find the fox we found a fox's appetite.

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Now there may be some people who will be so short-sighted as to think that we did not have a fox hunt at all. That is all wrong. One of the greatest truths of philosophy is that the reward is all in pursuit, and not in the achievement. Men who win success invariably tell us that it is as disappointing as the apples of Sodom, but the struggle for success is always stimulating and develops character. The fact that we did not get the fox greatly improved the philosophy value of our hunt. When they grow older I shall explain this to the boys, but at present they are too much disappointed at not getting the fox to appreciate the lesson.

**Bad Silage Killed Horses.**

That silage, though an excellent food for cattle, is not safe for horses, unless of strictly first-class quality, has been lately emphasized in the neighborhood of Ingersoll, Ont., by five cases diagnosed by Dr. W. F. Harrison, V.S., as cerebral meningitis. The first four proved fatal. The outcome of the fifth and any subsequent cases that may have developed since this information was obtained we are not in a position to state. The following important points are stated in correspondence to hand from Dr. Harrison.

"In all these cases silage had been fed more or less all winter.

"The silage was spoiled to some extent.

"The cases did not show any similarity to any other troubles I had met in horses this winter.

"One of the unfortunate gentlemen happened in my office yesterday and admitted his silage was in bad state, and blamed himself for not knowing better than to feed it to horses. I have made a very careful examination of food and water, and could not trace it to anything but

silage. One peculiar feature, which is not necessarily of any importance, is the fact that all the silos were new. I will give you a brief outline of the symptoms shown:

- "1.—Tucked-up appearance and weakness.
- "2.—Inability to swallow; would attempt to drink, but could not.
- "3.—Twitching of muscles.
- "4.—Temperature practically normal.
- "5.—Followed by paralysis, inability to stand, and while down would go through a series of automatic movements, as if trotting or running. Two of the cases reported died on the fourth day, while the other two lingered nearly a week. Every animal ranged between two and five years of age."

**The Reason Why.**

A writer in the O.A.C. Review signing himself J. E. L. discusses the rural problem very fittingly as follows:

The question of the depletion of the rural population, though repeatedly discussed, has yet a few phases not thoroughly explored.

I am cognizant of the fact that the multiplicity of middlemen in our ever-increasing division of labor provides for a great influx cityward. I admit that, as pointed out by Prof. Warren, of Cornell, there is a good chance of the agriculturist increasing his income by enlarging his estate and applying more labor-saving devices. Still the fact remains that in this Province, the question of the lack of farm labor has assumed serious proportions.

That thousands of acres in the Western Peninsula of Ontario, in the Counties of Bruce, Huron, Grey, Kent, Lambton and Middlesex, are seeded down to permanent pasture is not conducive to maximum returns in revenue, but it is what circumstances now necessitate. That weeds should be allowed the undisputed possession of one acre of this "Garden of Eden" is a circumstance that all must deplore, and a condition that all should seek to remedy with the enthusiasm with which we would empty our pockets to defend ourselves against an enemy that threatened us with the munitions of war.

We are not entirely justified, when we see an unproductive agricultural section, in assuming that these farmers do not understand their business. This may be the case; but ten to one the real trouble is, that under present conditions they are unable to procure the labor to enable them to accomplish what they know right well should be done. The real trouble is too many of the Ontario farmers have gone on strike, and the cause of the strike is the usual one, wages are insufficient.

We are told repeatedly by journalists, in altogether too infallible a tone, that "the prices of agricultural products are 'exorbitant' and that these prices are causing city people to 'suffer distress.'" If there are any city people "suffering distress" because of the "exorbitant" prices of farm products, let them go to the country and till some of the acres that have fallen among thieves and been stripped of their proper raiment and are now pleading eloquently for some good Samaritan to come and bind up their wounds and clothe them with profitable crops. Such a person may acquire land in Ontario to-day below its value. The owners of farm land in most sections of this Province have seen the value of everything else imaginable advance in price except their farms. The price of farm lands in Ontario has probably increased on the average about fifteen per cent. in the last ten years, while money has decreased in value about thirty per cent.

Western allurements is largely responsible for this condition. Ontario farmers to-day see those coming to our West in the eleventh hour receiving more than they who have so gallantly borne the burden and heat of the day. The Eastern pioneer is responsible for Western development. He labored for small reward. In the words of Carlyle, "For us was thy back so bent, for us were thy straight limbs and fingers so deformed; thou wert our Conscript on whom the lot fell, and fighting our battles wert so marred."

In most cases nothing remains but the opportunity of building a monument to his memory; but we can avoid following in his footsteps. The day when men stayed in business even when losing all but their pride is waning. The age is too materialistic for that. The rising generation in rural Ontario can not be expected to stay on the land at a financial loss even to preserve those splendid farms (monuments to the pioneers' industry and privation) from reverting to the pastoral stage.

Prices of farm products may seem to some minds exorbitant; but the price the producer receives must advance to insure more intensive methods and increased production in this Province. The price received by the producer might be materially increased without raising the retail price were a good system of marketing estab-

lished. However, this lies outside the premises of this article.

All are pleased with our Western development, even though it accounts to a certain extent, but not entirely, for the deserted farms of this Province. There are other features to be considered.

We are told by eminent financiers, influential in politics, that it is the farmer's own fault that he is unable to procure efficient and sufficient labor. He does not pay enough wages. He works his employees too long hours. He fails to provide them with suitable houses, etc. This may be true; but, would the farmer let his land lie idle if he could make a reasonable profit on an employee's labor at an advanced wage? The fact that farms are abandoned is proof positive that the business is not paying as it should.

As agriculturists are practically unrepresented in the Federal Parliament and exist on sufferance, it is fair to ask, have they received a square deal from that "target for all criticism" known as Government? Aside from the tariff, which, according to our best authorities, has been to a great extent settled for us by other countries, our Government has spoon-fed certain industries in this country.

Some years ago, when the question of the continuation of the steel bounties was discussed in the Commons, numerous petitions against their continuance were presented to the cabinet. These petitions were signed chiefly by farmers. The Finance Minister of that time arose in his place and said, "The farmers are not broad-minded enough to take a proper view of the situation." I am inclined to think the Finance Minister was right. It takes a "broad mind" to see some of what should be your revenue diverted into some one else's pocket, and preserve your entire equanimity throughout; but it can be done. Are we not taught by Marcus Aurelius that "No one can injure us but ourselves," and are we not emphatically told, that "He who steals our purse steals trash." But what about the receivers of these gifts—have they learned all that they know about a conscience from hearsay?

A bounty-fed manufacturing concern appointed a general manager at twenty-five thousand a year, while it was drawing one half million a year from the Government. What part of this salary did the business pay and what percentage did the taxpayer contribute?

This is, of course, past history. But past history is responsible for present-day conditions to a great extent. The condition of the agricultural industry of this Province is not causing those directly engaged in it any very serious alarm. It, however, does not seem to satisfy those eminent gentlemen aforementioned, who today deplore conditions they have helped to create.

If instead of destructive criticism only, they would seek to remove some of the grievances that the rural population are laboring under; if by making rural life more remunerative and more attractive they could persuade some of the farmers who have "gone on strike" to again resume operations, it would be the part of statesmanship.

In the meantime other industries move on apace. According to the address of the President of the Manufacturers' Association, there has been a new industry started every four days for the past ten years in this Dominion. This is splendid progress. It will be well if these industries grow quickly and soon pass the infant stage. For this fact is obvious that our aid to our infant industries has made other fields of endeavor more remunerative and more attractive than agriculture. This is largely the reason of the movement from the country to the city. Journalists continually complain at the high cost of living, while they deplore rural depopulation. This is equivalent to saying that though the agriculturist is doing too well, he is quitting the business. This ground is not well taken. The financial returns of the agriculturist must increase in order to stimulate production, and insure that not one acre shall cry out for labor, as thousands of acres are doing at the present time. Fortunately there are more important considerations than financial. Even in this age of the reign of filthy lucre, by which we are all figured up,

"How small of all that human hearts endure,  
That part which laws or kings can cause or cure!  
Still to ourselves in every place consigned,  
Our own felicity we make or find:  
With secret course, which no land storms annoy,  
Runs the smooth current of domestic joy."

### Care for the Ice.

Editor "The Farmer's Advocate":

For some years past practically every dairyman in Canada has been storing ice for summer use. Of late years it has become a necessity for the quick and safe cooling of milk, as every reputable creamery and condensery insists on the milk being cooled to at least 60 degrees within forty minutes after milking.

Every year the same cry of poor-keeping ice is heard on every side. The trouble is in a lack of care in storing. It is also possible a few do not really know the best method of packing and caring for it. To begin with, the ice should be cut in perfectly square cakes—not on a slant or level, but perfectly square. This makes for close packing, with no air holes or waste. While some advise cutting large cakes, it is more easily handled and least wasted when cut about twenty inches square.

Mostly any old building will do for an ice-house, as long as the air can sweep through over the top of the ice and create a circulation. Put about six or eight inches of sawdust in the bottom and pile the ice in layers, with a space of fifteen or twenty inches around the outside. All crevices and holes in the layers should be filled with chipped ice or snow, water being thrown on to make it solid and devoid of air.

After this is done, the whole should be covered with clean new pine sawdust. The outside especially should be packed in with the feet and stamping poles in order to keep all air from the ice, as it is the air which melts the ice—not the rain, as some people think.

Every few days the top and sides should be tramped to stop the formation of air pockets under the sawdust, which, unless attended to, will cause the loss of fully one-fifth of the harvest by the time warm weather comes. If these simple directions are followed, even the most inexperienced will find no difficulty in keeping ice until the next fall.

Elgin Co., Ont.

J. C. I.

### A Dangerous Instrument of Power.

Editor "The Farmer's Advocate":

As Mr. Black's letter on the Canadian banking system from a banker's point of view, published in "The Farmer's Advocate" of February 20th, appears so long after the discussion of the question in "The Farmer's Advocate," perhaps I may be allowed a word of comment. He points out some obvious defects in the American banking system. These defects are recognized in the United States and there is a vigorous movement to have them remedied, but there is no indication that the remedy will be the adoption of our branch-banking system or anything like it. They got rid of that system over fifty years ago, when it became intolerable. The branch-bank system works well in Great Britain where the branches are within easy reach of the home office, but the case is different on this continent where the branches may be thousands of miles away from the controlling head office. It is quite true that our system has saved us from panics, and that is a good thing. If our system did not have some good points, it could not be endured. But, I do not think that Mr. Black will find many to agree with him in his conclusion that the prosperity of Canada is due to the branch-bank system. It is due to many causes, chief of which is the opening up of the vast natural resources of a new country. As I have shown in earlier articles the chief work of the branch banks has been to place these resources at the mercy of a few enterprising men, by placing at their disposal the accumulated savings of the people for use in the formation of mergers and trusts.

When Mr. Black says that what has been heard of late about "Big Interests," and the "Money Trusts" is "due to a lack of knowledge of banks and banking generally," I am inclined to suggest that his point of view may be clouded by too intimate a knowledge of these matters. Because banking affairs are working out beautifully from a banker's point of view, there may be a tendency for bankers to think that everything else is working out well. The Monetary Times tells us that there are now over forty trusts or mergers operating in Canada, and students of business conditions have estimated that the flotation of these companies, made possible by the banks,—without risk to themselves, and, no doubt, with profit, has made it possible for the promoters of these "Big Interests" to unload on the people of Canada about \$600,000,000 of watered stock. This watered stock represents just that amount of robbery of the producers and consumers of the country. And it would not have been possible without the ease with which the banks gather through their branches the money needed to finance these promotions.

Mr. Black's argument that because the majority of the bank stock of the country is held by the people, the control of the bank rests with the people is quite correct in theory, but it does not work out so in practice. The widely scattered stockholders give proxies to the men in actual control of the banks, and I doubt if many of

them could name off-hand the men who are elected directors by their votes. While they continue to get fat dividends, they are quite satisfied with the management of the banks in which they hold stock. Only a very small percentage of them ever attend a meeting of shareholders, and even if they did they would find themselves at the mercy of the men who have the real control, unless something happened to cause a general uprising of the bank shareholders of the country. While on this point I may be permitted to call attention to Mr. Emmerson's recent speech in Parliament, in which he demonstrated that the control of all the important banks, transportation companies, and industrial corporations is in the hands of twenty men. They control them through interlocking directorates, and have the business of the country at their mercy. These men are naturally satisfied with conditions as they are, and one of them, whom I interviewed a couple of years ago, dismissed the complaints of small business men who had been hampered or driven out of business, by saying that these men were simply "soreheads." In the course of my investigations I have found many soreheads, and, as nearly as I could see, they were as worthy of extensive bank credit as the men who get it. Their trouble seemed to be that there was no room for them in the inner circle that controls the business of the country with the money of the people.

The stability of our note circulation has been admitted at all times, but I have yet to find any good reason why its stability should be at the expense of the depositors of the banks. The note-holders are preferred creditors of the bank and so is the circulation fund, so that on a last analysis it is the depositors who are back of our currency. In the case of the Farmer's Bank the notes will all be redeemed with interest, though the depositors will probably get nothing.

As to the character of the service that the banks give to the ordinary citizen it is certainly excellent, but that is not a point under discussion. A farmer in good standing can usually get his note discounted without trouble. The difficulty is that when he has money on deposit that money is often used to float mergers that will rob him. The banks must treat the ordinary citizens properly in order to get their deposits. It is the sum of these deposits in the hands of daring and unscrupulous men that works such widespread injury to the country.

Regarding the profits of the note issue I have no doubt that it is exactly as stated by Mr. Black. But even if the profit is only 2.47 per cent., it is still a profit that is not allowed in any other country of importance. It is a practical gift to the banks. Whether such a gift is necessary when the banks are already doing so well, that they are able to build up colossal reserves and erect the finest buildings in all the important cities, besides paying liberal dividends, is a question that is open to differences of opinion.

To Mr. Black's concluding eulogy of our banking system I shall be willing to subscribe when we have the banks under control, with a searching system of government inspection. The branch bank system would be admirable if it were used solely to distribute money from points where it is plentiful to points where it is needed for the development of the natural industries of the country, but while it is being used to place the savings of the people at the disposal of the big operators, who use it to centralize business, float watered stock, and eliminate competition, I cannot regard it as anything but a means to the best interests of all the people.

PETER McARTHUR.

### Death of Chas. M. Simmons.

The death occurred recently at his farm home in Lobo Township, Middlesex County, Ont., of Chas. M. Simmons in his 81st year, after a long and useful life. He was a progressive farmer, prominently identified with municipal affairs for over thirty-five years, and attained a marked degree of success as a breeder of Shorthorn cattle and Berkshire swine, his stock winning high honors at leading exhibitions. He was frequently called upon to act in the capacity of judge, and took an active part in the development of various pure-bred live-stock associations, being for many years a familiar figure at the shows and meetings. He rendered service as an effective speaker at farmers' institute meetings, where his incisive, practical comments were always appreciated. In 1890 he was chosen as a director of the old Ontario Agricultural and Arts' Association, on which board he served for several years. He was an adept in the art of cattle feeding, and at one time for several years did a large business as an exporter of heaves to Great Britain and the United States. Mr. Simmons was a native of Northumberland County, Ontario, and at an early date settled in Lobo, where he since resided. Two daughters—Mrs. James Quirrie, Delaware, and Mrs. Laughlin Cameron, Lobo—and several brothers survive him.

**Convention Week at Fredericton, N. B.**

There was a large gathering of farmers and their wives and daughters at the New Brunswick Capital City last week, when the annual meetings of the Farmers' and Dairymen's Association of New Brunswick, the New Brunswick Fruit Growers' Association, and the first Convention of Women's Institute delegates were held.

Combined with the meetings of the Associations, was a short course of instruction in horse, cattle and sheep judging, a provincial seed fair, and a poultry show.

There was decided feeling of optimism among those who attended, and the reports of the various county vice-presidents corroborated the statistics of the Agricultural Department, showing that, though the season had been unusually wet and cold, nevertheless in the aggregate there had been good crop returns.

In calling the meeting to order, President L. H. Smith, of the Farmers' and Dairymen's Association, reviewed some of the events of progress in the agricultural life of the Province which had taken place or arranged to take place during the year, and warmly commended the establishment of an Experimental Farm, the Dominion Subsidy for Agriculture, and the proposal to start two schools with Agricultural Courses and Short Courses in the Province.

He congratulated the people on their evident spirit of optimism and the effect it was having in advancing the value of real estate and drawing the attention of men of other parts of the world to New Brunswick's advantages. "Let the people," he said, "and the press unitedly work for the advancement and prosperity of our country and make its future great in proportion to its natural advantages and general resources."

A warm welcome from the city of Fredericton was conveyed to the Association by Mayor Hooper, to which Vice-President Ashley George, of Sackville, replied, urging that demonstration farms should be established, if possible, in every parish of the Province, so that the principles and methods found best on the Experimental Farms might be put into practice within reach of all farmers, that the elementary principles of agriculture be taught in the public schools, that some definite plan for the improvement of the highways be adopted, and, referring to the charge that present high prices were out of all proportion to the cost of production of farm products, claimed that the high price of labor and of those things which the farmer had to buy had so increased the cost of production that present prices did not leave any large margin of profit.

Hon. D. V. Landry, Commissioner of Agriculture, spoke upon the progress that had been made in the Province in the last few years. Agricultural societies had grown in number from 57 in 1907 to 104 in 1912. There was need for more until every farmer should have an opportunity of belonging to one. He also thought the horse breeders, the cattle breeders, and the sheep breeders, and men engaged with the stock generally, should each have a provincial association, and the Government would be glad to have their advice and help them. Great success, he said, had attended the work of the Fruit Growers' Association, and more apple trees had been planted last year than ever before in the history of the country. Although dairying was not as prosperous as it should be in the Province, and the Government intended to give special attention to this industry, yet last year the dairy output of the Province was the second largest year in its history, and was only \$8,000 less in total output than in the banner year of 1903. He spoke of the good work of the Farm Settlement Board in getting many vacant farms taken up by good settlers, and asked the co-operation of farmers in enabling the Board to obtain all farms not now being worked. He claimed New Brunswick was the equal of any other part of Canada, and urged all to "boost" for their Province, as the people of the West did for theirs.

Bishop Richardson spoke briefly but emphatically of the great resources and opportunities for comfortable living in New Brunswick as compared to the West. In his opinion, the farmers of New Brunswick had the solution of the attractiveness of farm life, or how to keep the boys and girls on the farm, in their own hands. Young men and women should not be expected to work on the farm or anywhere else unless they received reasonable pay for their work. Give your boys and girls, he said, the same wage you would have to give anyone else, and then make your farm home as comfortable as the city home. You can at least put water in it, you can have sanitary conveniences, you can make it attractive; then, if you work together, you can have good roads, but not under the present "statute-labor" system. Make your farm furnish you with profitable labor the year round, and don't rush off to the lumber woods for \$1.50 per day. You can make for more than that at home. Do not, he said, deny

yourself and your family comfort that you may put money in the banks at three per cent. interest and make fortunes for the bank shareholders, who send your money away and get eight per cent. Take this money and put your home and farm in good condition, and realize much more than three per cent.

His Lordship, in conclusion, wished the Association all success, and said he would be glad to do anything he could in its interest. He believed that within the course of the year he had stopped more men from going West than any other citizen of the Province. He was proud of New Brunswick, and as time went by was becoming more and more profoundly impressed with her immense possibilities.

A. G. Turney, the Provincial Horticulturist, provided a small but very handsome exhibit of New Brunswick grown apples in boxes, which included Kings grown on Deer Island, Bishop's Pippin grown in the St. John Valley at Lower Gagetown, Princess Louise grown at Sheffield, and perhaps the richest colored apple of all—an excellent winter variety known as Merritt, grown at Lower Gagetown. The last named apple originated in New Brunswick in 1776, when a small tree was brought by the Merritts, a loyalist family from Hampstead, Long Island, and from this tree many orchards have been topgrafted, until to-day it is considered one of the very best winter apples grown in New Brunswick.

S. L. Peters made a very strong case for New Brunswick as a producer of the best quality apples on the Continent of America, and said it would not be long until the Province was famous as the home of "The Big Red Apple."

At the Wednesday night meeting, which was held in the Opera House, Prof. J. H. Grisdale, Director of Experimental Farms, discussed the principles and best practices in the cultivation of the soil. He believed by drainage, proper rotation of crops, thorough preparation of the seed-bed, the use of implements which minimized man labor and increased the use of horse or other power, good after-cultivation and care of the crop, with, of course, good seed, it was possible in Eastern Canada to double the crop yields per acre and to almost cut in half the cost of production. The wages of farm labor were now almost 100% higher than twelve years ago. Do everything with the minimum of man labor and the maximum of power. On the Experimental Farm, at Ottawa, they had found that plowing with two horses and a single-furrow plow cost approximately \$2 per acre, with a two-furrow plow and three horses, \$1 per acre, and with a five-furrow plow and gasoline engine, 50c. per acre. Similarly in harrowing they had found that with a two-horse disc harrow it cost 90c. to fit an acre, with a three-horse disc, 70c., and with a double cutaway four-horse harrow, 45c.

An excellent Seed Fair was held on Thursday. Resolutions were passed asking the Provincial Government to procure the chemicals entering into the making of commercial fertilizers and sell them to farmers' organizations at cost; to take the administration of the highways out of politics and to better provide for good roads, endorsing the action of the Governments in arranging for an Experimental Farm and for Agricultural Schools, and urging that local demonstration farms, or demonstration on farms, and the teaching of elementary agriculture in the public school be added to the programme.

The officers of the Association elected for 1913-14 are as follows: President—W. H. Moore, Scotch Lake; Vice-President—J. A. Bernier, Edmundston; Recording Secretary—T. Edwin Carter, Bathurst; Corresponding Secretary—Morris A. Scovil, Gagetown; Treasurer—H. H. Smith, Hoyt Station.

Officials of the Provincial Department of Agriculture had a conference with the delegates of the various Agricultural Societies at the conclusion of the meeting and regulations governing the societies, as well as various work to be under-

	1912		1911	
	Acres	Bushels	Acres	Bushels
Wheat	12,636	248,117	13,226	254,771
Oats	183,805	5,715,644	198,120	5,970,435
Buckwheat	49,317	1,193,405	55,979	1,173,147
Potatoes	43,977	8,034,604	47,304	8,493,212
Turnips	6,130	3,104,028	6,473	3,426,793

taken by the Department, were discussed. It was announced by the Secretary for Agriculture, that N. W. Freligh, of Sussex, had been appointed to assist in working up support for the various cream-gathering buttermaking plants in the Province, and that a man would be appointed to assist in laying out farms for drainage, to advise on the purchase of chemicals and fertilizers, and to supervise the beekeeping interests. It was intended, he said, to encourage also the introduction of clover hullers and power ditching machines in the Province.

**To Investigate Poultry Conditions.**

J. H. Hare, B.S.A., a graduate of the Ontario Agricultural College, who has been District Representative of the Ontario Department of Agriculture in Ontario County for the past four years, where he has been particularly successful in carrying on investigations in poultry work and in establishing egg circles on a large scale, has been appointed by the Dominion Minister of Agriculture to a position on the Live-Stock Branch of his Department to investigate the conditions of the poultry industry in the Dominion. A preliminary investigation of the Ontario egg trade has been carried on by this Branch during the past year. Certain facts relating to the enormous loss that is charged back against the farmer and the unsatisfactory status of the trade, as a whole, have been collected and published in Bulletin 16—"The Care of Market Eggs." The Department felt that more detailed information was necessary before inaugurating a policy having for its object the bringing about of improvement in poultry business; hence the appointment.

Mr. Hare will be located at Ottawa, but will travel over Canada, East and West, first collecting all available data on grading eggs as they have been received at wholesale produce houses of Canada during the past two years. This information will be used as a basis for Government action to regulate the trade.

The Department is to be congratulated upon getting so capable a man as Mr. Hare. He has practical experience to back up his scientific training. From his advanced work in Ontario County, in connection with poultry, he is eminently fitted to undertake his new work. There is a wide field for poultry improvement in Canada.

**E. D. Hilliker's Ayrshire Sale.**

Favored with good weather and a large gathering of representative breeders from distant parts of Ontario, and some from Quebec, the dispersion sale of Ayrshire cattle held by E. D. Hilliker, of Burgessville, Ont., on Tuesday, Feb. 18th, was a pronounced success. The cattle were brought out in nice condition and were an essentially high-class lot, many of them being prize-winners at Toronto and other shows. Nine cows sold for \$1,765—an average of \$196. Six heifers sold for \$765—an average of \$127.50. Four heifer calves sold for \$227—an average of \$56.75. Two bull calves sold for \$105—an average of \$52.50. The highest price paid was \$350 for the three-year-old heifer, Betsy Brown, purchased by A. S. Turner & Son, Ryckman's Corners, Ont. P. D. McArthur, North Georgetown, Que.; A. S. Turner & Son, and J. L. Stancell, Staffordville, were the largest purchasers.

**New Brunswick Notes.**

At last some hard frost has come to break the continuous spell of mild weather which has been prevalent this season over all of southern New Brunswick. There has been but little snow, and over a large area of the Province there has been practically no sleighing.

North of Fredericton, on the St. John River, and on the North Shore, north of Kent County, winter conditions have been more normal, there having been ample snow since November, and, although the weather has been mild, it has been sufficiently frosty to keep the roads in good condition and to favor lumbering operations.

The crop returns for 1912, gathered by the Provincial Department of Agriculture, are just made public, and show that, notwithstanding the very wet and cold summer, the yields were considerably above the average, although the acreage was cut down through the inability of farmers to get on their wetter lands.

The following are the figures given.

	1912		1911	
	Acres	Bushels	Acres	Bushels
Wheat	12,636	248,117	13,226	254,771
Oats	183,805	5,715,644	198,120	5,970,435
Buckwheat	49,317	1,193,405	55,979	1,173,147
Potatoes	43,977	8,034,604	47,304	8,493,212
Turnips	6,130	3,104,028	6,473	3,426,793

The average yields of the above crops for the last 15 years have been as follows: Wheat, 18.5 bus.; oats, 29.3 bus.; buckwheat, 22.2 bus.; potatoes, 141.8 bus.; turnips, 449.9 bus.

Numbers of live-stock show a gradual increase, the figures are as follows:

	1912	1911	1910	1909
Horses	61,042	60,829	61,042	57,713
Cattle	241,130	227,145	215,529	199,481
Sheep	152,892	150,740	147,489	143,274
Swine	94,993	91,363	80,022	70,010



MARKETS.

Toronto.

REVIEW OF LAST WEEK'S MARKETS

At West Toronto, on Monday, February 24th, receipts of live stock numbered 60 cars, comprising 989 cattle, 474 hogs, 81 sheep, 144 calves, and 63 horses; no business transacted. Dealers are again quoting \$9 for hogs fed and watered, and \$8.65 f. o. b. cars at country points.

Receipts of live stock at the City and Union Stock-yards last week were as follows:

	City.	Union.	Total.
Cars .....	18	348	366
Cattle .....	307	4,523	4,830
Hogs .....	177	8,887	9,064
Sheep .....	124	1,080	1,204
Calves .....	19	467	486
Horses .....	—	103	103

The total receipts at the two markets for the corresponding week of 1912 were as follows:

	City.	Union.	Total.
Cars .....	180	153	283
Cattle .....	1,374	2,017	3,391
Hogs .....	4,454	2,957	7,411
Sheep .....	1,226	592	1,818
Calves .....	221	22	243
Horses .....	—	25	25

The combined receipts of live stock at the two markets for the past week show an increase of 83 cars, 1,439 cattle, 1,653 hogs, 243 calves, and 78 horses; but a decrease of 614 sheep, compared with the corresponding week of 1912.

Receipts of live stock at the two markets for the past week were liberal for cattle, moderate in hogs, but light in sheep, lambs, and calves. Trade was active for good to choice quality cattle, but slow for medium, and common, half-fat cattle, which should have been kept in the farmers' stables from six weeks to two months longer before being offered for sale. There are far too many of these unfinished animals being brought on the market, which, of course, sell at lower prices, and help to keep the better classes from selling at higher quotations.

Exporters.—There were about 150 steers of export quality and weight sold during the week, at prices ranging from \$6.80 to \$7.10, but only 11 cattle sold at the latter price. They were all bought for the Toronto and Montreal abattoirs.

Butchers.—Choice butchers' cattle sold at \$6.40 to \$6.75; loads of good, \$5.85 to \$6.25; medium, \$5.40 to \$5.70; common, \$4.50 to \$5.25; choice, heavy cows, at \$5.25 to \$5.50; good cows, \$4.75 to \$5.25; medium cows, \$4.25 to \$4.75; common cows, \$3.50 to \$4; canners, \$2.50 to \$3; choice, heavy bulls, \$5.25 to \$5.50; good bulls, \$4.75 to \$5; medium, \$4 to \$4.50; bologna bulls, \$3.50 to \$4.

Stockers and Feeders.—There was a better demand for stockers and feeders. Steers weighing from 900 to 1,000 lbs. each, sold at \$5.75 to \$6; stockers, 750 to 850 lbs., at \$5 to \$5.50; common stockers, 600 to 700 lbs., \$4.50 to \$4.75.

Milkers and Springers.—Only a moderate number of milkers and springers were offered. The bulk of them sold from \$45 to \$65 each, and a few of good to choice quality, sold from \$68 to \$72 each.

Veal Calves.—Choice, new-milk-fed calves are scarce, selling at \$9.50 to \$10 per cwt. The common and medium calves, especially the latter, sold fully 50c. per cwt. lower. Common, rough, heavy calves, sold as low as \$4 to \$4.40; medium, \$6 to \$7, and good, \$8 to \$9 per cwt.

Sheep and Lambs.—Sheep sold at higher prices, ranging from \$5.50 to \$6.25 for ewes, and \$5 to \$5.50 for rams; cull sheep sold at \$3 to \$4 per cwt.; lambs sold from \$8.50 to \$9.50, and \$9.60 for a few selected lots of choice quality.

Hogs.—The packers declared for lower prices, and succeeded in reducing values from 15c. to 25c. per cwt. The bulk of the hogs during the week were bought at \$9 per cwt., fed and watered, and \$8.65 to \$8.75 f. o. b. cars at country points. A few hogs were reported at \$9.10 fed and watered, and \$8.75 f. o. b. cars at country points. On Friday,

there were 1,106 hogs sold at the Union yards. Prices were firmer, ranging from \$9.10 to \$9.20, fed and watered. The commission firm of Rice & Whaley sold 600 hogs, at \$9.10 to \$9.20, fed and watered at the market.

Horses.—Trade in horses at the Union Horse Exchange, Union Stock-yards, for the past week was very quiet. Two car loads were sold to go to Montreal, and several smaller lots to different parts of Ontario, and quite a few were bought by local cartage companies and wholesale firms. Prices were no higher, if as good, as for the previous week, and ranged as follows: Drafters, \$200 to \$250; general-purpose horses, \$150 to \$200; express and wagon horses, \$150 to \$210; drivers, \$100 to \$150; serviceably sound, \$30 to \$100 each.

BREADSTUFFS.

Wheat.—Ontario, No. 2 red, white or mixed, 95c. to 96c. outside; inferior grades, down to 70c. Manitoba, No. 1 northern, 96c.; No. 2 northern, 93c., track, lake ports; feed wheat, 66c., lake ports. Oats—No. 2, 33c. to 34c., outside; Manitoba oats, No. 2, 41c.; No. 3, 39c., lake ports. Rye—No. 2, 60c. to 65c. per bushel, outside. Peas—No. 2, \$1.15 to \$1.20, outside. Buckwheat—51c. to 52c., outside. Corn—No. 3 yellow, 56c., track, Toronto, all-rail shipment. Flour—Ninety-per-cent. Ontario winter-wheat flour, \$3.95 to \$4.05, seaboard. Manitoba flour—Prices at Toronto are: First patents, \$5.30; second patents, \$4.80; in cotton, 10c. more; strong bakers', \$4.60, in jute.

HAY AND MILLFEED.

Hay.—Baled, car lots, track, Toronto, \$18 to \$14 per ton for No. 1, and \$11 to \$12 per ton for No. 2.

Straw.—Baled, car lots, track, Toronto, \$9 per ton.

Bran.—Manitoba bran, \$19 to \$20 per ton; shorts, \$21.50; Ontario bran, \$19 to \$20, in bags; shorts, \$21.50, car lots, track, Toronto.

TORONTO SEED MARKET.

Unchanged, and very quiet. Alsike No. 1, per bushel, \$11.50 to \$12.50; alsike No. 2, per bushel, \$10.50 to \$11; alsike No. 3, per bushel, \$9.50 to \$10; red-clover seed, Ontario-grown, \$7 to \$9 per bushel; timothy No. 1, per bushel, \$1.90 to \$2.25; timothy No. 2, per bushel, \$1.25 to \$1.60.

COUNTRY PRODUCE.

Butter.—Market unchanged. Creamery pound rolls, 32c. to 34c.; creamery solids, 28c. to 29c.; separator dairy, 28c. to 30c.; store lots, 22c. to 24c.

Eggs.—Strictly new-laid, 30c. per dozen by the case; cold-storage eggs, 22c. per dozen.

Cheese.—Large, 14c. per lb.; twins, 15c. per lb.

Honey.—Market firm. Extracted, 12c. per lb.; combs, per dozen, \$2.75 to \$3.

Beans.—Broken car lots are reported as selling at \$2.50 for primes, and \$2.55 to \$2.60 for hand-picked.

Potatoes.—Car lots of Ontario potatoes are worth 65c. per bag, and New Brunswick Delawares at 80c. per bag, track, Toronto.

Poultry.—Receipts were light; prices firm, as follows: Turkeys, 25c. to 26c. per lb.; geese, 18c. to 20c.; ducks, 20c. to 22c.; chickens, 20c. to 22c. per lb. for choice; hens, 15c. to 16c.

HIDES AND SKINS.

No. 1 inspected steers and cows, 13c.; No. 2 inspected steers and cows, 12c.; city hides, flat 12c.; country hides, cured, 11c.; country hides, green, 10c.; calf skins, per lb., 14c.; lamb skins, \$1.10 to \$1.50; horse hides, No. 1, \$3.50 each; horse hair, per lb., 37c.; tallow, No. 1, per lb., 5c. to 6c.

FRUITS AND VEGETABLES.

Apples—No. 1 Spies, \$3.75 to \$4 per barrel; No. 2 Spies, \$3 to \$3.50; Greenings, \$2.75 to \$3; Kings No. 1, \$4; Baldwins, No. 1, \$3 to \$3.50; cabbage, per barrel, \$1; beets, 75c. per bag; turnips, 40c. to 50c. per bag; parsnips, 60c. to 75c. per bag; Florida strawberries, 45c. to 50c. per quart box, retail.

British Cattle Market.

John Rogers & Co. report 13c. to 15c. per lb. for Irish steers.

Montreal.

Live Stock.—On the whole, the market for cattle showed additional strength last week, and prices advanced in some instances. Supplies were on the light side, and the weather was quite favorable. In addition to this, it is claimed that cattle are costing more in the country, owing to competition between American and Canadian buyers. A few loads of choice steers sold at 7c. per lb., and some holders were asking 7c. Fine stock was about 6c., and good around 6c. per lb., while medium ranged from 5c. to 6c., and common from 4c. to 5c. per lb. Supplies of lambs were quite light, and the tone of the market firm. Sales took place at 7c. to 7c. per lb. There was not a very active demand for sheep, and prices were steady, at 4c. to 5c. Calves were in moderate demand, and prices showed but little change, being from \$5 to \$12 each. Supplies of hogs were light, and as a result prices were higher than a week ago, and the tone was still stronger. Select lots sold around 10c., off cars.

Horses.—Prices were steady, at \$300 to \$400 each, for horses weighing from 1,500 to 1,700 lbs.; \$225 to \$300 each for light draft, weighing from 1,400 to 1,500 lbs.; \$125 to \$200 for light horses, weighing from 1,000 to 1,100 lbs.; \$75 to \$125 for broken-down stock, and \$350 to \$500 for choice saddle or carriage animals.

Poultry.—There was a fair demand for poultry, and as supplies were rather light, prices were rather firmer, in some instances. Turkeys sold from 22c. to 24c. per lb., for fresh-killed stock, while ducks and chickens ranged from 17c. and 18c. to 20c. or 21c., when the quality was very fine. Fowl were quoted at 15c. to 17c. per lb., and geese at 14c. to 15c.

Dressed Hogs.—In sympathy with the market for live hogs, dressed hogs were quite firm, selling at 14c. to 14c. per lb., for abattoir-dressed, fresh-killed, and at 13c. to 13c. for country-dressed; light weights, and at 12c. to 13c. for heavies.

Potatoes.—Demand was rather better, but prices were steady, at 7c. to 7c. per 90 lbs. for Green Mountains, in car lots, track, and 60c. to 65c. for Quebecs. Smaller lots were 25c. more than these figures.

Eggs.—Supplies were moderately large, and notwithstanding the colder weather, prices were rather on the easy side, and fluctuated a good deal. New-laid were quoted at 33c. to 35c. per dozen, select, held stock, 28c. to 25c., and No. 1 storage, 20c. to 21c.

Syrup and Honey.—The time for the new syrup is drawing near, but prices were steady, at 7c. to 8c. per lb. in wood, and 8c. to 10c. in tins. There was very little to be had. White-clover comb honey was 16c. to 17c. per lb., and dark, 14c. to 15c.; white extracted was 11c. to 12c., and dark, 8c. to 9c.

Grain.—The market for oats was fairly active, but prices were steady, being 41c. in car lots, for No. 2 Canadian Western oats, and 40c. for No. 1 feed, extra, ex track.

Flour.—On the whole, the market was steady, although there was a feeling that prices may be lower on Ontarios. Manitoba first patents sold at \$5.40 per barrel; seconds, \$4.90, and strong bakers', \$4.70. Ontario patents were \$5.25 per barrel, and straight rollers, \$4.85 to \$4.90, in wood.

Millfeed.—There was an improved demand for millfeed, and prices were firm, at \$20 per ton all the way round for bran, and \$22 for shorts, while middlings were \$25 per ton, including bags. Pure grain mouille was \$35 to \$38, and mixed, \$30 to \$33.

Hay.—The demand for hay was very light, but as supplies were also light, the market showed little change. Holders in the country ask higher prices than dealers care to pay. Local prices, car lots, track, were: No. 1 hay, \$13 to \$14 per ton; No. 2 good, \$11 to \$12; No. 2 hay, \$10 to \$11 per ton, and clover mixed, \$9 to \$10 per ton.

Hides.—Quality was poor and demand light, with the result that prices were about to decline. To-day's quotations were steady, at 12c., 13c. and 14c. per lb. for beef hides, for Nos. 3, 2 and 1. Prices this week will be 1c. less. Calf skins were 14c. and 16c.; lamb skins, \$1 to \$1.10, and horse hides,

\$1.75 and \$2.50 each. Tallow was 1c. to 3c. per lb. for rough, and 6c. to 6c. per lb. for refined.

Buffalo.

Cattle.—Prime steers, \$8.25 to \$8.75; butchers', \$6 to \$8.25; bulls, \$5.25 to \$7; stock heifers, \$4 to \$4.60; shipping, \$7.25 to \$8.25; heifers, \$5 to \$7.25; cows, \$3.50 to \$7; stockers and feeders, \$4.60 to \$6.80; fresh cows and springers, \$35 to \$32.

Veals.—\$4 to \$11.

Hogs.—Heavy, \$8.75 to \$8.85; mixed, \$8.80 to \$8.90; Yorkers and pigs, \$8.85 to \$8.90; roughs, \$7.85 to \$8; stags, \$6 to \$7; dairies, \$8.75 to \$8.90.

Sheep and Lambs.—Lambs, \$6 to \$8.85; yearlings, \$5 to \$8.

Chicago.

Cattle.—Beeves, \$8.75 to \$9; Texas steers, \$5.20 to \$6; stockers and feeders, \$5.90 to \$8.15; cows and heifers, \$3.15 to \$7.48; calves, \$7 to \$10.50.

Hogs.—Light, \$8.30 to \$8.55; mixed, \$8.25 to \$8.55; heavy, \$8.10 to \$8.50; rough, \$8.10 to \$8.20; pigs, \$6.50 to \$8.35.

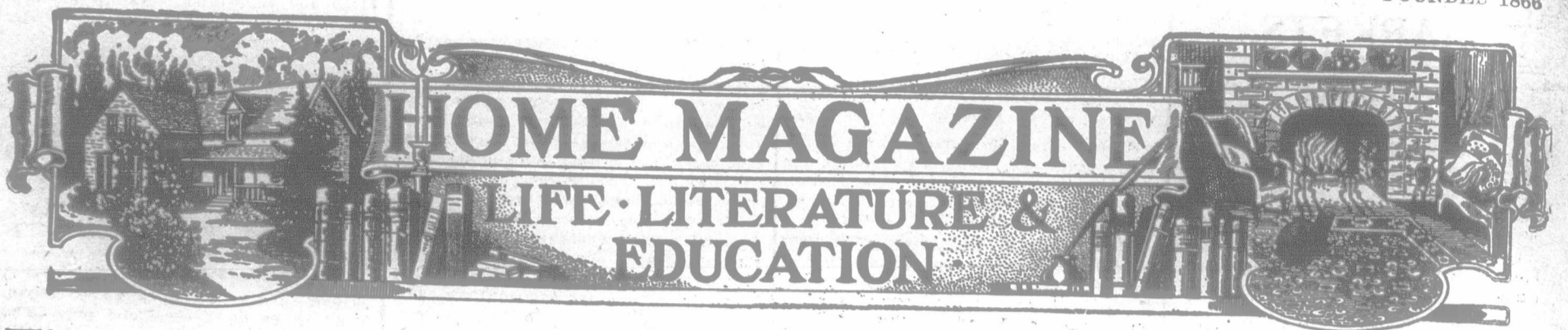
Sheep and Lambs.—Sheep, native, \$5.10 to \$6.65; yearlings, \$6.70 to \$8; lambs, native, \$7.40 to \$8.85.

Gossip.

The removal auction sale of 77 head of registered Berkshire hogs, the herd of Wm. George, of Aurora, Illinois, is reported as one of the most successful held in years, the entire number having made an average price of \$122. The top price was \$1,500, for the four-year-old boar, Master Yet, the International winner, taken by a society known as the Loyal Order of Moose. The same firm captured, at \$385, Brookline Master, a four-months-old son of Master Yet. The highest price obtained for a sow was \$330. A sale of Berkshires, by Thos. Stanton, at Wheaton, Ill., February 18th, made an average of \$140 for the 50 head offered. The highest price in this sale is also reported as \$1,500, for the four-year-old boar, Hopeful Lee 2nd, taken by Branford Farms. Four boars averaged \$450.

PAY FREIGHT TO OTTAWA EXHIBITION.

A scheme to specially encourage the smaller stock-breeders, or amateur class of exhibitors, was adopted by the Central Canada Fair Directors at the annual meeting this month. The Fair Association will pay freight charges, from the last point of shipment, on all live stock coming to Ottawa's 1913 Exhibition, from points in the Provinces of Ontario and Quebec. In some instances, the freight will be from some other fair, and in others, from the home of the exhibitor. The animals will also be conveyed home without charge to the owner. A feature of the Dominion Exhibition, in Ottawa, last year, was the payment of freight rates up to a hundred-mile radius of Ottawa. The experience was very gratifying. Hence the extension of the policy, involving the assumption, by the Exhibition Association, of all freight expense for a large number of exhibitors. The directors concluded that a concession of this kind would prove a greater incentive to the common farmer or non-professional exhibitor than any inducement in prize money. It is the aim of the Association to distribute the premiums among as many breeders as possible, and to stimulate the breeding of exhibition live stock everywhere. The directors give credit to the farm newspapers for what is regarded as a splendid innovation for the next Ottawa Exhibition. The necessity of arousing the small breeder to compete for prizes, and the advantage of placing him as nearly as possible in a position of equality with the established stockman, were forcefully urged in the press. It is the desire of the Ottawa Exhibition management to meet the views of the farming community in all such cases, and to co-operate when possible. In providing for the payment of transportation charges, right into Ottawa, the arrangement does not, of course, cover express rates.



## The New Public Health.

The Farmer's Advocate Bureau of Public Health Information.  
QUESTIONS, ANSWERS, AND COMMENTS.

Conducted by Institute of Public Health, London, Ont.

[Questions should be addressed: "New Public Health, care of 'The Farmer's Advocate,' London, Ont." Private questions, accompanied by stamped, self-addressed envelope, will receive private answers. Medical treatment for individual cases cannot be prescribed.]

### The New Public Health and Tuberculosis.

Tuberculosis, of all forms, is due to the growth, somewhere in the body, of a certain germ, exactly as diphtheria and typhoid are due to the growth, in the body, of certain germs. There are many very definite individual differences, in the size, shape, manner of growth, etc., of the three different germs of these three different diseases, and these differences make it perfectly possible to distinguish each germ from the others, just as the farmer can distinguish oats, corn, and potatoes, from each other.

But just as there are different varieties of potatoes, so there are at least two varieties of tuberculosis germs which affect human beings. One variety is what is known as the human tuberculosis germ proper. The other is found chiefly in cattle, and is therefore called the cattle tuberculosis germ (the bovine tuberculosis germ), and this name is given to this variety even when it is found in the human, as it sometimes is.

#### HUMAN TUBERCULOSIS.

A most important difference that the germs of human tuberculosis, of diphtheria, and of typhoid fever show amongst themselves, is not a difference in size, shape, etc., but in the parts of the body each selects. Thus, the diphtheria germ flourishes chiefly in the nose and throat, and the typhoid germ flourishes chiefly in the intestine, and perhaps the blood; while the human tuberculosis germ will flourish almost anywhere in the body, glands, bones, joints, intestine, kidneys, brain, lungs. This selection is no mere accident, although we do not know how it comes about. All three germs enter the body chiefly by the mouth, conveyed thereto chiefly by the hands, but also more or less through food and milk, and, in the case of typhoid fever, through water and flies. On entering the mouth, all three germs, which are, of course, far too small to taste or feel, are swallowed in the food, milk, etc., in which they happen to be present, or merely in the saliva, if, as is most usual, they reach the mouth directly or indirectly from the fingers. Once swallowed, all three pass into the stomach, where many are killed by the acid there present, the survivors, if any, passing on into the intestine. On the journey from mouth to intestine, some are left, of course, by the wayside, stranded on the tonsils, throat, gullet, etc. Here at once is shown their respective peculiarities. Of all the diphtheria germs that are thus swallowed practically only those that are stranded in the throat, will flourish; those diphtheria germs which pass on into the stomach or intestine are destroyed, or pass out harmlessly. On the other hand, typhoid germs, if stranded on the

throat, do not flourish there, nor do those which reach the stomach flourish in that organ. It is only those typhoid germs which survive the journey until the intestine is entered that can succeed in producing typhoid fever. The human tuberculosis germ has a still longer road to go. Not only must it pass mouth, stomach, and intestine, but it must be also absorbed from the intestine into the blood, as the food is; but it does not grow in the blood. The blood is only a river, by which it can be carried to a favorable developing ground. We do not know at all why human tuberculosis germs, entering the blood thus, should elect to settle and grow in a joint in one person, in a lung in another, in a kidney or a gland or a bone in another. However, this is the way in which these different forms of human tuberculosis develop. The old idea that human tuberculosis of the lung (consumption) is contracted chiefly by breathing the germs directly into the lungs, has been definitely upset. The lungs are infected from the blood-stream chiefly, just as are the other internal organs, bones, and joints.

Another, and, from the public-health standpoint, an even more important difference exists. Diphtheria germs developing in the throat, and typhoid-germs developing in the intestine, can readily escape from the body: in the case of diphtheria, through the mouth and nose discharges; in the case of typhoid fever, through the bowel, and sometimes the bladder, discharges. It is

no great highway to the outside, lying at their doors to carry the germs out to other persons. Practically only in human tuberculosis of the lungs are such highways provided for the human tuberculosis germs, although sometimes in bladder, kidney, and intestinal tuberculosis. But in the latter forms, the germs do not, as a rule, pass out by the highways provided for them in such condition or such numbers as to be of serious importance in propagating the disease. In human lung tuberculosis, on the other hand, the windpipe, throat, and mouth, form a highway, along which the germs may escape from the affected lung in such enormous numbers that twenty-four billion per day have been detected in the discharge (sputum) from the lung of a single advanced case, although the average number from the average case is usually "only" four or five billion daily.

Thus it comes about that human tuberculosis of the lungs is the only common form of human tuberculosis which is much to be feared as infectious. Practically all the other forms of human tuberculosis are derived from the sputum of cases of human lung tuberculosis, carried chiefly by mouth-spray and on the hands, and if cases of human lung tuberculosis did not act to spread infection to other persons, all forms of human tuberculosis would disappear.

Moreover, even human lung tuberculosis is not very infectious in the early stages, i. e., when the germs are growing in the

### THE ABOLITION OF CATTLE TUBERCULOSIS IN THE HUMAN.

Although the cattle tuberculosis germ differs from the human tuberculosis germ somewhat in size, shape, etc., the most important public health difference is this: the cattle tuberculosis germ seldom produces lung tuberculosis in the human. It produces bone, gland, joint, etc., tuberculosis, but lung tuberculosis hardly ever. Consider how important this fact is. It means that cattle tuberculosis existing in a human can very seldom be conveyed from that human to another human. In other words, cattle tuberculosis may be transmitted from cattle to man, but practically is not further

(Continued on page 385.)

### Letters from Abroad--I.

Rome, Jan. 2, '13, Hotel Michel.

My dear Jean,—Here I am in the Eternal City. The sun is shining, the sky is blue, and the air is balmy as spring—and you, poor thing—I suppose you are hemmed in by snow-drifts six feet high, with blizzards raging, and the thermometer at zero.

Well, I certainly was glad to escape from Germany, much as I love it. Those last three months in Wiesbaden were a horror—fog and rain all the time. How I hated it—Rome, by comparison, seems an earthly paradise. And that graveyard cough that drove me South—I lost it on the way—but I will confess that Italy looked terribly shabby and down at the heels compared to Germany. You notice the difference the minute you cross the frontier. Everything in Germany is so spick-and-span, and "system" seems to dominate. In Italy, everything seems to be mussy, and there is no system at all. Take the railroad station, for instance. When a train arrives, the platform is a scene of the wildest confusion, men rushing along yelling, screaming, gesticulating; bells ringing; whistles blowing; engines tooting—one would suppose a terrible riot was in progress. When the train leaves, the excitement breaks out afresh. The train gives three or four awful lurches as a preparation for the final jolt, which nearly throws you off your seat if it is so violent—so different from the lady-like behaviour of the German trains, which glide out so smoothly and silently one hardly feels the vibration at all.

It is interesting to go from one country to another and note the differences in the habits and appearance of the people.

The Italians have such handsome eyes, and they know how to use them effectively. Even the facchini (porters), who carry your travelling-bags, can draw double tips by gazing at you appealingly. I am trying to steel myself against this form of extortion, but have not become quite hardened yet.

"Doing up" foreigners in Italy seems to be regarded as a legitimate occupation, and the tenderfoot has to pay for his experiences.

I have just been in Rome four days, and have spent the time roaming around. In the street and down another—when I go up and down, I mean it literally—the town is built on hills, and some of them are so steep that steps are necessary. The little shops are simply fascinating. The windows full of the most beautiful things. In imagination, I have seen a cart-loads of stuff, including enough to deck the necks of all the female soldiers, and I have selected several antique rings for every man who attracts me to give him a present. It is very easy to buy things that way; one only has to suffer so much from regrets afterwards. But what do you think I was doing on New Year's night, Jean?—weeping



Happy Days.  
Painting by Elizabeth Nourse, Detroit Museum of Art.  
"Thistle" Print, Copr., Detroit Publishing Co.

the escape by these channels of these germs from the body which makes these diseases "catching" or "infectious" or "communicable," for if they could not escape from the body, they could not reach other persons, and therefore could not be "catching." But in human tuberculosis, most of the places where it develops—bones, glands, joints, etc.—are not connected with any opening of the body by which the germs may leave the body. These forms of tuberculosis have

lung tissue, but have not yet reached the air-passages, because, until then, the germs cannot escape into the windpipe, and so, by the throat to the mouth. When in the later stages the germs reach the air-passages, the way for the escape of the germs to the outside and so to other mouths is "open." Persons in this stage of tuberculosis are called "open" cases, and it is in these only the "open" cases that are serious to be feared as infectious.

in my lonely chamber because I was alone and far from home?—Not I. I was having the time of my life. I was dancing—dancing with an Italian officer with gilt buttons and epaulettes. I did not know his name, and the benevolent old gentleman who introduced us, did not know either of us. How did it happen? Well, there was a ball in the hotel, and I went to look on. I sat beside a Canadian lady whose acquaintance I had made that day in the elevator. The elevator got a kink, and would not go, and the Canadian lady and I were jailed in it near the ceiling for fifteen minutes. There was nothing to do but talk, and during our dialogue we discovered that we were compatriots. So we went to the ball to gaze upon the merry throng, and we heard the same old waltzes and two-steps that are played in every town and hamlet in Canada. But when the orchestra started up the lancers—the same old lancers—we were brought up on—well, it certainly did give me a shock. Who ever would have expected to hear those moss-grown strains in a foreign land!

I really might have got weepy, if I had not been urged to dance—you see, there were shoals of men there dying to dance—and not enough girls to go round. A charming old gentleman came to us and implored us to have pity on these yearning youths. The yearning youths swarmed behind him and looked appealingly at us. It was too much! We melted! Age fell from us like a mantle, and we never stopped dancing until 2 a. m. I never had my hand squeezed so much in my life. It seems to be a habit with Italians—and the way they look at you with their handsome eyes! Why, when a man asks you for a dance, he looks as if he were laying his heart and all his possessions at your feet. I began to feel twenty, and irresistible. After the ball, I asked the Canadian who the old gentleman was who introduced the Italian men to us. "Haven't the least idea," she said. "I never saw him before. I thought he was an acquaintance of yours." Wasn't it a joke? Thursday night, Miss Morris and the young widow who is travelling with her, will arrive in Rome, and the following night we leave for Taormina, said to be the most beautiful place, and have the most perfect climate of any place in the world. I'll write you from there. Good-bye.

LAURA L. L.

P. S.—Don't tell Jack about the hand-squeezing. Men are so queer, you know, sometimes.

## Hope's Quiet Hour

### Sent Before His Face.

As My Father hath sent Me, even so send I you.—S. John xx.: 21.

The Lord appointed other seventy also, and sent them two and two before His face into every city and place whither He Himself would come.—St. Luke x.: 1.

We are accustomed to think of the Apostles as the messengers of Christ, sent out by Him as His especially-chosen ambassadors; but in our second text we see that He also sent out seventy messengers whose names are unknown to fame. These seventy were sent to prepare His way, they were to go "before His face" into every place He intended to visit.

Who are the people sent before His face now? They are the men and women who have placed their lives at His disposal, who have concentrated their talents to His service. It is a glad thing to remember that we are sent before the face of our Master, and that He will sow good seed in the ground we have prepared. "Before His face"—not so far removed from Him that we have to work alone. Sometimes the work itself becomes so absorbing that we forget Him almost entirely. We are elated when visible success swiftly follows our efforts, and we get discouraged when we toil for a long time and can see no result. It is well to remember that the work is not ours, but God's. He has sent us to do our part, and the visible results are no certain proof that we have been faithful servants. As for apparent failure—the Great Leader Himself seemed to have failed. It was only after His

death that the harvest began to spring up, and two thousand years of steady progress in righteousness have witnessed to the success of His faithful sowing.

A preacher once declared that if it were proved that God was dead, the lives of most men would go on much as before. That was a very pessimistic remark, and I don't agree with him in the least. If God were dead, and men knew it, despair would crush hope out of the hearts of the bravest. As I go from one ward to another in the Hospital, I find unconquered souls in many weak and suffering bodies. Why are they cheerful when the outlook is dark? There is one reason, given in different words by each, the one hope which shines like a star in darkness: God is with them, and they know it. Yesterday I asked a woman, who is slowly dying of cancer in the head, whether she would willingly change places with a healthy person who did not know JESUS as a friend. The tears were running down her face—tears caused by pain—and yet she exclaimed earnestly: "No! Oh, no!" She is praying constantly that death may come soon, yet she would rather suffer than lose the glad vision of God in Christ. She has the wisdom whose price is "above rubies."

The Church has been roused to the

be trusted to give the necessary increase. We live in a world of increase, and may well be filled with amazement when we think of the mighty results which sometimes follow very trifling actions—good or bad. I have lately been reading, in "The Wide World," an account of rabbit-fighting in Australia, which is a vivid illustration of great results from small beginnings. Years ago, an English emigrant took with him to Australia one or two pairs of rabbits. He did not mean to do any harm, but his act has cost the country countless millions. The farms have to be protected by wire netting, and an army of men is at work, all the year round, killing rabbits. Western Australia was protected from the "bunnies" by a desert, but at last its time came.

A man was riding one day in the "Golden State," as the West was called, and was horrified to see a little brown body scuttle across his path. A few miles further on he saw another, and knew that at last the desert-barrier had been crossed by the dreaded foe. The news was telegraphed to the Government, and a desperate fight began. More than two thousand miles of wire-fencing had to be built in a hurry, and men are constantly going up and down to guard this fence. "The rabbits keep ceaseless

the Roman Empire laid its banner at the feet of the Jewish Carpenter, Who had been despised and crucified. The cross was lifted from its place of shame, and held aloft as symbol of the highest honor. Kingdoms and empires have grown strong, and have fallen into decay, but that wonderful kingdom which God planted in weakness has steadily grown, and spread from country to country. The world thought it could easily crush out of existence the infant Church of Christ—and found itself mistaken. But now the world can easily see that all the great powers combined could not possibly stop the onward march of the Christian religion.

But, though the main body cannot be destroyed, each soldier of Christ can do far more than he knows to help or hinder the cause of his Master. A Japanese writer, Yoshio Markino, in a book published in 1912, describes his eager study of the Christian religion. Though he was only a boy when he began to read the Bible, he started at the beginning and studied the Old Testament, then went on with the New—looking up the references at the side of the page very carefully. But when he asked questions about the necessity of Christ's sacrifice for the salvation of mankind, the missionary did not make any attempt to explain the difficulties which perplexed his enquiring mind, but said he would pray.

The lad exclaimed: "No, no, no, no! Don't make such an awful artificially trembling voice in front of me, but kindly teach me!"

Then the messenger of Christ called him "insincere," and said he had been reading bad books. He received no helpful and kindly sympathy, though he said he was studying the Bible with heart and soul, and trying to make himself a Christian. He found some missionaries who won his heart by their Christlikeness, but others were hateful in his eyes, and he even called them "rotten," because they were not honorable in their business affairs. They refused to pay the usual price to the riksha-men who carried them home, and took no notice of the angry protests: "O, you Hon. Foreign Thieves! Fancy you treat us like this, and then on Sundays you preach with crying voices in the Church! Who could believe you, the Hypocrites?"

It is not only in heathen lands that the selfish or dishonorable conduct of a professing Christian brings disgrace on the cause of his Master and blocks its progress. The Apostles were sent on the glorious errand of enlightening all nations, but on one occasion two of the chief Apostles were sent to get a meal ready.—St. Luke xxii.: 8-13. Do you ever think, when cooking the dinner or washing the dishes, that the King Himself has "sent" you to do that special work, as certainly as He sent the two disciples to prepare the Passover meal? Whatever the day's duty may be, we are Christ's messengers, sent before His Face, witnessing for Him, or else blocking His approach to other souls.

"We must buy and sell in the markets, we must earn our daily bread, But just in doing the usual acts may the soul be helped and fed. It is not by keeping the day's work and the day's prayer separate so, But by mixing the prayer with the labor that the soul is taught to grow. For sweeping a room by God's law is a service He deigns to bless; And mending a kettle worthily is working for Him no less Than steering steady the ship of state, or wielding the sword in war, Or lifting the soul of man by songs to the heights where angels are."

DORA FARNCOMB.

What bring you to the hills?

All my ills!  
All my disappointments keen;  
All the shadows in my skies;  
All the bitterness that lies;  
My heart and the world between;  
All that wounds and kills.

What bring the hills to you?

Healing dew!  
Restful spaces for my eye;  
Soothing sense of airy height;  
Stars, and the tranquil dawn of light;  
Peace in the wide protecting sky  
And heaven's voice speaking through.  
—Helen Coale Crew.



Jack in the Box.

Painting by George Brown, Detroit Museum of Art.  
"Thistle" Print, Copr., Detroit Photographic Co.

necessity of carrying out the great command of her Lord, and is bent on making disciples of all nations. The field is wide, and the laborers are comparatively few. She may feel hopeless if she thinks of the greatness of the task, but her business is not her own, but God's. He has given the order, and He can be trusted to provide needful power. The first disciples were told that when they needed special eloquence it would be given them—given in the "same hour" it was required. Last Sunday I heard a layman giving an address on Missions. He talked of 888,000,000 of heathens, and said that the numbers were appalling. So they would be if the campaign were ours, but when it is not ours, but God's, when He is always close behind His messengers, there is no reason for despair. Each one is "sent" to do his own special task, to witness for Christ in city or in country, at home or abroad. If that commission be faithfully executed, the King and Ruler of the nations can

watch for an opportunity to get in. In places they are in scores of thousands, and have eaten the country behind them, and right up to the fence, as bare as a city road." How little that English emigrant dreamed of the tremendous results of his carelessness.

Of course, that is an extreme case, but no one can tell what harvest may spring from his sowing. We should all be careful to sow good seed, for the harvest of our lives will go on multiplying long after we are dead. The advance guard of the Church Army consisted of a very few people, without money, worldly influence, or learning. They went out to win the world for Christ, "and the number of names together were about an hundred and twenty." Who but God could count the names of Christians now? The Church, which was so small and looked so weak, grew very swiftly, in the face of persecutions so awful that we can hardly endure to read about them. In less than three hundred years

The Mending Basket

**Love in the Home.**  
I have been reading the letters in the Mending Basket with much interest, and I confess that at times I was quite excited over some of the letters.

Nearly all have been blaming the man for all of the domestic troubles. Now I do not think that is right. Sherard McLeay says that oftentimes the women have to do chores that are unwomanly work. Well I only know of two women who do as he says. One of them does it of her own choice. She is not content to just do her housework but must always be "choring," and I know that her husband would rather she would stay in the house.

In the other case, the man is a cripple from rheumatism, and the wife labors for him. And labor for those we love is a pleasure.

I have two little children and find that I am busy most of the time. But when the men are extra busy, as in haying or harvest or at threshing time, I usually find time to help with the milking and to feed calves top. I usually look after the hens. I asked my husband to let me do that much.

Now I have told you that I am ready to help with the outside work when necessary. Well when I am busy I always have help, a hand to run the churn, the washing machine, or to do anything that a man can help at.

Now where each loves the other, I am sure this will usually be the way of things, and if a woman does more than her share I am sure that it is her own fault. If she is unable to help outside she should say so, and not keep on doing it.

In order to keep "our" work done each must have his or her own work, but that is no reason why each cannot help the other.

To make farm life happy husband and wife must love one another, and the one who is most demonstrative does not always love most deeply. Please remember this.

What if your husband is not perfect? Well, neither are you. Maybe you are to blame as much as he is. Just try to overlook his faults, and remedy your own.

Hoping this may be of use to some one, I will close. DUTCH LASSIE.

REPLY FROM BERNICE BROOMSTICK.

Dear Readers.—At last I have emerged from "Chaos" after getting a severe "picking to pieces" from Fair Play, of Essex Co. My article which caused "Fair Play" to get "riled," applied only to people possessing modern conveniences, that is, with the usual number of servants, etc.

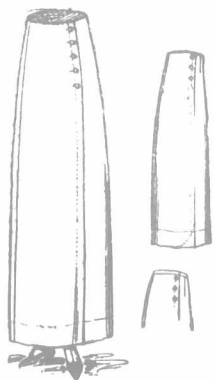
But when a woman is left in Fair Play's place, it is absolutely necessary for her to help in the work of the strong sex, while it would be utterly useless for her to think of filling the bill all the way through.

I also referred to farmers of my own locality, as I don't know and can't say anything of life in Essex Co. But I imagine it would be easy for the men if the women were all like Fair Play.

Wishing all continued success, Fair Play included, I remain,  
BERNICE BROOMSTICK.

Dundas Co.  
This topic is now closed.—Ed.

"The Farmer's Advocate" Fashions.



7610 Four Piece Skirt for Misses and Small Women, 14, 16 and 18 years.



7674 Girl's Empire Dress, 10 to 14 years.



5956 Princess Petticoat, 34 to 42 bust.



DESIGN BY MAY MANTON.  
7057 Three-Quarter or Full Length Coat, 34 to 44 bust.

May be made of heavy silk, velvet, novelty coating, or cheviot. Required, 8 yards 27 inches wide; 4 1/2 yards 44 inches wide, for the three-quarter length.



DESIGN BY MAY MANTON.  
7495 Girl's Box Plaited Dress, 6 to 12 years.



7613 Girl's Panier Dress, 12, 14 and 16 years.



7649 Girl's Dress, 8 to 14 years.



7637 Semi-Princesse Dress for Misses and Small Women, 16 and 18 years.



7616 Semi-Princesse Gown, 34 to 46 bust.



DESIGN BY MAY MANTON.  
7455 Girl's Dress, 10 to 14 years.



DESIGN BY MAY MANTON.  
7694 Empire Coat, 34 to 42 bust.

May be made of heavy silk, velvet, satin, or broadcloth. Required, 5 1/2 yards 27 inches wide, or 2 1/2 yards 52 inches wide.





7666 Girl's Side Plaited Sailor Dress, 8 to 12 years.

HOW TO ORDER PATTERNS.

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The Beaver Circle.

OUR SENIOR BEAVERS.

[For all pupils from Senior Third to Continuation Classes, inclusive.]

Senior Beavers' Letter Box.

Dear Puck and Beavers,—This is my second letter to the Beaver Circle. I am getting along all right at school. I am in the Junior IV. Class now. In the winter we have great fun skating; I like to go to school. I have my hen yet; she is five years old. Her name is Rebecca. I had seven chickens to sell last summer, which she raised for me.

We have four horses; we call them Lady, Kate, Blucher, and Patricia. The last two are colts. We have six cows and three calves. We are thinking of selling one. We have a lot of poultry, Plymouth Rock and White Leghorn hens, ducks, turkeys, guinea fowls, and are going to get some geese.

I have composed several bits of poetry. I will enclose some that I really composed my own self, and no one helped me. I did not copy it from any book. This is it:

FAITH.

I've endured life's temptations,  
Its struggles and its strife,  
I've seen full many a sorrow,  
During my sea-tossed life.

I've carried all my burdens,  
Though sometimes forced to yield,  
I was carried through life's billows,  
God was my strength and shield.

I trust in the Lord to help me,  
And carry me safe through life's storm;  
I know if I trust and obey him,  
He'll keep me safe from harm.

No one but God can save me,  
And heed my bitter cries,  
I am anxiously watching and waiting,  
To die the death that never dies.

CAMERON K. K. SMITH.  
(Age 10, Jr. IV. Class.)

Crowland, Ont.

Dear Puck and Beavers,—I enjoy reading the letters of this Circle very much. We have about thirty chickens, and I take it as one of my chores to feed them. I did have a cute little gray kitten, but when I went away for a few days at Thanksgiving she ran away. I called her Tootsie. I was very sorry that I lost my kitty, but I could not even find any trace of her.

I will close with a few riddles, hoping that you, Puck, will pardon me for my neglect in not acknowledging that nice book which you sent me, for which accept many thanks.

Why is Sunday the strongest day in the week? Ans.—Because the rest are all week days.

Why do you go to bed? Ans.—Because the bed won't come to you.

What does an empty purse say to its owner? Ans.—There is no change in me. ANNA GERTRUDE BROWNLEE, Alvinston, Ont. (Sr. IV.).

Dear Puck and Beavers,—I thought I would write to you. This is my first letter, and if I do not see it in print I will not write again. I am 12 years old. I live within a hundred yards of a lake. I go in swimming, and in the winter I have good times skating and tobogganing. I go up on a steep hill, and then come down and away out on the lake. My pets are six sheep and two cats. I am going to get a little pup. I like to skeep when there are lots of jumps in the way.

My father is a farmer. He has taken "The Farmer's Advocate" for about five years. I have four brothers and a sister; three of my brothers are at Queen's University, Kingston, Ont. I go to school every day. I must close now, as you will be tired of reading.

ELWOOD SHALES (Age 12, Bk. IV.).  
Perth Road, Ont.

Dear Puck and Beavers,—I enjoy reading the letters in the Beaver Circle very much. My father has taken "The Farmer's Advocate" as long as I can remember. I wrote a composition a long time ago, but it was not in print, so I haven't got courage enough to write very much. I live about a mile and a half from school, and I have been going to school all this week myself. There are only five scholars going to our school, and there were only three there to-day. There are three boys and two girls. I go to school with Viola Seabrook. My teacher's name is Miss Campbell, and I like her very much. Well, as this is my first letter, I think I will have to quit. Good-bye, Beavers. MINNIE PRINGLE (age 10. Sr. III.). Chatsworth, Ont.

Dear Puck and Beavers,—My father has been taking "The Farmer's Advocate" for about a year, and I like reading the letters in your Beaver Circle very much. I live on a farm. We have one hundred acres. I have one sister; her name is Marjory. She is seven. She and I go to school nearly every day. We like our teacher fine; her name is Miss Robson. I am taking music lessons, and have taken six quarters. I have passed one examination in music, and am taking up the intermediate work. My music-teacher's name is Miss Cowan. I guess I will close, as my letter is getting long. EVELYN SEMPLE, (Age 13, Sr. IV. Class.)  
Hereward, Ont.

Dear Puck and Beavers,—We have taken "The Farmer's Advocate" for two months. I always read the letters, and enjoy them very much. I live on a farm consisting of one hundred acres. We have a maple wood, and in spring we sometimes cook syrup. I have four brothers and three sisters. My little sister and I go to school. Our farm is situated one-half mile from St. Clements and ten miles from Waterloo. I will close with the following riddles:

Why do chickens walk over the street? Ans.—To get on the other side.

Why does the dog wag his tail? Ans.—Because the tail cannot wag the dog.

Something goes up-hill and down-hill and yet never moves. Ans.—Street.

On which side has a dog the most hair? Ans.—Outside.

MAGDALENA KUNTZ.  
(Age 12, Jr. IV.).  
St. Clements, Ont.

Dear Puck and Beavers,—I got my prize quite a while ago, and thank you very much for it. I have neglected writing to Puck to thank him for it, but I hope he will forgive me. I didn't think that anyone could get a prize so nice, for doing such a small thing. I wonder when Puck will have another competition for us; I like them; don't you, Beavers?

I go to school and am in the Fourth Book. We have two miles to go. I don't think we Beavers are going to have many skates this winter, or slides down-hill, either. I think it must keep Puck busy thinking of things for us

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Send for six pairs of warm Cashmere Holeproof Hose. Six pairs are guaranteed to wear six months. If any wear, tear or break a thread in six months, you get new hose Free!

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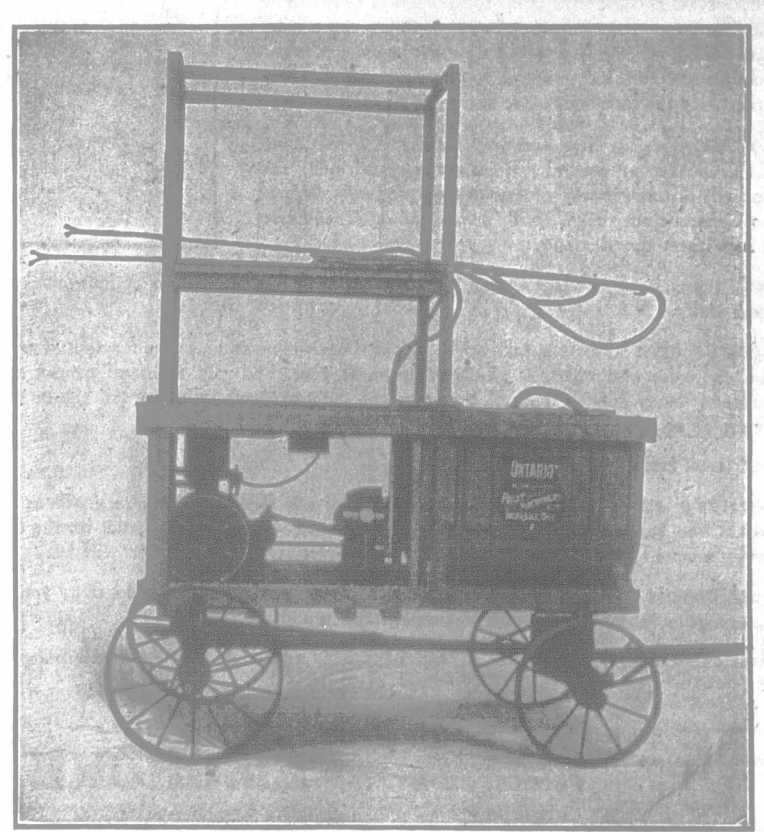
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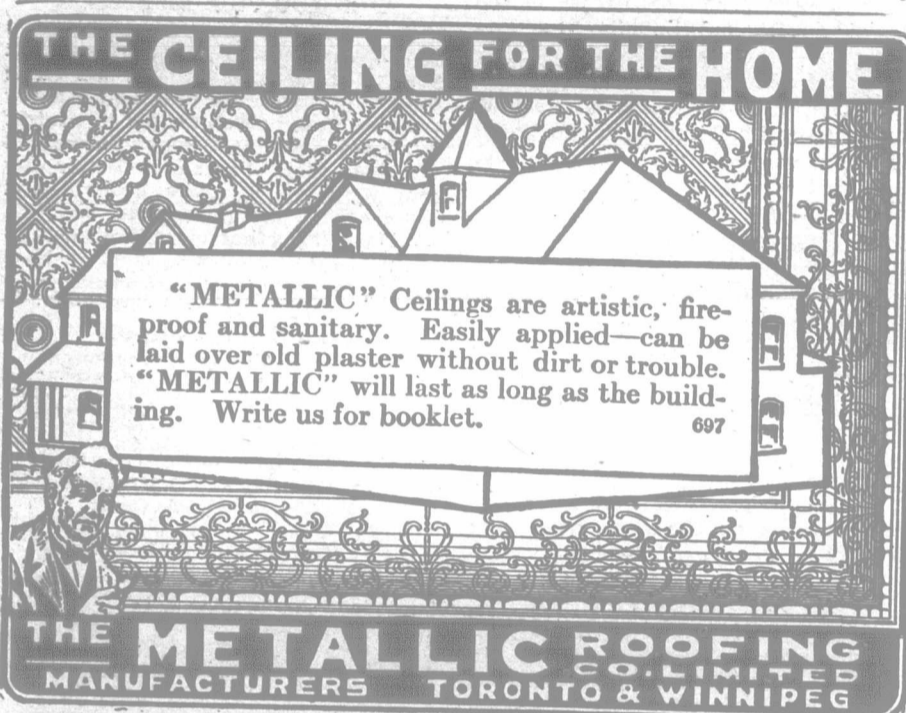
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Beavers to do, and publishing letters. I have taken one quarter in music lessons, and like it fine. I wish some of the Beavers of my age would correspond with me. I live on an island, and it is very lonely here, as there are few girls of my age.  
EDITH M. BATES.  
(Age 14, Book IV.).  
Allen, Wolfe Island, Ont.

Dear Puck and Little Beavers,—I thought I would try my luck. I have written four or five times, but my name was never in "The Farmer's Advocate." Puck, I'm going to tell you about a bird my mother has. It is a canary. I don't know why it doesn't sing. We've had it two years, and it has never sung yet. Puck, what would you think the best food for a canary? We live on a farm of about 200 acres. I go to school every day, and my teacher's name is Mr. Flanagan. He is a very nice teacher. I like him. I have a mile and a half to go to school, but my mother takes me all the time, and when she doesn't take me, my father does. Well, Puck, as my letter is getting long, I guess I will close with a few riddles.

What goes around and around the house, and sits in the corner? Ans.—Broom.  
What goes around and around the house, and leaves a white spot on a window? Ans.—Snow.  
What goes around and around the house, and leaves a black spot on a window? Ans.—Rain.  
LOU EVERETT (age 10; Bk. III.).  
Iroquois, Ont.

The bird seed that you buy is very good, but birdie also likes a bit of soda biscuit, cuttle-fish bone, cabbage, and lettuce, with plenty of clean water.

Dear Puck and Beavers,—The other morning when I went to the henhouse to feed the hens the cat followed me, and, finding the weather not too bad, he stayed there, and began to make his breakfast off a fine piece of meat which had been hung up for the hens.

When he was through with his breakfast he found that I had gone, so he started off for the barn again, but found the first door shut, so he started to go around, to get in from above. Before he got there, he decided not to go in, because the weather was so nice and there was no snow on the ground.

He started off for a walk. He walked across the barnyard, through the orchard, along the hillside, until he came to the lane, then he walked up to the house. He intended to walk past and go to the barn, but the open kitchen door looked so tempting that he went in for a few minutes to warm his feet. When he got inside the door, he went straight for the stove. He lay down under it and fell asleep, and stayed there until evening, then he stretched himself and started off towards the door, but finding it shut, he sat there and mewed until he was let out. Then he started off for the barn, but it had been snowing during the day, and the poor fellow had to wade in snow half-way from his knees to his body. When he reached the barn, he was sad to find the barn door shut, so he had to go around again and get in from above. When he got in, his feet were much colder than they would have been if he had gone straight home from the house in the morning, instead of going in to dry and warm his feet.  
IVAN GROH.  
Box 448, Preston, Ont.

Dear Puck and Beavers,—Being an interested reader of your valuable paper for some time, I thought I would write to the Beaver Circle, thinking perhaps some of the Beavers would like to know something of the important little town of Delaware, which is right near my home. It is situated on the Longwood's Road, and is nestled in between two big hills, with the River Thames flowing through it.

Delaware is generally known as a rather dead town, on account of there being no transportation other than the old-fashioned stage, drawn by horses, but still it is noted for its beautiful scenery, especially in the summer-time. Automobile tourists are heard to be constantly remarking the beauty of the eastern hill for its beautiful evergreen trees, and the western hill, over which is seen a gorgeous sunset. This hill is on our farm.

although the same one extends on and on along the river.

Well, this letter is getting pretty long for the first one, so I will have to close. Maybe I will write again some time, and tell you a little about a girl's farm life. Bye-bye, for this time.

MABEL RHINDRESS (age 14).  
Delaware P. O., Ont.

Dear Puck and Beavers,—As this is my first letter to your charming Circle, I thought I would write you a short one. I am staying at my grandfather's. I have been here over a year, and I like it fine. He takes "The Farmer's Advocate," and I enjoy reading the Beaver Circle letters very much.

I have travelled quite a lot. I was out to the Northwest, but I did not like living on the open prairie. I spent a lot of my time catching gophers.

I have about a mile to go to school. Our teacher's name is Miss Wedgerfield. We all like her fine.

FLORENCE DROLETT.  
Mindemoya, Manitoulin Island, Ont.

Dear Puck and Beavers,—I enjoy reading your letters, so I thought I would write to your club. I go to school every day. The school is on one corner of our farm. I have two sisters and one brother. One of my sisters and my brother go to school with me. My sister is going to try for the Entrance this year. My other sister, Vera, is too young to go to school yet. We have a great view from our place; we can see the Georgian Bay, although it is twelve miles away.  
ANNA E. GILMORE.  
(Age 11, Book Sr. III.).  
Fairmount P. O., Ont.

Dear Puck and Beavers,—I am taking the opportunity to write to you about "The Work I do at Home." Well, I am not a boy, but I do as much as most of the boys do after I come from school. When my brother goes to the city with hay, and when my father is attending threshing, I go out and feed the horses and carry in bedding. Then I bring in the calves and tie them in their stalls and feed them. As soon as I have them in I go after the cows and tie them in, feed them, and put in bedding.

Next morning, being Saturday, I turn out the cows and calves, and take them down about one-quarter of a mile to water. Then I come up and draw in corn with a horse and chain all day until 4 o'clock, and I did the same work as I do after I come from school.

I am not mentioning the work I do in the house.  
MYRTLE ALLEN.  
Douro, Ont.  
(Age 11, Jr. IV.).

Dear Puck and Beavers,—This is a letter about the work out of doors in the midsummer holidays.

We have two large farms and one small one, which makes a great deal of work for my father and one brother, so I try to be helpful. I get up about 6 o'clock in the morning, wash, dress for milking, eat my breakfast, then go out and milk my share of eight cows. I then saddle my horse, Dixie, take my dog Ken, and drive the cattle to our pasture farm. When I come back I rake the hay with Dixie—when it is the haying season—I love to do this work. I am only happy when I'm driving horses and working out of doors. I am much disappointed when I am asked to wash dishes or help mamma in the house. I hate girl's work, anyway; boys have much more pleasant work. They have the fresh air, sunshine, and plenty of exercise, while we girls have the same old work every day, and never a change.

However, I live out of doors even though I am not a boy.

On Saturday I drive my mother to market in the city. I feed and care for my horse, and if it is a bright day I take my city cousin for a drive around the city for half the day. They seem much afraid of Dixie becoming afraid of the street-cars, but she has so much confidence in me she feels perfectly safe.

Now, when the haying season is over and the hay in the barns, I am the "little chore girl" that the poet, Whittier, speaks of in his poem, "Telling the Bees," that we studied in school last week.

I have drawn the water when the men



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For wholesome, digestible "eats"  
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ROSES crust.

Upsets Pie Prejudice *without* upsetting the  
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Great for Pie Crust—top and bottom.

And Puff Paste and *Difficult Things*.

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All soppy with the rich red juice of the  
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Put the FIVE ROSES "crust end" about 'em.  
See the hungry wedges fade behind busy milk teeth.

At Pie Time—

Use FIVE ROSES.

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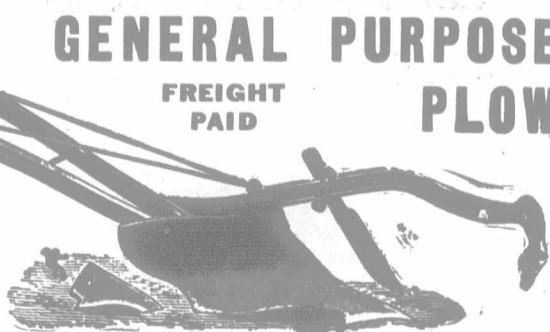
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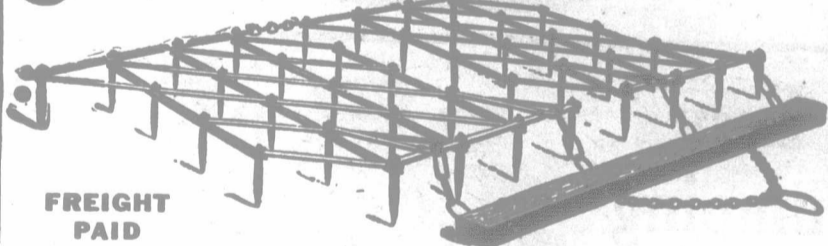
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were digging the well, picked the apples, brought the cows, and many other things. I make my work a pleasure, because I love my pony, dog, and calf, Bobbie, and pride myself in having them always looking their best.

They are my pets, and I feel as if I am a truly "out-of-doors girl," and am not afraid of work. I can also do my share in the house.

One Saturday my mother went to the

city and left me as housekeeper. I scrubbed and arranged the house for Sunday. Then I undertook to bake. This, however, was not exactly a success. My cookies were, I think, "good dog biscuits." However, I shall learn how to

bake some day, I hope. Wishing success to the Beaver Circle.

FLORENCE ALLEN,  
(Age 13, Jr. IV. Class),  
Douro, Ont.

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### Rebecca of Sunnybrook Farm.

By Kate Douglas Wiggin.  
[Serial rights secured from Houghton Mifflin Publishing Company, New York.]  
XIX.  
Deacon Irsael's Successor

It was a very small meeting, aunt Miranda, began Rebecca, "and the missionary and his wife are lovely people, and they are coming here to stay all night and to-morrow with you. I hope you won't mind."

"Coming here!" exclaimed Miranda, letting her knitting fall in her lap, and taking her spectacles off, as she always did in moments of extreme excitement. "Did they invite themselves?"

"No," Rebecca answered. "I had to invite them for you; but I thought you'd like to have such interesting company. It was this way."

"Stop your explainin', and tell me first when they'll be here. Right away?"

"No, not for two hours—about half past five."

"Then you can explain, if you can, who gave you any authority to invite a passel of strangers to stop here over night, when you know we ain't had any company for twenty years, and don't intend to have any for another twenty,—or at any rate while I'm the head of the house."

"Don't blame her, Miranda, till you've heard her story," said aunt Jane. "It was in my mind right along, if we went to the meeting, some such thing might happen, on account of Mr. Burch knowing father."

"The meeting was a small one," began Rebecca. "I gave all your messages, and everybody was disappointed you couldn't come, for the president wasn't there, and Mrs. Matthews took the chair, which was a pity, for the seat wasn't nearly big enough for her, and she reminded me of a line in a hymn we sang, 'Wide as the heathen nations are,' and she wore that kind of a beaver garden-hat that always gets on one side. And Mr. Burch talked beautifully about the Syrian heathen, and the singing went real well, and there looked to be about forty cents in the basket that was passed on our side. And that wouldn't save a heathen baby, would it? Then Mr. Burch said, if any sister would offer entertainment, they would pass the night, and have a parlor meeting in Riverboro to-morrow, with Mrs. Burch in Syrian costume, and lovely foreign things to show. Then he waited and waited, and nobody said a word. I was so mortified I didn't know what to do. And then he repeated what he said, and explained why he wanted to stay, and you could see he thought it was his duty. Just then Mrs. Robinson whispered to me and said the missionaries always used to go to the brick house when grandfather was alive, and that he never would let them sleep anywhere else. I didn't know you had stopped having them, because no travelling ministers have been here, except just for a Sunday morning, since I came to Riverboro. So I thought I ought to invite them, as you weren't there to do it yourself, and you told me to represent the family."

"What did you do—go up and introduce yourself as folks was goin' out?"

"No; I stood right up in meeting. I had to, for Mr. Burch's feelings were getting hurt at nobody's speaking. So I said, 'My aunts, Miss Miranda and Miss Jane Sawyer, would be happy to have you visit at the brick house, just as the missionaries always did when their father was alive, and they sent their respects by me.' Then I sat down; and Mr. Burch prayed for grandfather, and called him a man of God, and thanked our Heavenly Father that his spirit was still alive in his descendants (that was you), and that the good old house where so many of the brethren had been cheered and helped, and from which so many had gone out strengthened for the fight, was still hospitably open for the stranger and wayfarer."

Sometimes, when the heavenly bodies are in just the right conjunction, nature seems to be the most perfect art. The word or the deed coming straight from the heart, without any thought of effect, seems inspired.

A certain gateway in Miranda Sawyer's soul had been closed for years; not all at once had it been done, but gradually, and without her full knowledge. If Rebecca had plotted for days, and with the utmost cunning, she could not have effected an entrance into that forbidden country, and now, unknown to both of them, the gate swung on its stiff and rusty

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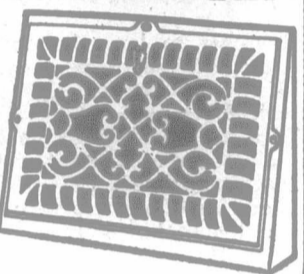
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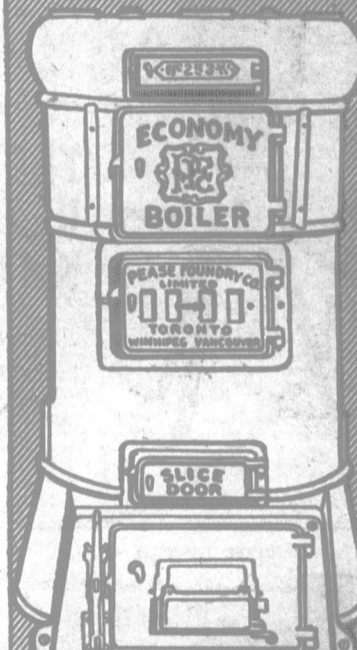
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hinges, and the favoring wind of opportunity opened it wider and wider as time went on. All things had worked together amazingly for good. The memory of old days had been evoked, and the daily life of a pious and venerated father called to mind; the Sawyer name had been publicly dignified and praised; Rebecca had comported herself as the granddaughter of Deacon Israel Sawyer should, and showed conclusively that she was not "all Randall," as had been supposed. Miranda was rather mollified by and pleased with

the turn of events, although she did not intend to show it, or give anybody any reason to expect that this expression of hospitality was to serve for a precedent on any subsequent occasion.

"Well, I see you did only what you was obliged to do, Rebecca," she said, "and you worded your invitation as nice as anybody could have done. I wish your aunt Jane and me wasn't both so worthless with these colds; but it only shows the good of havin' a clean house, with every room in order, whether open or

shut, and enough victuals cooked so't you can't be surprised and belittled by anybody, whatever happens. There was half a dozen there that might have entertained the Burches as easy as not, if they hadn't 'a' been too mean or lazy. Why didn't your missionaries come right along with you?"

"They had to go to the station for their valise and their children."

"Are there children?" groaned Miranda. "Yes, aunt Miranda, all born under Syrian skies."

"Syrian grandmother!" ejaculated Miranda (and it was not a fact). "How many?"

"I didn't think to ask; but I will get two rooms ready, and if there are any over I'll take 'em into my bed," said Rebecca, secretly hoping that this would be the case. "Now, as you're both half sick, couldn't you trust me just once to get ready for the company? You can come up when I call. Will you?"

"I believe I will," sighed Miranda reluctantly. "I'll lay down side of Jane

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in our bedroom and see if I can get strength enough to cook supper. It's half past three—don't you let me lay a minute past five. I kep' a good fire in the kitchen stove. I don't know, I'm sure, why I should have baked a pot o' beans in the middle of the week, but they'll come in handy. Father used to say there was nothing that went right to the spot of the returned missionaries like pork 'n' beans 'n' brown bread. Fix up the two south chambers, Rebecca."

Rebecca, given a free hand for the only time in her life, dashed upstairs like a whirlwind. Every room in the brick house was as neat as wax, and she had only to pull up the shades, go over the floor with a whisk broom, and dust the furniture. The aunts could hear her scurrying to and fro, beating up pillows and feather beds, flapping towels, jingling crockery, singing meanwhile in her clear voice:—

"In vain with lavish kindness  
The gifts of God are strown;  
The heathen in his blindness  
Bows down to wood and stone."

She had grown to be a handy little creature, and tasks she was capable of doing at all she did like a flash, so that when she called her aunts at five o'clock to pass judgment, she had accomplished wonders. There were fresh towels on bureaus and washstands, the beds were fair and smooth, the pitchers were filled, and soap and matches were laid out; newspaper, kindling, and wood were in the boxes, and a large stick burned slowly in each airtight stove. "I thought I'd better just take the chill off," she explained, "as they're right from Syria; and that reminds me, I must look it up in the geography before they get here."

There was nothing to disapprove, so the two sisters went downstairs to make some slight changes in their dress. As they passed the parlor door Miranda thought she heard a crackle and looked in. The shades were up, there was a cheerful blaze in the open stove in the front parlor, and a fire laid on the hearth in the back room. Rebecca's own lamp, her second Christmas present from Mr. Aladdin, stood on a marble-topped table in the corner, the light that came softly through its rose-colored shade transforming the stiff and gloomy ugliness of the room into a place where one could sit and love one's neighbor.

"For massy's sake, Rebecca," called Miss Miranda up the stairs, "did you think we'd better open the parlor?"

Rebecca came out on the landing braiding her hair.

"We did on Thanksgiving and Christmas, and I thought this was about as great an occasion," she said. "I moved the wax flowers off the mantelpiece so they wouldn't melt, and put the shells, the coral, and the green stuffed bird on top of the what-not, so the children wouldn't ask to play with them. Brother Milliken's coming over to see Mr. Burch about business, and I shouldn't wonder if Brother and Sister Cobb happened in. Don't go down cellar, I'll be there in a minute to do the running."

Miranda and Jane exchanged glances. "Ain't she the beatin'est creetur that ever was born int' the world!" exclaimed Miranda; "but she can turn off work when she's got a mind to!"

At quarter past five everything was ready, and the neighbors, those at least who were within sight of the brick house (a prominent object in the landscape when there were no leaves on the trees), were curious almost to desperation. Shades up in both parlors! Shades up in the two south bedrooms! And fires—if human vision was to be relied on—fires in about every room! If it had not been for the kind offices of a lady who had been at the meeting, and who charitably called in at one or two houses and explained the reason of all this preparation, there would have been no sleep in many families.

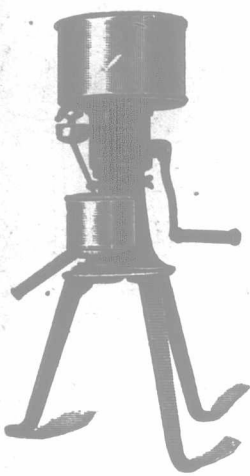
The missionary party arrived promptly, and there were but two children, seven or eight having been left with the brethren in Portland, to diminish travelling expenses. Jane escorted them all upstairs, while Miranda watched the cooking of the supper; but Rebecca promptly took the two little girls away from their mother dressed them of their wraps, smoothed their hair, and brought them down to the kitchen to smell the beans.

There was a bountiful supper, and the presence of the young people robbed it all of possible stiffness. Aunt Jane helped clear the table and put away the food, while Miranda entertained in the parlor;

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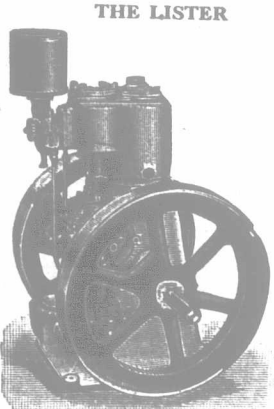
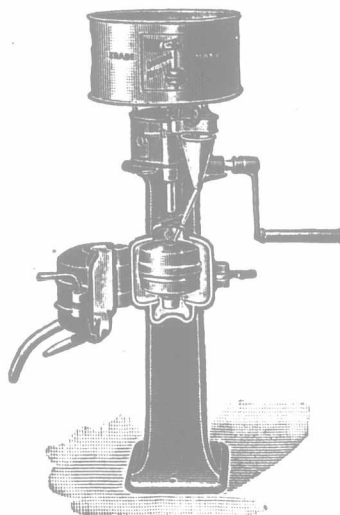


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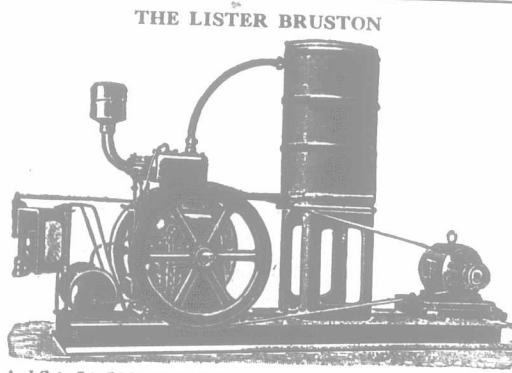
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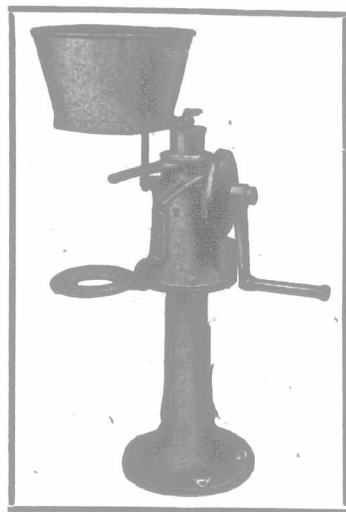
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but Rebecca and the infant Burches washed the dishes and held high carnival in the kitchen, doing only trifling damage—breaking a cup and plate that had been cracked before, emptying a silver spoon with some dishwater out of the back door (an act never permitted at the brick house), and putting coffee grounds in the sink. All evidences of crime having been removed by Rebecca, and damages repaired in all possible cases, the three entered the parlor, where Mr. and Mrs. Cobb and Deacon and Mrs. Milliken had already appeared.

It was such a pleasant evening! Occasionally they left the heathen in the blindness bowing down to wood and stone, not for long, but just to give themselves (and him) time enough to breathe, and then the Burches told strange, beautiful marvelous things. The two smaller children sang together, and Rebecca, at the urgent request of Mrs. Burch, seated herself at the tinkling old piano and gave "Wild roved an Indian girl, bright Alfarata" with considerable spirit and style.

At eight o'clock she crossed the room, handed a palm-leaf fan to her aunt Miranda, ostensibly that she might shade her eyes from the lamplight; but it was a piece of strategy that gave her an opportunity to whisper, "Now about cookies?" "Do you think it's worth while?" sibilated Miss Miranda in answer.

"The Perkinses always do." "All right. You know where they be." Rebecca moved quietly towards the door, and the young Burches cataracted after her as if they could not bear a second's separation. In five minutes they returned, the little ones bearing the plates of thin caraway wafers,—hearts, diamonds, and circles daintily sugared, and flecked with caraway seed raised in the garden behind the house. They were a specialty of Miss Jane's, and Rebecca carried a tray with six tiny crystal glasses filled with dandelion wine, for which Miss Miranda had been famous in years gone by. Old Deacon Israel had always had it passed, and he had bought the glasses himself in Boston. Miranda admired them greatly, not only for their beauty but because they held so little. Before their advent the dandelion wine had been served in sherry glasses.

As soon as these refreshments—commonly called a "colation" in Riverboro—had been genteelly partaken of, Rebecca looked at the clock, rose from her chair in the children's corner, and said cheerfully, "Come! time for little missionaries to be in bed!"

Everybody laughed at this, the big missionaries most of all, as the young people shook hands and disappeared with Rebecca.

(TO BE CONTINUED.)

### News of the Week.

Militant suffragettes in England during the week dynamited a new house which was being built for Chancellor Lloyd-George, and burned the tea pavilion in the Kew Gardens. Mrs. Pankhurst, who has declared herself responsible for the former, will be prosecuted.

On account of recent land-slides, 5,000,000 cubic yards extra of material will have to be excavated from the Panama Canal bed.

Cincinnatus Heine Miller, better known as "Joaquin Miller," the poet, of California, died in his cabin near San Francisco, on February 17th. His best-known work is "Songs of the Sierras."

It is proposed that a monument to the memory of Capt. R. N. Scott and his companions be erected in St. Paul's Cathedral, London, and it has been suggested that Mrs. Scott, who is a sculptor of note, and was a pupil of Rodin, be entrusted with the work.

Francisco Madero, former President of Mexico, and Jose Pino Suarez, former Vice-President, were shot and killed on February 23rd, while being taken from the National Palace to the penitentiary. A few days previously he had been forced from the Presidency and arrested, with those of his ministers who remained loyal to him, General Huerta being proclaimed provisional President. The climax, induced by the shooting of Madero, may compel American intervention. At present strict martial law rules in the City of Mexico.

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Cream—Sweet or sour, bought at highest Toronto prices, at any point in Ontario. We furnish cans, pay promptly—haven't paid less than 32 cents for weeks. Write: TORONTO CREAMERY CO., Ltd., Toronto

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Seed Corn, Barley, Oats for Sale—High-grade seed of Improved Leaming Corn, Newmarket Oats of pedigreed stock, and O. A. C. 21 Barley. For samples and prices write: W. A. BARNET, Mgr. Gov. Exp. Farm Harrow, Essex Co.

Farm for sale—To close an estate. 188 acres, six miles south from Hamilton, Wentworth Co., Glanford Tp. Loamy soil, no waste land, 35 acres timber, two good bank barns, flowing spring, frame house, near stone road. Address: ROBERT CALDER, Ancaster, Ont.

"Big commission for Reliable Agents. Exclusive territory to be allotted for ("The Everyday Vacuum Cleaner"). Best hand power machine on the market. Will sell by hundreds this spring. Write London Specialty Co., 94 Fullarton St., London, Ont.

WANTED—CUSTOM TANNING—Send me your cattle and horse hides, and have them tanned and made into robes and coats. Deerkins tanned for buckskin, also made into mitts and gloves. We tan all kinds of hides, skins and furs. Send them to me and have them dressed right. B. F. BELL, DELHI, ONT.

## ANNOUNCEMENT *of* a NEW BOND COMPANY

Of interest to financial men and to the public generally is the formation of the Bankers Bond Company, Limited, with a capital of One Million Dollars, headquarters at Toronto.

The President of the Company is Mr. F. W. Baillie, the Vice-President, Mr. F. P. Wood, and, in addition, a group of prominent Canadian banking men are interested both as investors and advisors.

The Bankers Bond Company will conduct the customary bond and preferred stock business, and aims to be of special service to the public in other ways.

It will assist worthy industries, business men and others who have not access to the customary channels for capital, to expand by financing the needed money. Canada has many industries only needing capital to become large and prosperous concerns.

Directed by men experienced in both investments and banking, the Bankers Bond Company should render valuable service to investors and business men. This should especially apply in a country such as Canada, so replete on one hand with opportunities for investment wherein judgment and foresight are needed, and, on the other, with opportunities for business expansion, provided financial assistance is forthcoming in either small or large amounts at crucial periods.

The Bankers Bond Company is the outcome of steady and important growth of the investment business done by the firm of Baillie, Wood and Croft, Bankers and Brokers, Toronto, during a period of ten years. The latter firm will hereafter confine themselves to Stock Exchange business.

The Bankers Bond Company, Limited, have engaged as premises the ground floor of the Imperial Life Building, Victoria St., Toronto.

**BANKERS BOND COMPANY**  
**LIMITED**  
**TORONTO, CANADA.**



**The New Public Health.**

(Continued from page 374.)

transmitted from man to man. To prevent cattle tuberculosis in the human, we do not need to take into account existing cases of cattle tuberculosis in the human, but only existing cases of cattle tuberculosis in cattle. If we free our cattle of cattle tuberculosis, we shall free our humans of cattle tuberculosis also; and this is the only practical way that cattle tuberculosis in the human can be abolished, unless, and until the human race abandons the use of raw cow's milk.

**THE ABOLITION OF HUMAN TUBERCULOSIS.**

How can we abolish human tuberculosis? Exactly as we can, and some day shall, abolish any and all other infectious diseases, by killing off the germ that causes it, exactly as we have almost abolished the race of buffalo by killing off the existing buffalo. We know well enough that when the last buffalo is dead, no man, however wise, no government, however powerful, could ever produce another buffalo. So, once the existing diphtheria or scarlet fever or tuberculosis germs are all dead, there is no way under heaven by which these particular germs could be produced again. Those which exist now are not evolved from dirt any more than are buffalo or roses. Those which are living to-day are simply the descendants of those which existed yesterday, and so on, just as in the case of buffalo or roses, back to the dawn of history. Once any race of plant or animal is wiped out, it can never be redeveloped; and the tuberculosis germ, just as well as the germs of diphtheria or typhoid fever, can be abolished exactly as the megatherium or dinosaur has been abolished, i. e., by the killing of the existing individuals.

But consider the enormous numbers and the tiny size of germs, and that they are present everywhere,—in air, water, food, milk, dust; in and on everything we touch or taste or handle. It is quite impossible to kill them all. True, germs are everywhere, but not disease germs. We know some fifteen hundred or more species of germs, and hardly fifty of these produce disease, while only two, already mentioned, produce tuberculosis in the human. That these are very small and cannot be slaughtered individually like buffalo, is true, but it is also true that their very minuteness means that billions can be slaughtered in one operation, if they are only kept together. As to tuberculosis germs being everywhere, all over, outdoors and indoors—this is not true. No more important fact in public health has ever been formulated than this, due to that keen leader in public health, Chapin of Providence: The germs that produce disease are not ubiquitous, not in dust everywhere, water everywhere, milk everywhere. They are chiefly, almost wholly, in the bodies of a few (relatively) people, or animals; and when they escape from those bodies, where alone they can find the peculiar food, high temperature, abundant moisture, and darkness which they need, they promptly die or become harmless. Even in water, milk, food, etc., into which they may be introduced from infected persons, their lives are short, and they must quickly reach a new living victim, or die.

To abolish any one race of disease germs is far easier than to destroy some much larger things. Thus, to abolish flies means not only killing all flies, indoors in all houses everywhere, in all stables everywhere, in and around all dwellings everywhere, but also throughout all fields and forests, mountains and valleys everywhere, because flies are hardy outdoor beings as well as indoor beings. They can breed and flourish almost anywhere, where any kind of food, even in vanishing quantity, is to be had. Moreover, they can move of their own volition with promptness and despatch, have quick eyes, and quicker wings to escape designing enemies, and in a thousand ways can take care of themselves.

Disease germs, in contrast with the fly, are very tiny and helpless particles of protoplasm, having no eyes to see an enemy, no nose to smell him, no means of running away from him. They cannot flourish on almost any food, but need the living tissues of the human body; they cannot grow at almost any temperature, but must have the heat of

the human body. In brief, they are not merely indoor plants: they are incubator plants, and cannot grow, thrive, or reproduce themselves in nature, except in the incubators—our bodies, or, in a few cases, animal bodies, provide them. Hence, if we are able to take a visual census of all the living tuberculosis or scarlet-fever or diphtheria germs in the world we should see them, not in the dust everywhere, the water everywhere, the food everywhere, etc., but in a very few places only, and those places would be, in almost all cases, the bodies of humans (or animals).

Indeed, we can foretell just about what the census of tuberculosis germs in any district of the temperate zone would show. It would show about one person in every seven hundred of the population carrying a large number of active, living, growing germs, in the lungs,—germs that were escaping to the outside and reaching other persons' mouths. It would show a number of other persons in whom the germs were present in joints, bones, glands, etc., but not escaping to others; and it would show a number of persons affected in the lungs, and, later, likely to develop to the point where the germs could escape, but practically harmless to others so far. Beyond this, hunt high, hunt low, search garbage barrels, manure heaps, dead animals, dusty streets, sewage, water, foods, milk, etc., and human tuberculosis germs, alive, growing, capable of producing the disease, would not be found. True, in the immediate neighborhood of the "open" cases, the sputum they throw out, their mouth-spray, and their hands, would show the germs, and things they spit into, mouth-spray into, or touch, would show for a short time a few; but these would be dying or already dead, holding out danger to other persons only during the short time which elapses between leaving their happy homes in the human lung and death outside from starvation and dying. This applies, not to tuberculosis germs alone, but practically to all the germs of the ordinary infectious diseases, anthrax and tetanus forming two chief exceptions, both rare diseases here.

No person energetic enough to advocate the abolition of flies should hesitate a moment to advocate the far simpler, smaller, easier, and far more important work of abolishing the germs that alone can make the fly a danger.

In brief, the method, and, I believe, the only rapid, complete, effectual method of abolishing human tuberculosis, is this: find the "open" cases and prevent the spread from them of the germs they alone throw out in numbers and condition to be feared. That means, find the one person in every seven hundred whose infection threatens all the rest, and supervise him just enough to keep his discharges from entering other people's mouths.

How is this one person in every seven hundred to be found? Not without ingenious, skilful, deliberate, sagacious, well-trained hunters, epidemiologists, as devoted and persistent in their work as the average insurance agent is in his,—men who devote themselves to the abolition of tuberculosis as wholeheartedly as any merchant does to making money.

And how? Where shall we begin? Must we canvass the whole population one by one? True, that would do it, but epidemiology has found a simpler, keener, more scientific, far more economic plan. Begin with the known cases, and search the zones of infection surrounding each, for mild, unrecognized, and concealed cases. (In tuberculosis, the search for carriers is probably unnecessary, certainly at the present time.)

But why not concentrate on the incipient lung case, the case that may be cured, and by preventing this case from going on to the "open" infectious stage, get rid of danger to others thus, instead of by attention to the open case? For several reasons, the abolition of tuberculosis through care of incipient lung cases only, cannot at present be accomplished:

1st.—Because incipient cases, in the distantly incipient "non-open" stage, are discovered, perhaps, are discoverable, in a covered, perhaps are discoverable, in a very small percentage only of their total number.

2nd.—Because a large proportion of the incipients so found would not go on in any case, whether found or not, to the

**When you buy a Sherlock-Manning 20th Century Piano You positively get "Canada's Biggest Piano Value,"**

This is not merely an advertising claim. It's the plain statement of a fact which we can prove to your entire satisfaction.

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Ask about its many quality features—Otto Higel Double Repeating Action; Poehlmann Wire (the best imported piano wire); Weickert Felt Hammers; the famous Billings Brass Flange (the flange that endures); and other important features.

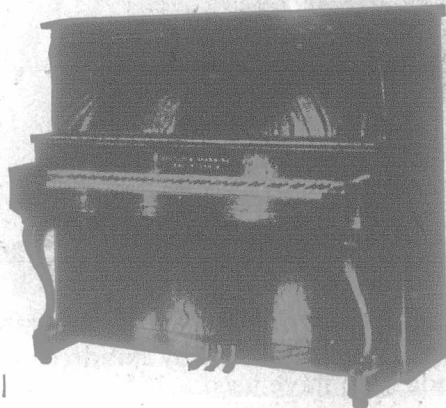
Then, when you've found out all there is to know about the Sherlock-Manning 20th Century Piano—when you've been convinced that this instrument

represents the best piano value in the Dominion—then, ask us its price. You'll find it much less than you expected.

But there are sound reasons to account for the lower price as well as for the greatest excellence of these SPLENDID instruments.

Write us today for full particulars and handsome art catalogue—and we'll tell you how you can save \$100.00 on the purchase of as fine a piano as can be made at any price. We'll give you plain facts

which will prove to your satisfaction or the satisfaction of any unbiased master musician that the Sherlock-Manning is "Canada's Biggest Piano Value."



LOUIS XV.—STYLE 80

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**Big Poultry Book The New 1913 Prairie State FREE Catalog**

Just send us your name on a postcard and we will mail you at once a complete copy of this valuable book. No poultry owner—especially beginners can afford to be without it. Nothing like it has ever been published before. It is a condensed handbook of information that tells you in plain words just what you want to know about poultry raising. It shows how the most successful poultry owners make big money—how you can make the business pay well from the start with very little capital.

**Partial List of Contents**

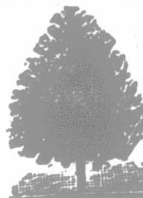
- Which is the Best Breed?
- The Intensive or Extensive Plan
- How to Feed Laying, Growing Stock
- What System Shall Poultrymen Use?
- Fattening—Feeding Little Chicks
- How to Keep Poultry Free from Lice
- Colony House Methods
- Care of Brooders
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Do it today. Thousands of dollars and years of time have been spent in finding out the secrets of poultry success which you will find inside this FREE book. Before you spend a dollar for any kind of incubator or brooder we want you to have this big book and get posted. We want every man, woman or child we start in the poultry business to make money. That's why 75 pages of this free book contain no advertising—just facts that you ought to know. We want you to see how one man made \$12,000 last year—why the most successful poultrymen use

**Prairie State Incubators and Brooders**

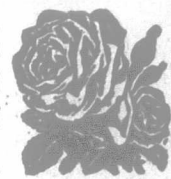
We want you to see for yourself why Prairie State machines can be depended upon to hatch "chicks that live". Learn about the Sand Tray and Universal Hover Brooder. Send for Catalog. Ship your eggs to us and get highest market price. Box 316 GUNN, LANGLOIS & CO., Ltd. Montreal, Canada (3) Manufacturers in Canada of the Famous Prairie State Incubators.



**Central Nurseries Quality Stock**

Apple, Pear, Plum, Cherry, Peach, Nut and Ornamental Trees in variety. Grape Vines, Berry Plants, Herb. St. Regis, Himalaya and Cuthbert. Think of berries from July till October. Shade Trees, Evergreens, Cal. Privet, Hedge Shrubs and Roses. Just the kinds wanted. Send for our Priced Catalogue, and order quick for variety.

No agents. A. G. HULL & SON, St. Catharines, Ont.





## "I Doubled My Crops"

This is the story that can be told by hundreds of happy farmers in Canada who have used a 10% Potash Fertilizer.

One farmer in Nova Scotia who ordinarily raised a crop of 120 bushels of potatoes with no fertilizer managed to raise 302 bushels with a low-grade fertilizer, but with a 10% Potash Fertilizer, he raised 442 bushels per acre off his land. We can tell you of many other cases just like this.

If you want to do the same on your farm, you must learn quickly that

## "Potash Pays"

EVERY crop you raise takes from your land just so much Nitrogen, Phosphoric Acid and POTASH. This is the food the plants eat. You must help Nature put back this plant food into your soil if you wish to raise good crops each year. You probably understand this, and it is likely you use some sort of fertilizer, but if you are not using a 10% POTASH FERTILIZER, you are not getting the best crops from your land. This is because every plant eats three times as much POTASH as it does Phosphoric Acid. Ordinary low-grade fertilizers contain from 6% to 8% Phosphoric Acid and but 2% POTASH. Certainly this is not three times as much POTASH. Therefore, you want to raise this percentage to 10% of POTASH.

IF YOU want to raise a bumper crop this year, do this: Insist that your dealer provide you with a 10% POTASH Fertilizer. If he cannot do this, and you have to buy a low-grade fertilizer, add enough POTASH to it to raise it to 10% POTASH. We will tell you exactly how to do this, free. You can mix your own fertilizer at home if you want to, and our experts will tell you how to do this, too, without charge.

GET in touch with your fertilizer dealer NOW, so that he will be sure to have POTASH on hand for you when you need it. Send us your dealer's name and we will send you a free booklet telling how to properly raise the kind of crops you deal in. It is written by some of the very best Agricultural Experts in the world, and will surely be of great interest to you. Simply write us, stating your dealer's name and telling us the kind of crops you raise.

If you want your POTASH now and your dealer has not got it, we will sell it to you direct. Simply let us know your requirements. The main thing to do is to ACT NOW. Write us to-day.

**German Kali Works, Inc., Temple Bldg., Toronto, Ont.**

We have Muriate and Sulphate of POTASH, stored, ready for immediate shipment at St. John, N. B., Montreal and Toronto.



## "The Gun and Its Development"

Is The Title of the World's Gunnery encyclopedia, by W. W. Greener. It contains over 800 pages, and more than 1,000 illustrations of every type of weapon, from the earliest arbalest to the perfect Greener Single Trigger Ejector, mailed for \$3.00.

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W. W. Greener, 63 and 65 BEAVER HALL HILL Montreal, P.Q.

open stage; and the time and money and efforts spent in finding and supervising them would have been relatively wasted.

3rd. Because a certain proportion of the incipients so found would go on, in any case, to the open stage, and thus become infectious cases, despite all efforts. In these alone would the efforts expended be of service in preventing new cases. The trouble is that, in the incipient stage, it could not be determined whether or not the case would so develop.

4th. Because the time and attention devoted to incipients, to prevent them becoming open cases, would imply, as it has, alas, so far implied, neglect of the advanced "open" cases, in which the danger of infection is so immensely greater.

5th. Because if all the incipient cases were discovered, they would form a mass of persons so great as to be beyond handling properly by any at present even dreamed of force of attendants, etc. If, as at present, only a very small proportion were found, the actual situation would not be materially changed.

"Would you then cease the care of incipient cases in sanatoria, and concentrate wholly on the advanced case?"

No. First, because the tuberculosis sanatoria, intended though they are for incipient cases, really handle very many "open" cases, and to that extent prevent new infections; secondly, because the tuberculosis sanatoria do, in a measure, fulfil their proper function of cure for incipients, and even early "open" cases, to some extent, and hence save life. But as a means of abolishing tuberculosis, the ordinary tuberculosis sanatorium for incipient cases is quite hopeless.

The thing to do first is, find the recognized "open" cases, whether they be in early, advanced, or late stages, and place them where they can spread the disease no further. Then search the "zones of infection" surrounding them, i. e., their relatives and associates, for mild, unrecognized or concealed cases, and also for incipients, handling all "open" infectious cases thus found, in the same manner. This system would begin at the right end by stopping further infections, and would incidentally find those early "open" and "non-open" incipient cases wherein sanatorium treatment would be of most avail.

### SUMMARY.

Tuberculosis is a typical infectious disease, and it must be handled on the same principles as any other infectious disease; hence, by blocking the routes of infection, but chiefly by finding the sources and preventing spread thence.

Of the five great routes of infection,—water, food, flies, milk, and contact,—human tuberculosis travels chiefly by contact, through sputum, mouth-spray, and hands, directly, or almost directly, from patient to prospective patient. Practically, it is spread exactly as scarlet fever or diphtheria is spread. Public flies and public food supplies are comparatively insignificant conveyors. Public water supplies are almost negligible, and public milk supplies act chiefly in conveying cattle tuberculosis to man, although, if the milk be handled by tuberculous humans, it may convey human tuberculosis also.

It is evident, then, that blocking of routes, since the chief one is contact, involves chiefly the far more important measure of finding the source, just as in scarlet fever, or diphtheria, etc., and if these sources are found and prevented from access to the routes, the routes may be disregarded. The measures for finding the human sources, practically the "open" cases of lung tuberculosis in the human, are epidemiological.

The measures necessary for finding the animal sources (infected milk cows) are the well-known tuberculin test of herds, with proper repetitions, and the elimination of the tuberculous animals. Serious enough as cattle tuberculosis in the human is, its prevalence, nevertheless, is so much less than that of human tuberculosis and its infectiveness in the human is so nearly negligible, that, if our efforts were concentrated wholly on human tuberculosis, more cases and more deaths would be prevented, in a year's work, than efforts on bovine tuberculosis, however successful, could possibly achieve in ten years.

Director, Institute of Bacteriology

## Trade Topics.

Three advertisements in this issue of The Bateman-Wilkinson Co., Ltd., Toronto, deserve careful attention, in view of the coming planting and spraying operations of the approaching spring. The Iron Age Potato Planter, and the Iron Age Sprayer, are the lines specially mentioned, but they offer other good farm tools. Look up the advertisements.

Are you now planning your summer's work? If not, you should be, and the planning should include the consideration of all devices intended to lighten labor on the farm. Hay carriers are one of these. The type manufactured by the Stratford Manufacturing Company, Ltd., Stratford, Ont., are said to require less a hay-carrier outfit. Plan to install a hay-carrier outfit. See the advertisement in another column, and write for particulars.

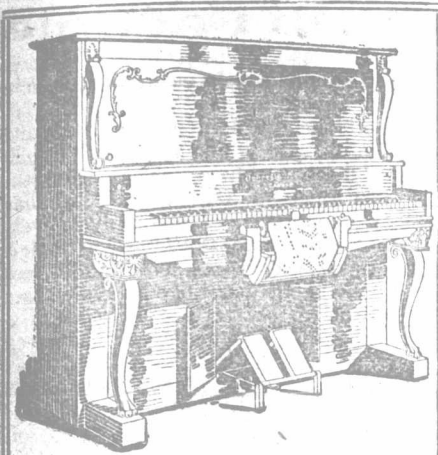
The L. C. Prime Company, Limited, St. John, N. B., have received a cable announcing that a Royal Warrant has been issued to the Manufacturers of "Molassine Meal." This means that the Molassine Co. is entitled to call themselves purveyors to the Royal Family, and to use the Royal Arms. This is considered a great honor. Molassine Meal has been recognized in Great Britain for many years as a leading livestock food. See the advertisement in another column.

It never pays to roof a good building with poor material. Leaky roofs mean loss. Genasco roofing, made of Trinidad Lake asphalt, the natural waterproof material from the famous asphalt lake in Trinidad, is guaranteed by the manufacturers to be sun-proof, wind-proof, rain-proof, heat-proof, cold-proof, spark-proof, alkali-proof, and acid-proof. This smooth-surface roofing, with the "Kant-leak Kleet," is advertised elsewhere in this issue. Look up the advertisement.

One of the big problems for the farmer is how to get satisfactory help. For some the Dominion and Provincial Governments have established departments to try and solve this problem, but year after year the needs of the farmer are growing. The Cunard Steamship Company, who have established a Canadian service, have opened up an Immigration Department with headquarters at Toronto, with J. B. Hoseson as their representative, with the object of getting in close touch with farmers' clubs and agricultural associations, principally in the Province of Ontario, with the object of supplying labor from the Old Country for the farmer. Their scheme seems to be to ask the farmer to fill out an application form for labor, which is sent over to their headquarters in England, and the requirements are distributed amongst their agents in the country districts of the Old Country, just where suitable farm help should be procurable, rather than getting men from the cities. They insist upon the farm help proving that they have had some experience in farm work. This new scheme should be helpful to the Province in co-operation with the Governments. The first party has sailed by the steamer "Ausonia." The parties will come out weekly during the spring and summer seasons. Farmers should get in touch with their Immigration Department at Toronto and find out the particulars.

## Gossip.

Official records of 259 Holstein-Friesian cows were accepted for entry in the American Advanced Register, from January 18th to January 27th, 1913. This herd of 259 animals, of which over one-half were heifers with first or second calves, produced in seven consecutive days, 103,265.2 lbs. milk, containing 3,607.349 lbs. of butter-fat; thus showing an average of 3.49 per cent. fat. The average production for each animal was 398.7 lbs. milk, containing 13.928 lbs. of butter-fat, equivalent to 56.96 lbs. or 27.1 quarts of milk per day, and 16.25 lbs. of the best commercial butter per week.



We can make any piano a perfect

### 88-note Player Piano

Upright Players \$225

Grand Players \$300

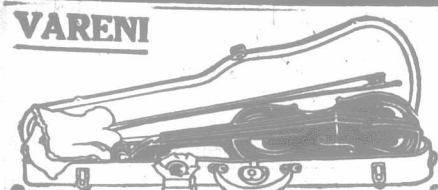
Write for illustrated booklet.

**W. DOHERTY PIANO & ORGAN CO., LIMITED**  
Clinton, Ontario



### VELOX GEARLESS MOTOR WASHER

We recommend the Velox because we believe it has the simplest, strongest and best gearless water motor made. There is no lost power, no danger, no noise, no stained clothes, no attention required, no sticking, no rust; great power and high speed. It is perfectly simple and simply perfect. The tub has exclusive patented features that prevent warping and give great strength, rigidity and durability of the tubs. See the "Velox" at your dealer's or send to us for full information. 104 SUMMER-DOWNSWELL, LTD. HAMILTON, ONT.



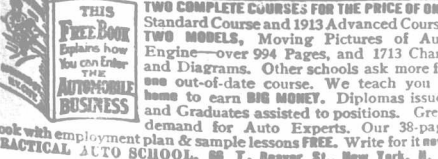
### \$42 VARENI OUTFIT \$35

The famous Vareni Violin is offered, complete with all requirements, at a remarkably low price. The outfit includes the student's model Vareni, highest grade Pernambuco Bow, Chamois Bag, Rosin—all in Premier Leather Case—a \$42 outfit when sold separately; special price \$35. Write for booklet # 5 for particulars.

Three Vareni Models STUDENT'S \$25 ORCHESTRAL \$35 CONCERT \$45



**THE WILLIAMS & SONS CO. LIMITED**  
145 YONGE ST.  
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**LEARN TO RUN AND REPAIR AUTOS**  
TWO COMPLETE COURSES FOR THE PRICE OF ONE. Standard Course and 1913 Advanced Course. TWO MODELS, Moving Pictures of Auto Engine—over 994 Pages, and 1713 Charts and Diagrams. Other schools ask more for same out-of-date course. We teach you at home to earn BIG MONEY. Diplomas issued and Graduates assisted to positions. Great demand for Auto Experts. Our 38-page book with employment plan & sample lessons FREE. Write for it now. PRACTICAL AUTO SCHOOL, 86 T. Beaver St., New York, N. Y.

### Gossip.

The past season has been the greatest ever for the sale of Poland-Chinas, writes G. G. Gault of Edgar Mills, Ont. Have filled orders from the Rocky Mountains to Mottano, Cape Colony, Africa, and all customers are highly pleased with this easy-feeding breed of Swine.

F. W. Ewing, breeder of Shorthorn cattle, in ordering a change in his advertisement, writes: As we have rural-mail delivery now, would ask you to oblige by changing the address from Salem to Elora, Ont. The young Shorthorn bulls we are offering are exceptionally good individuals, of the low, thick type, and from thick, well-fleshed cows, the kind that Shorthorn admirers are looking for.

The contribution sale of Shorthorn bulls, advertised to take place in the Winter Fair building, at Guelph, on March 5th, under the auspices of the Guelph Fat-stock Club, is reported by the Secretary to give promise of being a better offering than that of any former sale under its management. The strong feature of the offering is the 38 meritorious young bulls of the most desirable breeding, and many of them individually fit to head any herd, and to compete for honors at leading shows. For catalogue, write to J. M. Duff, Guelph, Ont.

The dates that the Canadian Industrial Exhibition have decided upon for their exhibition of 1913, are July 8th to 16th, both days inclusive. The Association recognizing the importance of the Clydesdale and Shorthorn classes at all Western Canadian Exhibitions, have this year made arrangements for the services of James Durno, of Jackston, Rothie-Norman, Scotland, to adjudicate upon these two breeds. Mr. Durno has officiated as judge at the International Stock Show at Chicago, and in South America, and at the large shows "at home" he is very much sought after, being one of the leading judges in Great Britain.

Irishmen find a way out of most difficulties, and a Mr. Huddy, who was the postmaster of Lismore at the beginning of the last century, would not have worried himself about a mere taxi strike. In January, 1821, when ninety-seven years old, Haddy travelled for a wager from Lismore to Fermoy, in a Dungarvan oyster-tub, drawn by a pig, a badger, two cats, a goose and a hedgehog. He wore on his head a large red nightcap, and carried a pig-drover's whip in one hand, and in the other a big cow's horn, which he blew to encourage his team, and to give notice of the arrival of the Royal Mail.—London Live-stock Journal.

It is the opinion of Mr. J. A. Spoor, Chairman of the Board of Directors of the Union Stock-yards and Transit Company, Chicago, that there is a world shortage of live stock, especially cattle. His study of the cattle situation shows that in England and all European countries beef has become a luxury. Argentina's live-stock interests have been crippled by three successive seasons of drought, followed by foot-and-mouth disease, and that country must first raise more cows before she can begin to produce a normal crop of steers. Owing to the increasing demands from foreign countries for Argentine beef, the annual slaughter of cattle far exceeds the increase of the herds, and legislation to limit the number of female cattle slaughtered is proposed as the solution. Under normal conditions, England will outbid the United States and the world for all the cattle Canada can produce. Mexico will take at least a decade to recover from recent droughts and revolution. In the United States, according to the Government figures, since 1900 the population has increased over 26 per cent., while the supply of beef cattle has declined fully 20 per cent., and during the same period the slaughter of calves has increased 600 per cent. Mr. Spoor believes that nothing but a continued shortage of beef cattle may be looked for during the year 1913. He also states that the natural law of supply and demand governs the market values of live stock; otherwise there would be no way of explaining the prices of 1912, which have been the highest ever known.

# RENNIES SEEDS

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Nothing succeeds like success. We succeed through the success of our customers who succeed through the success of our lines.  
Buy an O.W.E. & P. Co.'s Engine, Windmill, Well Drill, Grinder, Pump, Saw, Water Basin, Tank, Tower, Scale, Pump Jack, Pressure Tank, or Well Drill, and succeed in successfully travelling the road of success with us.  
If your dealer does not handle our lines, write the ONTARIO WIND ENGINE & PUMP CO., Ltd., at Montreal, Toronto, Winnipeg or Calgary.

## Maple Syrup Makers!

ENTER THIS CONTEST \$500 IN GOLD CASH PRIZES CUT OUT THIS COUPON

### Why Not Be a WINNER in This Contest?

We are giving away \$500 in gold, cash prizes, to users of the GRIMM "CHAMPION" EVAPORATOR. Full particulars will be mailed on receipt of above coupon.

The competition will take place during the last two weeks of April, and samples of syrup and sugar received will be placed on exhibit in the show windows of the "Montreal Star." Every purchaser and user of the Grimm "Champion" Evaporator may take part in this contest. Now is the time to properly equip yourself to make high-grade syrup and sugar—high priced, and therefore profitable. Do it now, before the sap runs. State number of trees you will tap, and we will give you prices on a suitably-sized outfit. Address all enquiries:

**PRIZE CONTEST GRIMM MFG. CO., Limited**  
56-58 Wellington Street MONTREAL  
(Don't forget coupon)

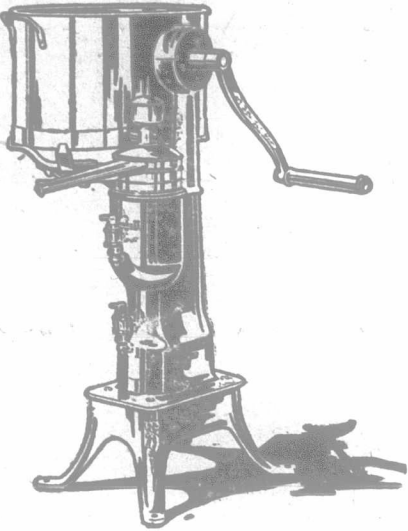
## 75 Hillcrest Ayrshires

Our Ayrshires are selected and bred for big production, and showing quality. Many of the heifers we are offering are grand-daughters of the two Ex-World's Champions, Jean Armour, Rec. 20174 lbs., and Primrose of Tanglewyld, Rec. 16195 lbs. F. H. HARRIS, Mount Elgin P.O. & Sta.

**Pay the Price of the Best  
—No More—No Less**

**ECONOMY** in buying a cream separator does not begin nor end with the price. You may easily pay too little and just as easily pay too much.

Learn the difference between gears that work without back lash and those that have it or develop it soon. Learn the importance of a self-adjusting bowl spindle bearing, and learn to know one when you see it. Discover the difference between brass and phosphor bronze as a material for bearings. Buy a separator with an oiling system that cannot fail you even for a few minutes of a run. When you find the separator that comes up to your specifications—one that with proper care will do good work for a long time—buy it. You will find it marked



**I H C Cream Separator  
Dairymaid or Bluebell**

I H C cream separators turn easily and they are easy to run because the working parts are accurately made and the bearings are sufficiently lubricated. The shafts and spindle are the strongest used in any separator. The shaft and spindle bearings are supported by the frame, but have no contact with it. The contact is between the steel spindles and phosphor bronze bushings. The gears are spirally cut so that there is no lost motion between them. They are entirely protected from grit and milk, and at the same time are easily accessible for cleaning.

See the I H C local agent and ask him to give you a demonstration of the efficiency of the machine as a skimmer and to go over with you and explain carefully all of its good, mechanical points. You can get catalogues and full information from him, or, write the nearest branch house.

**CANADIAN BRANCH HOUSES**  
**International Harvester Company of America**  
 (Incorporated)  
 At Brandon, Calgary, Edmonton, Estevan, Hamilton, Lethbridge, London, Montreal, North Battleford, Ottawa, Quebec, Regina, Saskatoon, St. John, Winnipeg, Yorkton

**The Anthony Fence**

Made in Canada

**The Anthony Knot**

A fence that is tied with a perfect lock.  
 A lock that is strong, neat and compact.  
 A lock that will not loosen by expansion and contraction from heat and cold.  
 A lock that won't come off.

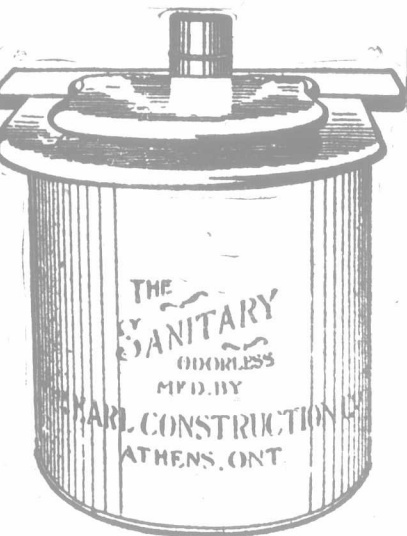
The Anthony Fence is made of all No. 9 wire, which is thoroughly galvanized.

The Anthony Fence will not bend down at the top or roll up at the bottom, but will stand up straight when erected.

The Anthony Fence will stop anything from a pig to a bull.

If you are interested in a fence like this, write for full descriptive catalogue. Live agents wanted in all unoccupied territory.

**THE ANTHONY WIRE FENCE CO. OF CANADA, LIMITED**  
 WALKERVILLE, ONTARIO



**COMFORT and  
CONVENIENCE**

without waterworks, sewage or plumbing. A perfectly sanitary, Odorless Closet that may be placed in any dwelling—in the bathroom, bedroom or down cellar.

Requires no burning out.

Write us for literature.  
It's free.

**Earl Construction Co., Athens, Ont.**

**Gossip.**

Five hundred young people were in the 1912 contest of raising the best acre of corn in Oklahoma. Most of these contestants were boys, but a girl won the prize, with a yield of over 95 bushels, on rocky, stumpy, upland.

The practice of spraying is rapidly increasing in connection with the growing of several truck and garden crops. Potato-growing and fruit-growing make spraying essential, and it is important that the right kind of machinery and appliances be used in the operation. Hand and garden tools should also be of the best material, and all labor-saving devices should be on hand. The Bateman-Wilkinson Company, Limited, of Toronto, manufacture a complete line of spraying machinery, of small hand and garden tools, and also a quartet of potato implements—a planter, a riding cultivator, a sprayer, and a digger. This is the well-known "ironage" line. See the advertisement in another column, and drop a line to the firm for their illustrated booklets.

**PLEASANT VIEW SHORTHORNS.**

Pleasant View Stock Farm, situated 2 1/2 miles west of the G. T. R. station, at Oakville, Ont., is the property of G. E. Morden & Son, and when it is known that Mr. Morden has refused the tempting offer of \$60,000 for the farm, some idea can be gained of the value of land in that district, the high-class character of this farm in particular, and the farm buildings in general. A visit by a representative of this paper, a few days ago was a revelation in looking over the big and well-selected herd of Scotch and English Shorthorns. Of the latter, there is probably no herd in Ontario containing so many of the ever-increasing old popular tribes of Booth and Bates milking Shorthorns; of the former, are several of the present-day Sowerby tribe, carrying very little of any other blood; of the latter, are many tracing to such well-known cows as Lily (imp.) =302=, Beauty (imp.) =30=, Esterville (imp.) =154=, Rachel (imp.) =445=, etc. As would naturally be expected, many of these are exceptionally good at the pail. Particular mention might be made of Willow Lodge Louisa 2nd, tracing to Esterville (imp.). For some weeks after freshening, an average of 48 lbs. a day is taken from this cow after her calf has taken its fill, and for sale, out of her, are two young bulls, King James =83528=, a red, twenty-two months old, sired by Sir James =77776=, and New Ruler, a roan, 11 months old, sired by Pride's Ruler =70491=. Parties looking for a bull bred on milk-producing lines, should look after one of these. Another one, bred on producing lines, is a red senior yearling Booth-bred bull, Royal Albert =83738=, out of Sowerby's Flower =84355=, and sired by Prince Albert =81244=. Among the pure Scotch tribes represented in the herd are the Nonpareils, English Ladys and Jealousys, daughters of such noted bulls as Imp. Proud Gift; the Toronto grand champion, Royal Favorite; Heatherman, Goldie's Prince, Royal Lavender, etc., gilt-edged in breeding, and massive in type and flesh. For sale, are young bulls and heifers of both the Scotch and English tribes. Mr. Morden has also laid an unsurpassed foundation for the breeding of Shire horses, by the purchase of the two noted prize mares, Tuttlebrook Sunflower (imp.), winner of first and champion at London, and at Guelph Winter Show, and first at Toronto and Ottawa; and Tuttlebrook Ladylike (imp.), winner of second prize at all the above shows, the first in foal to Baron Kitchener, and the latter to the noted champion, Proportion (imp.). We forgot to mention that at the head of the Shorthorn herd are: Pride's Ruler =70491=, by Imp. Scottish Pride, dam Gladys 5th, by Red Chief (imp.). He is white, six years old, heavily-fleshed, and very mellow. He is for sale. The other is the Toronto second-prize winner, Mountaineer =77726=, by the famous Uppermill Omega (imp.), dam Mistletoe 21st (imp.), by Nonpareil Victor, great-grandam by William of Orange. He is now being used.

**Farm For Sale**

Farm for sale consisting of 100 acres more or less, being the east half of lot 5 in the 10th concession of East Nissouri, clay loam, all tile drained; good garden and small fruits; also young apple orchard, 30 trees of best varieties. There is on the premises a cattle barn 55x60 ft., stabling cement throughout, water supply in every stall, will accommodate 40 head of cattle & 1,500 bushels of roots, silo 13x36, feed room conveniently arranged. Horse barn 30x40 feet, with water supply inside. Up-to-date hog-pen and henhouse 20x64 feet. Drive barn 18x24 feet. Storey and a half frame house with good cellar, main part 36x24 ft., kitchen 18x24 ft., woodshed and summer kitchen 20x30 ft., hard and soft water inside. The farm is situated on C.P. R. one and a half miles from a cheese factory and other conveniences. Telephone service and rural mail delivery and in line for Hydro-electric in the near future. This is one of the best farms in Oxford county and is a rare chance for anyone wanting up-to-date property.

**W. I. HOGG, Proprietor,  
Thamesford P. O.  
Ont.**

**STUMP EXTRACTOR**

If you are troubled with stumps, give our "Patent Samson Stump Extractor" a trial. It has now been in use in Europe for the past three years with the greatest success. By its assistance, two men will do the work of three men and a horse. It can also be used for felling trees.

WRITE US FOR DETAILS.

**The Canadian Boving Co., Ltd.**  
164 Bay Street, TORONTO

**HAWK BICYCLES**

An up-to-date High Grade Bicycle fitted with Roller Chain, New Departure Coaster Brake and Hubs, Detachable Tires, high grade equipment, including Mudguard, \$22.50 Pump, and Tools.

Send for **FREE 1913 Catalogue**, for 103 pages of Bicycles, Sundries and Repair Material. You can buy your supplies from us at Wholesale Prices.

**T. W. BOYD & SON,**  
27 Notre Dame St. West, Montreal.

**SEED GRAIN**

Don't sow musty grain. It is devalitized. Good seed pays. Oats—Siberian heads list in Experimental Union. Banner—fine stock, from imported seed. Special—From Lord Rosebery's estate, Scotland, Dalmeny Special and Garton's Record. O. A. C. No. 21 Barley, Ontario's favorite. Siberian, 55c. per bus., Banner, 55c. per bus., Dalmeny, 75c. per bus., Record, 75c. per bus., O. A. C. 21 Barley, \$1.00 per bus. Bags free; send for sample. Yorkshire Swine. **W. T. DAVIDSON & SON,** Meadowvale, Ont.

**STAMMERERS**

can be cured, not merely of the habit, but of its cause. The Arnott Institute has permanently restored natural speech to thousands—do it to-day. Write for full information and references to:

**The Arnott Institute, Berlin, Ont., Can.**

**HEADACHE**

INSTANTLY RELIEVED BY THE OLD  
**DR. MARSHALL'S  
 CATARRH SNUFF**  
 25¢ AT ALL DRUG STORES OR SENT FREE  
 PAID BY C.H. KEITH, 625 EVELAND AVE.

**Build Concrete Silos**

Any size with the London Adjustable Silo Curbs. Send for Catalogue. We manufacture a complete line of Concrete Machinery. Tell us your requirements. **LONDON Concrete Machinery Co., Limited,** Dept. B, London, Ontario. Largest manufacturers of Concrete Machinery in Canada. 1

**PRESIDENT  
SUSPENDER**  
NONE-SO-EASY

**Sale**  
 of 100 acres  
 half of lot 5 in  
 Missouri, clay  
 garden and  
 orchard, 30  
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**ACTOR**

umps, give  
 Extractor"  
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 three men  
 used for

Co., Ltd.  
 TORONTO

**CYCLES**

High Grade  
 Roller Chain,  
 Hoaster Brake  
 Machine Tires,  
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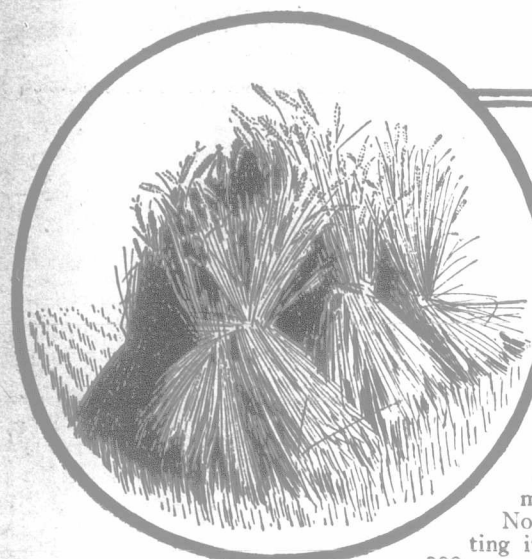
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**Progressive  
 Jones Says :  
 "Get More  
 Bushels  
 Per Acre"**

# Harab FERTILIZERS

will put back into your soil the plant food that continual cropping has taken out. Your worn-out land will become the rich, profit-making soil of former years. And all at a small cost.

Harab Fertilizers are natural Fertilizers. They are manufactured from blood, bones, etc., from the big Harris Slaughter Houses, with the addition of Potash and just enough quick-acting Nitrates and Superphosphates to produce well-balanced Fertilizers, which feed the plant as required and develop it to early maturity in a natural way.

But what you want first is the Fertilizer Booklet issued by the Harris Abattoir Co. It gives complete information about choosing the correct Fertilizers for barley, oats, rye and other crops, and the quantities to use. It's a mighty interesting booklet. I know, for I've read it myself. The Harris people assure me they'll gladly mail you a copy free. It's up to you to show you're "A Progressive."

*Years for bigger grain crops  
 Progressive Jones*

**The Harris Abattoir Co., Limited  
 TORONTO, CANADA**

## Reliable Help for the Farmer

Farm labor is scarce. Wages are high. All the more need for a **BARRIE ENGINE**. Soon pays for itself in time and labor saved. Grinds grain, shells seed corn, pumps water, cuts straw, threshes beans, saws wood, drives churns, separators and washing machines. Does many other things, too.

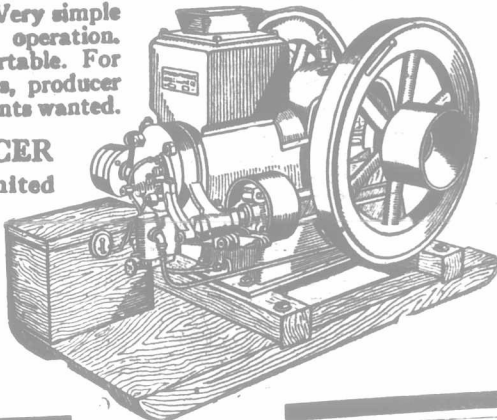
## BARRIE ENGINES WORK LONG

hours without getting tired. Very simple in construction. Reliable in operation. 3 to 100 h.-p. Stationary or portable. For gasoline, distillate, natural gas, producer gas. Write for catalogue. Agents wanted.

**The CANADA PRODUCER  
 & GAS ENGINE CO., Limited**

Distributors:

James Rae, Medicine Hat; Canada Machinery Agency, Montreal; McCaquer Imp. Co., Regina; The Tudhope Anderson Co., Ltd., Winnipeg; Calgary, Edmonton, Lethbridge, Saskatoon and Regina.



**BEST RESULTS ARE OBTAINED FROM ADVOCATE ADVERTISEMENTS**

### Trade Topic.

STUDY THE SEED CATALOGUES.

Better field crops, and a better garden, should be the aim of every reader of "The Farmer's Advocate" this season. Good seeds is the beginning, and now is the time to study the catalogues of the various reliable houses whose announcements have been appearing in this paper. It's easier now to plan just what you will need than a month hence, and the early orders are likely to be best and most promptly filled. It is foolish to trust to a "corner-grocery" supply at the last minute. This year's catalogues that have reached us are unusually fine, and more profitable reading than any "best seller" in the book stores. Each one seems to have some specially attractive feature to offer. That of the famous London, Eng., establishment, Jas. Carter & Co.—"Tested seeds"—is a marvel of nearly 300 large pages. The illustrations, both of vegetables and flowers, are superb. The Canadian representatives are Patterson, Wyde & Co., 132 King street, Toronto, who supply the catalogue and fill orders.

Pansies worked in colors, and some of the colored insets on the front cover, make the "Seed Annual" of D. M. Ferry & Co., Windsor, Ont., almost a work of art. Ferry's seeds have for years stood the actual test well. A number of attractive specialties are offered for 1913, and there is a good page of hot-bed information.

Wm. Rennie & Co., Toronto, Ont., have as the motto of their 1913 catalogue, "The Finest in the Land," and their frontispiece is a beautiful page of tall climbing nasturtiums. Some attractive prizes to growers are offered, and also premiums on one-dollar orders. No name is better known than "Rennies."

Forty-three years is a long look backward, but that is the record of "Ewing's Reliable Seeds," which have won a place of esteem with leading farmers and gardeners in all directions, for William Ewing & Co., Montreal, P. Q. Cash premiums, and a modern seed-cleaning plant for timothy, clover, and seed grain, are mentioned specially.

"Canada's Premier Seed House," established 1856, and a brilliant cover page of Canterbury bells and snapdragons, catch the eye on the J. A. Simmers, Ltd., Toronto, Ont., Annual Seed Catalogue and Cultivator's Guide. They are offering some original Swedish novelties in grains, and some special garden collections, including one for boys, that will interest the young folk.

The stately new warehouse, erected to accommodate their growing trade, illustrates appropriately the 1913 catalogue cover of the Steele Briggs Seed Company, Ltd., whose headquarters are in Toronto, Ont. Its 100 pages contain many things readers will want to know about, and if their seeds have not been used before, they request a trial order.

A superb spike of "Bruce's Gladiolus" gives a particularly rich appearance to the John A. Bruce & Co., Ltd., Hamilton, Ont., catalogue for 1913, which, by the way, is the 62nd annual edition. They make a special feature of selected vegetable seeds, and offer some fine floral collections. A successful Western Ontario vegetable-grower, calling at "The Farmer's Advocate," incidentally mentioned how good he had found "Bruce's seeds."

Though not quite as large as some other seed annuals, quality is certainly stamped on every page of the one entitled "Keith's Seeds," 1913, established 1866, the same year that "The Farmer's Advocate and Home Magazine" was born. Unvarying reliability has been their motto. Seed corn, grain, and field root seeds are kept deservedly well to the front in this catalogue, and a specialty is also made of poultry supplies. Geo. Keith & Sons, King Street East, Toronto, is the address.

Among the foregoing, readers can hardly go astray in making their selections for next spring's sowing. In the choice of varieties, it is best to rely for main crop on sorts that have been tried before, but it is well to be always on the alert to test things new, and perhaps better.

## THIS WASHER MUST PAY FOR ITSELF.

A MAN tried to sell me a horse once. He said it was a fine horse and had nothing the matter with it. I wanted a fine horse, but I didn't know anything about horses much. And I didn't know the man very well either.

So I told him I wanted to try the horse for a month. He said "All right," but pay me first, and I'll give you back your money if the horse isn't all right." Well, I didn't like that. I was afraid the horse was not "all right" and that I might have to whistle for my money if I once parted with it. So I didn't buy the horse, although I wanted it badly. Now, this set me thinking.



You see I make Washing Machines—the "1900 Gravity" Washer.

And I said to myself, lots of people may think about my Washing Machine as I thought about the horse, and about the man who owned it. But I'd never know, because they wouldn't write and tell me. You see I sell my Washing Machines by mail. I have sold over half a million that way. So, thought I, it is only fair enough to let people try my Washing Machines for a month, before they pay for them, just as I wanted to try the horse.

Now, I know what our "1900 Gravity" Washer will do. I know it will wash the clothes, without wearing or tearing them, in less than half the time they can be washed by hand or by any other machine. I know it will wash a tub full of very dirty clothes in six minutes. I know no other machine ever invented can do that, without wearing the clothes. Our "1900 Gravity" Washer does the work so easy that a child can run it almost as well as a strong woman, and it don't wear the clothes, fray the edges, nor break buttons, the way all other machines do.

It just drives soapy water clear through the fibres of the clothes like a force pump might. So, said I to myself, I will do with my "1900 Gravity" Washer what I wanted the man to do with the horse. Only I won't wait for people to ask me. I'll offer first, and I'll make good the offer every time.

Let me send you a "1900 Gravity" Washer on a month's free trial. I'll pay the freight out of my own pocket, and if you don't want the machine after you've used it a month, I'll take it back and pay the freight, too. Surely that is fair enough, isn't it?

Doesn't it prove that the "1900 Gravity" Washer must be all that I say it is? And you can pay me out of what it saves for you. It will save its whole cost in a few months in wear and tear on the clothes alone. And then it will save 50 to 75 cents a week over that in washwoman's wages. If you keep the machine after the month's trial, I'll let you pay for it out of what it saves you. If it saves you 60 cents a week, send me 60 cents a week 'till paid for. I'll take that cheerfully, and I'll wait for my money until the machine itself earns the balance.

Drop me a line to-day, and let me send you a book about the "1900 Gravity" Washer, that washes clothes in six minutes.

Address me personally:  
 B. A. MORRIS, Manager 1900 Washer  
 Co., 267 Yonge St., Toronto, Can.

## Do YOU Feed DAIRY CATTLE?

If so, you will be interested in our prices on

LINSEED OIL CAKE MEAL, "OWL BRAND"  
 QUOTON SEED MEAL, GLUTEN FEED,  
 "GOOD LUCK" DAIRY TESTING FEED,  
 "GOOD LUCK" CALF MEAL, OATS, CORN,  
 BRAN, SHORTS, ETC.

We also manufacture

"GOOD LUCK" BABY CHICK FEED,  
 SCRATCH FEED, POULTRY MASH, and  
 handle a complete line of Poultry Supplies.

We make a specialty of SEED GRAINS, and handle all kinds of Commercial Fertilizers.

If it's anything for STOCK or POULTRY, we have it. Write to-day for prices.

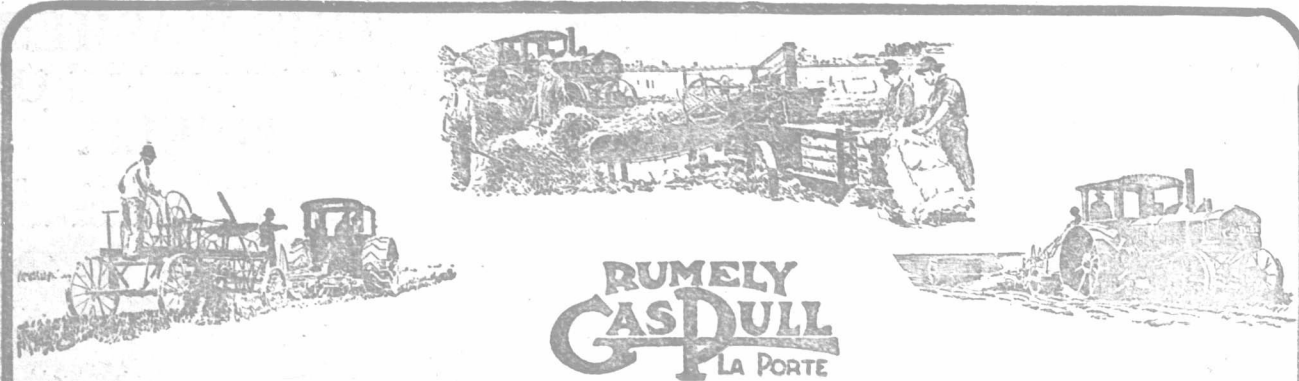
**CRAMPSEY & KELLY**  
 Dovercourt Road, Toronto, Ontario

**MERCHANTS  
 PRODUCE CO.**

Butter Eggs Poultry Honey  
 Beans Apples Potatoes, etc.

Our constantly growing trade demands  
 large supplies of choice farm products.  
 We need yours. Write for weekly  
 market letter.

87 Front St. E., Toronto  
 (Established 1880)



RUMELY  
GAS PULL  
LA PORTE

## An Every-Day Tractor

It often pays to have a tractor just for the rush jobs. It always pays to have one for the every-day work.

Most up-to-date big farms have tractors—the farmer with a moderate sized farm needs a tractor, too. We have the right one for him—the

RUMELY  
GAS PULL  
LA PORTE  
15-30

It fits any size farm from 160 acres up. There's some job it will do every day in the year—it will bale, thresh, harvest, harrow, fill silos, saw, plow, build roads, haul—it is an every-day tractor.

It's light and will go anywhere—you can use it in any part of your farm or on any kind of work. The GasPull is simple, handy, powerful and inexpensive either to buy or to run—every working part is protected.

Here are some GasPull facts:

2-cylinder—15 draw-bar h.p.; 30 h.p. at belt—weight only 11,000 pounds—low platform—variable speeds—convenient levers—working parts protected—turns corners in 15-foot circle—pulls 4 to 6 plows—hauls 30,000 pounds on roads not too hilly—has draw-bar pull of 3,000 pounds on low gear.

You haven't a real job on your farm this tractor won't help in. A man, 25 gallons of gasoline and a GasPull should plow 15 acres in 10 hours—a lot depends on the ground.

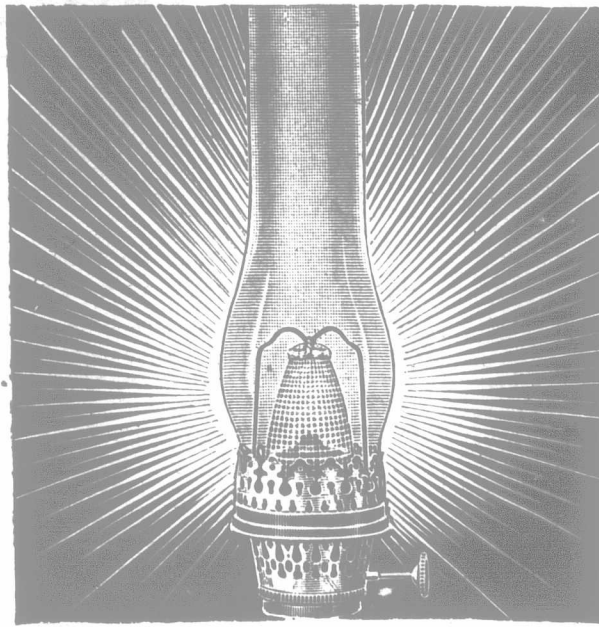


GasPull Data-book No. 352 will tell you how you can use it winter and summer. Send for it.

**RUMELY PRODUCTS CO.**

(Incorporated)  
Power-Farming Machinery  
Toronto, Ont.

466



## NEW COAL OIL LIGHT Beats Electric or Gasoline

Powerful white incandescent mantle light. Replacing common oil lights everywhere. Burns 70 hours on one gallon of coal oil (kerosene.) No odor or noise, simple, clean. Tests by Prof. McKergow, McGill University, Montreal, on leading oil burning lights show this gives over twice as much light as the Rayo and other round wick lamps and uses less than half as much oil. Thousands of satisfied users endorse it as the best light in the world. To introduce this modern white light quickly, we will let you

**TRY ONE TEN DAYS  
At Our Risk**

We want one person in each locality to whom we can refer customers. Write quick for agents wholesale prices and special introductory offer, which entitles you to **One FREE.**

**MANTLE LAMP CO.**

723 Aladdin Building, Montreal and Winnipeg

**AGENTS  
WANTED**

Experience unnecessary. Make Money evenings or spare time. Write quick.

## Seed Peas and Beans

Being one of the largest growers of Seed Peas and Beans in Canada we are desirous of arranging with farmers in good pea growing sections to grow for us.

We supply the seed, freight paid to your station, and pay good prices for product, making it a remunerative business for farmers.

For further particulars address

**W. P. NILES, LIMITED**  
Wellington, Ontario



## 125-Egg Incubator and Brooder Both For \$13.75

If ordered together we send both machines for only \$13.75 and we pay all freight and duty charges to any R. K. station in Canada. We have branch warehouses in Winnipeg, Man. and Toronto, Ont. Orders shipped from nearest warehouse to your R. K. station. Hot water, double walls, dead-air space between, double glass doors, copper tanks and boilers, self-regulating. Nursery under egg tray. Especially adapted to Canadian climate. Incubator and Brooder shipped complete with thermometers, lamps, egg testers—ready to use when you get them. Five year guarantee—30 days trial. Incubators finished in natural colors showing the high grade California Redwood lumber used—not painted to cover inferior material. If you will compare our machines with others, we feel sure of your order. \*Don't buy until you do this—you'll save money—it pays to investigate before you buy. Remember our price of \$13.75 is for both Incubator and Brooder and covers freight and duty charges. Send for FREE catalog today, or send in your order and save time. Write us today. Don't delay.

**WISCONSIN INCUBATOR CO., Box 244, Racine, Wis., U. S. A.**

**FREIGHT  
AND DUTY  
PAID**

## 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 local enquiries, \$1.00 must be enclosed.

### Miscellaneous.

#### Ice in Root Cellar.

Would ice keep in a root cellar? The cellar is on the north side of the barn, under the approach. It would be a convenient place to put the ice if you think it would keep.

#### CONSTANT READER.

Ans.—We would not expect ice to keep well in a root cellar. The sawdust would become damp, and consequently its non-conducting virtue would be impaired. This would be more especially the case if there were not first-class drainage from the bottom, and good circulation of air above the surface covering of sawdust. An old single-board shanty outdoors would be a better place in which to store ice.

#### Sweet Corn Fodder and Oat Chop.

Which would be the better for me to grow for dairying, sweet corn for the factory, the corn being picked off, at \$8 a ton, and oats bought for chop, or the common field corn drilled in? We have no silo. Factory corn runs about three and a half to four tons to the acre.

J. H. G.

Ans.—If you are so situated as to market the sweet-corn ears advantageously at the canning factory, we believe it will pay you to grow it, feeding the fodder and buying oats to use with it. At least, we would try this plan with a part of the corn area, and compare it with ordinary field corn.

#### Joint Ownership—Cost of Culvert.

1. A and B, farmers adjoining, own a manure spreader on equal terms, A having 100 acres, B 50 acres. A has left his farm, having an auction sale. He put up his share for sale and withdrew it, as the offer was not satisfactory. Can A dispose of his half of the implement without consulting B?

2. Can he dispose of it to a party at a distance?

3. There is a ditch running down the roadside in front of a farm. The farmer has to put in a culvert at his gate. Should the council pay part or all the expenses of the culvert?

Ontario. N. R. D.

Ans.—1 and 2. Yes, unless B is protected against it by the terms of their agreement.

3. We think so.

#### Pin Worms.

What should be done for a mare with pinworms? She may be in foal.

W. L. H.

Ans.—Treatment for pinworms consists in an injection with a decoction of quassia chips. Take half a pound of the chips and add two gallons of water in a pot. Put on the stove and bring to a boil. Then simmer for four or five hours, at a temperature just under the boiling point, adding a little water if necessary. Strain off now, and add sufficient warm water to make a gallon. Inject the rectum with warm water first to remove all feces. When this is expelled, inject the decoction, and hold the tail down for at least half an hour to prevent her expelling it. The worms, if any, will be expelled with the fluid. If your mare is in foal, it would be well to wait until after parturition. The pinworms, unless very numerous, will not be likely to interfere seriously with her condition.

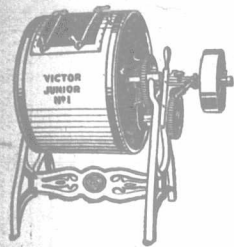
#### Trade Topic.

Indications seem to point to an increasingly strong demand this season by Canadian farmers for high-class seed grains, timothy and clover seeds. Farmers will be well advised in securing their supplies early, of the best obtainable. In this connection, The Hewer Seed Co., of Guelph, Ont., make an announcement elsewhere in this issue that readers should look up promptly.

# Money Makers and Savers for Dairymen

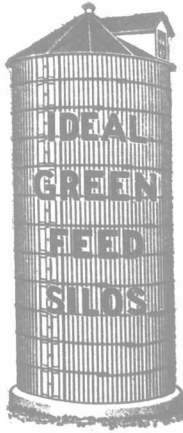
Up-to-date dairy equipment brings bigger profit to users, because it saves time and insures higher grade products.

We carry a very complete line of all requisites for the creamery, cheese factory, dairy and milk dealer, all of the highest grade, because we know it does not pay the dairyman to buy equipment of any other kind.



**VICTOR CHURNS.** The best butter with the least work can be made with the "Victor Churn." Both churns the butter and works it. Years of churn building experience back of it. Large sizes for creameries and smaller sizes for farm dairies.

## The De Laval Line of Dairy, Creamery, and Farm Supplies



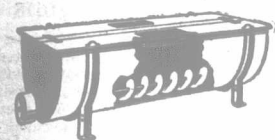
No dairy without a silo is fully equipped. The Ideal Green Feed Silo has been longest on the market. The best and most popular silo made in Canada. All sizes.



**BOTTLE FILLERS.** A good bottle filler is an absolute necessity in every milk plant. Our "Climax" bottle fillers are well made and finished, and we unhesitatingly recommend this filler as the best on the market. Furnished in various sizes.

### DE LAVAL MILK CLARIFIERS.

With the installation of the De Laval Milk Clarifier you are able to offer your customers absolutely clean milk. Up-to-date milk plants everywhere are installing them. Send for special catalog.



**MILK VATS.** Our "Paragon" vats are made of extra heavy copper, tinned on both sides, and all seams are double riveted and joints, corners, etc., soldered flush. Sizes, 100 gallons to 1000.



**SANITARY MILK PAILS.** We carry a very complete line of Milk Pails. The Gurler Pail illustrated above we especially recommend.



**BUTTER PRINTERS** We carry various styles and sizes to cut from one print to ninety prints at one impression, every brick square and true. These are fully described in our catalog.

**DE LAVAL WHEY SEPARATORS** turn waste into profit. Every cheese factory should install one. Butter made from whey cream brings a good price and the butter-fat recovered from the whey will more than pay for the machine the first year.

Our line of creamery, dairy, cheese factory, milk dealer's and farm equipment is most complete. Only a few items are mentioned and illustrated here. We shall be pleased to mail complete catalog if you will write advising what supplies you require.

## DE LAVAL DAIRY SUPPLY CO., Ltd.

LARGEST MANUFACTURERS OF DAIRY SUPPLIES IN CANADA  
Exclusive Canadian distributors of the "World Standard" De Laval Cream Separators  
173 William Street, MONTREAL 128 James Street, WINNIPEG



### This Name Protects You

The proverbial "pig in a poke" was not a more uncertain purchase than are garden seeds if you do not know that there is a reliable firm behind them.

You cannot tell by looking at them whether field and garden seeds are well-bred, vigorous and sure to grow, or exactly the opposite. You must buy by faith, and your faith has the best foundation when you select

## EWING'S Reliable Seeds

For over forty years these seeds have produced the finest vegetables and flowers grown in Canada — and they are better to-day than ever.

*They do not disappoint.*

Write now for our illustrated Catalogue, and if your dealer hasn't Ewing's Seeds, buy from us direct.

WM. EWING & CO., Seedsmen  
McGILL ST., MONTREAL



BEST RESULTS ARE OBTAINED FROM ADVOCATE ADVERTISEMENTS.

### Gossip.

M. L. & M. H. Haley, of Springford, Oxford County, Ont., noted breeders of Holsteins, too late for publication in this issue, have sent copy for change in advertisement, in which they offer for sale choice bull calves, four months and under, from high-testing dams, and sired by their great stock-getter, Grace Payne 2nd's Sir Colantha. Also young females, with satisfaction guaranteed.

T. S. Cooper, of Pennsylvania, the well-known importer of Jersey cattle, is said by an English exchange to be on a tour of inspection of several of the best dairy Shorthorn herds in England, and the outcome of his visit is being watched with interest by breeders, as it is well known that the milking Shorthorn is becoming increasingly popular in the United States, and it is proposed to extend a special class for them at the Panama Exhibition in 1915. Mr. Cooper, who was a breeder of dairy Shorthorns forty years ago, long before he embarked on his importation of Jerseys, has expressed his opinion that there is a great future for the breed in the States.

### PERCHERONS OF QUALITY.

The unparalleled success that has attended Hodgkinson & Tisdale, of Beaverton, Ont., since their advent in the importation of Percheron stallions and fillies, both in the matter of winnings at the leading shows, and in the rapid turn-over of their various importations, needs no argument to prove the superior qualities of the horses and fillies they import. The strictly high-class quality of their importation last fall was the admiration of many hundreds at the Toronto and Guelph Shows, and their almost unbroken series of winning successes in the largest classes ever seen in this country, is proof positive that no better lot of Percherons was ever before landed on Canadian shores, their big, draft character and size, their flashy quality of bone, well-sprung ankles, big, wide feet, stylish tops, and trappy, straight action, made them the object of much attention. This should be remembered by parties wanting a high-class Percheron stallion, or a stylish draft filly. Hodgkinson & Tisdale's prices are no higher than others, and their terms are the best procurable. Get in touch with them, at Beaverton, Ont.

### JOHN A. BOAG & SON'S CLYDESDALES.

It has seldom been experienced in the annals of the show-ring history of this country that one man, or one firm, with a limited number of horses, and a limited number of entries, scores such a pronounced success as did John A. Boag & Son, with their Clydesdale entries at the big horse show at Guelph in December last. An enumeration of their winnings shows: In the aged stallion class, second on the big, quality, bay stallion, Royal Rover (imp.). (In the three-year-old class they had no entry.) In the two-year-old class they were second, on Hindsward Crest (imp.); third on Baillie Boy (imp.), and fifth on Jewel Keeper (imp.). In the yearling class they were first on Laird o' Ken (imp.). In class for mares foaled previous to January 1, 1910, they were first on the flashy, quality mare, Ruby Gay (imp.). This mare was afterwards champion and grand champion. In the two-year-old class, they were first on Nell Pendreigh (imp.); fourth on Elsa (imp.), and fifth on Bruckley Lass (imp.). In the yearling class, they were second on Jean 4th of Redbank (imp.). In the class for Canadian-bred stallions foaled in 1912, they were first on the brown colt, Bayview Guest (imp.). This is certainly a remarkable record, and is proof of the high-class quality of the horses imported by the Messrs. Boag, and this is the quality of horses they have for sale, both in stallions and fillies. Parties wanting something above the average in breeding, draft character, quality, and true, straight action, would be consulting their own interests by visiting the stud of John A. Boag & Son, at Queensville, Ont., near Newmarket.

## WESTERN LAND FOR SALE

In areas to suit purchasers from 160 acres upwards, situated on or near railways in the

Best Wheat, Oat and Stock Growing Districts of SASKATCHEWAN AND ALBERTA

200,000 acres to choose from. PRICES LOW.

Special Inducements Given Actual Settlers

F. W. HODSON & CO.  
Room 102, Temple Building  
TORONTO, ONTARIO, CANADA  
Western Office: North Battleford, Sask.

## GRAND TRUNK RAILWAY SYSTEM

### HOMESEEKERS' EXCURSIONS

Each TUESDAY, Mar. 4 to Oct. 28 (Inclusive)

Via Chicago and St. Paul.

Winnipeg and return, \$35.00

Edmonton and return, \$43.00

Tickets good for 60 days. Proportionate low rates to other points in Manitoba, Saskatchewan and Alberta.

The Grand Trunk Pacific Railway is the shortest and quickest route between Winnipeg, Saskatoon, Edmonton.

Time Tables, Land Pamphlets and other descriptive literature relative to the Grand Trunk Pacific Ry. may be obtained from nearest Grand Trunk Agent.



### "CLEANLINESS IS NEXT TO GODLINESS"

Install a bath in your home for \$7.50, which will give you all the comforts enjoyed by your city friends. Our Folding Bath Tub is 5 ft. long, 2 ft. wide, 18 inches deep, and weighs 15 lbs. This tub is the same size as the standard bath tub, but has the advantage over same that it may be carried from one room to the other. It requires but two pails of water to give one a proper bath, being so constructed that it rests on the floor, permitting the water to come to the body. One minute empties the tub, when it may be rolled up and set away in the corner. Every Bath Tub carries a guarantee for five years. Address:

FOLDING BATH TUB CO., LIMITED  
Gananoque, Ontario.

Ontario price of Tub, \$7.50 f.p.b. Gananoque.

### MORE POTATOES PER ACRE

Think of finding one to eleven \$5 bills in the furrow, on every acre you plant. It's been done many times. Plant the spaces you skip, sell the potatoes, and you've got the money. No extra land, no extra work, it costs no more to prepare ground, fertilize, cultivate, spray and dig a perfect stand.



This machine soon pays for itself and yet puts real money into your pocket. One seed piece in every space and one only. Uniform spacing. No injury to seed. Ask your dealer to show it and write us for free booklet, "100 per cent Potato Planting." We make full line potato machines, Garden tools.

The Bateman-Wilkinson Co., Limited  
116 Symington Ave., Toronto, Ontario

### O. A. G. NO. 21 BARLEY.

Another supply of beautiful seed now ready. We increased one pound to nine hundred bus. in three crops. Price 90 cents per bus. Also a supply of clean and pure improved Siberian Oats, the leading variety. Price fifty cents per bushel. Best cotton bags twenty seven cents.

Jno. Elder, Hensall, Ont.

## A Big Crop A Good Market



In these times of high prices and big demand, the farmer who has anything to sell will have no trouble in selling it. A good market is waiting for everything he can raise. Parcels Post will help, and the effort that is being made to regulate the commission business and to better transportation facilities. There never was a brighter prospect of a larger share of the consumer's dollar than 1913 offers to every farmer who has the crop and the quality.

A good fertilizer is a very essential aid to a big crop of best quality.

Wherever you live, we can reach you with the right fertilizer, the right service, and the right price. Write today for copy of "Plant Food," a practical hand book on fertility. No advertising in it; sent without cost, while this edition lasts.

Agents wanted in unoccupied territory. Liberal terms and goods that sell. It pays to sell our fertilizers as well as use them. Ask for agency proposition.

### The American Agricultural Chemical Co.

Makers of brands with fifty years of quality and results behind them.

71 Lyman Street, Buffalo, N. Y.

P. O. Drawer 814-E, Detroit, Mich.

## Hand Spray Pumps

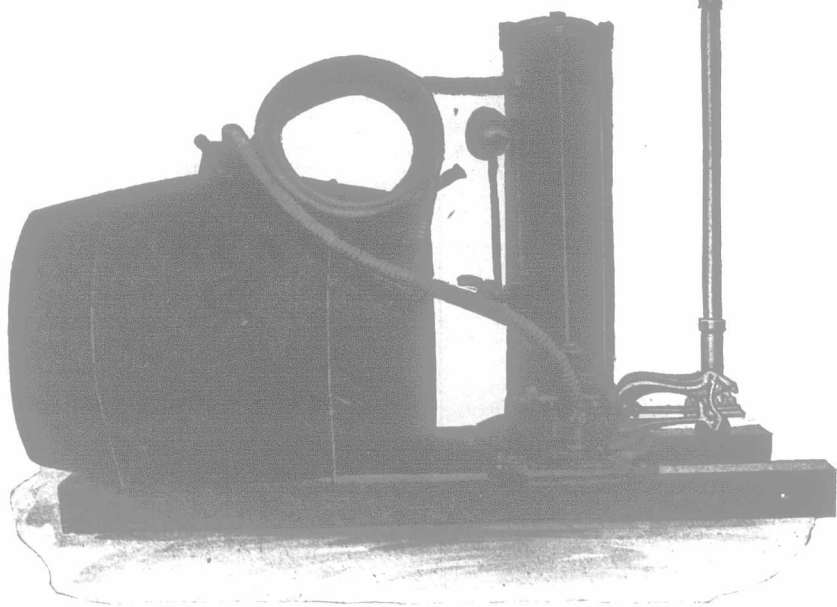


FIG. NO. 335 A

### HIGH PRESSURE HAND SPRAY PUMPS

Are the most efficient and easiest operated Hand Spray Pumps offered to the fruit grower.

Note the exceedingly large air-chamber, mechanical agitator and cog-gear lever, giving 40 per cent. more leverage than other makes of pumps of this class. Making our pump so easy to work.

Get Free Catalogue explaining fully, also showing POWER PUMPS—THREE KINDS—for all size orchards.

CANADA REX SPRAY CO., Limited, Brighton, Ontario

### Gossip.

The British Holstein Cattle Society, in its report for 1912, states that the increase in membership has been continued, and on December 31st, 1912, there were five vice-presidents and 249 ordinary members on the books, compared with four vice-presidents and 111 members on December 31st, 1911.

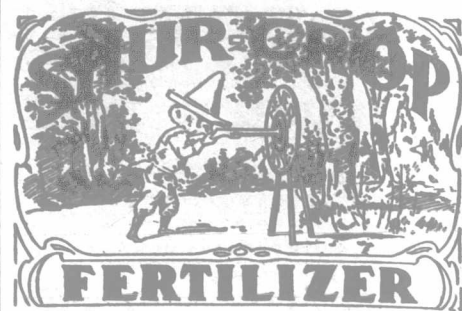
#### A HIGH-CLASS HERD OF CHESTER WHITES.

Reliability in description through correspondence, and the highest standard in type and quality, are key-notes of the many years and still increasing success in the breeding of Chester White swine achieved by W. E. Wright & Son, of Glanworth, Ont. Their splendid herd, recognized and proven by many years' sweeping success in competition at such great shows as Toronto, London, and Guelph, are all either prizewinners, champions, or the get of prizewinners and champions. The two great stock boars, Ascot 6738, and White Boy 6477, are both winners, the former winning first at Toronto and London two years in succession, and the latter also a winner at both shows. The dozen or more brood sows are probably as choice a lot as the breed has produced, winners and champions for years, sweeping aside all opposition. From such breeding as this, for sale, are young stock of either sex, and any age, strictly high-class, and priced reasonably.

#### THE GREAT CARGILL HERD OF SHORTHORNS.

A most interesting and pleasant day was lately spent by the writer at the farm of H. Cargill & Son, Cargill, Ont., enhanced by a visit on the same day of Mr. McKay, of Walkerton, District Representative of the Department of Agriculture, Toronto, and his class of some twenty-odd farmers' sons of that district, where they were put through their drill in the judging of several classes of Shorthorns, from the large and high-class herd of Mr. Cargill. The boys did themselves credit, and showed an aptitude in selecting the toppers, and giving their reasons for such selections that speaks well for their future as judges of Shorthorn cattle. John Clancy, manager of the herd, acted as referee, and his final decisions were vigorously cheered by those fortunate enough to have picked the winners in the trial. The herd, which, by the way, is the largest in Canada, was, as usual, found in prime breeding condition. It would seem superfluous to say anything more than has many times been told through these columns regarding the breeding, modern type, and quality of the herd, the majority of the breeding cows being personally selected and imported by the late Henry Cargill, for their individual merit and choice breeding, and at all times having at their head the best bulls procurable. The herd has always maintained a very high standard, equalled by few and excelled by none. The long rows of one- and two-year-old heifers are certainly most attractive for anyone wanting to start a new herd or strengthen one already founded, particularly when it is known that the prices asked for them are, in many instances, less than those asked for less pretentious animals. Although the herd is now over a hundred strong, and the annual produce a large one, every year sees the surplus distributed practically all over the country, to go on and do their share of improving the standard of Canadian cattle. The young herd-headers now on hand, although not numerous, are probably as choice a lot as was ever together at one time in the herd. Running along from 10 to 21 months of age, there are nine. An individual description is more than space allows, and we suffice it by saying that very many of the best stock-getters in the country were bred in this herd, and whose breeding was almost identical with these now ready for delivery, and aside from that, among them is show material of a high order.

## GUNNS



1 Tobacco Producer.....	8	8	10	8
2 Sugar Beet Special.....	2	6	8	9
3 Bowling Green and Lawn Special.....	5	6	8	7
4 Corn Manure.....	2	9	11	5
5 Potato and Celery Special.....	2	8	10	10
6 Bean Grower.....	2	7	9	8
7 Forcing Growth.....	5	8	10	7
8 Wheat Special.....	2	9	11	2
9 General Garden.....	3	5	7	6
10 Early Vegetable.....	4	6	8	7
11 Young Orchards.....	2	7	9	5
12 Berry Special.....	1	8	10	8
13 Fine Steam Bone.....	3			22
14 Pulverized Steam Bone.....	3			22
15 Blood and Bone Compound.....	7	7	9	2

#### — ALSO — GUNNS SHUR-GAIN FEEDS

Gunns Shur-Gain Calf Meal.  
Gunns Shur-Gain Dairy Meal.  
Gunns Shur-Gain Hog Feed.

Gunns full line of POULTRY FOODS.

#### 40 YEARS' REPUTATION BEHIND THEM

Write for Price List and Booklet

**GUNNS LTD., West Toronto**

### Put T-A Wheels on Your Wagons

These Wide-Tire Steel Wheels are so constructed that they roll smoothly over the roughest roads, without tiring your horses. And they are absolutely accident-proof—yet cheaper than ordinary, wooden wheels.

### T-A Wide-Tire Steel Wheels & Handy Farm Wagons

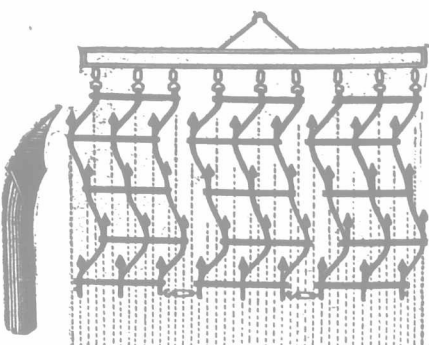
Our Handy Farm Wagons are built low—making them easy to load and unload—and are especially designed to meet the requirements of the man who wants a light, strong wagon for all kinds of work on the farm.

Let us send you our catalogue. It will give you complete information.



**Tudhope-Anderson Co., Ltd.**  
Orillia, Ontario.

M. Moody & SONS CO., Terrebonne, Que.  
Selling agents for the Province of Quebec.



### Erie Lance Tooth Harrow

Is the finest and most useful article that can be placed on a farm. The teeth are so shaped that they tear rough ground, and cultivate and make the finest seed bed possible. Once used on a farm, it will be the last implement parted with. Made strong and adapted to the roughest usage. 2-section set, \$10.00; 3-section set, \$15.00; 4-section set, \$20.00. Each section covers 3 feet of ground in width.

### Erie Iron Works, Limited

MAKERS

St. Thomas, Ont.

Fifteen Dollars and Expenses Weekly for trustworthy man or woman to act as travelling representative. Previous experience not required. Travelling expenses advanced. Commence in home territory.

WINSTON LIMITED  
Toronto Ontario



## The "Bissell" is a 3-drum roller

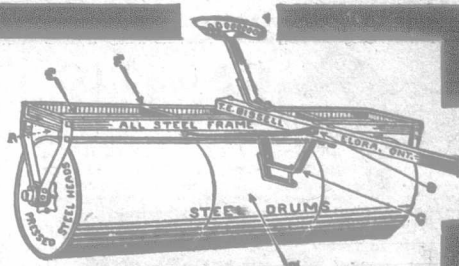
3 DRUMS make the best Land Roller. It is easy to understand how the "Bissell" Roller with 3 drums and supported by 6 heads is a STRONGER IMPLEMENT than any 2 drum Roller on the market. With 3 drums the centre bearing is not needed. When the "Bissell" Roller is at work, the axle turns with the drums.

It costs more to manufacture the 3 drum Roller than the 2 drum, but you pay no more for the "Bissell" 3 drum and get BETTER VALUE FOR YOUR MONEY. You get heavier weight in the "Bissell" drums too.

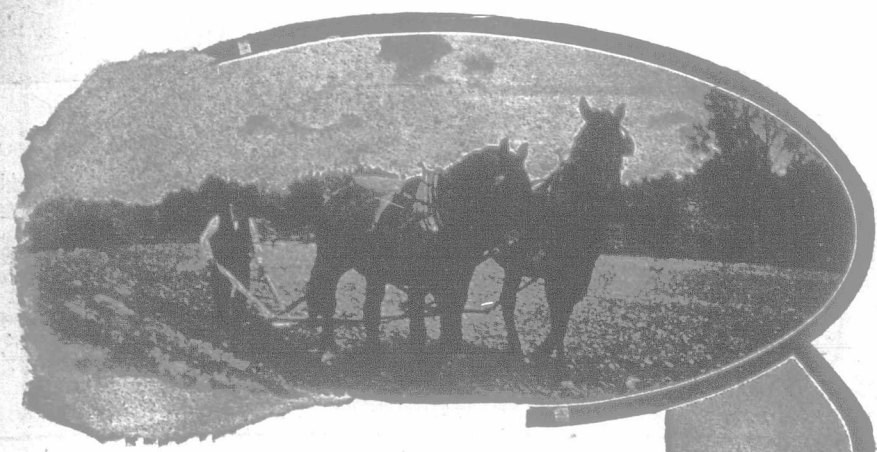
The good points cannot all be told here. Ask your dealer about the "Bissell" Roller and do not be put off

with a Roller unless the name "Bissell" is plainly stencilled thereon.

Grass Seed-er Attachment furnished if required. Write Dept. W for free catalogue. 63



T. E. BISSELL CO., LIMITED, ELORA, ONT.



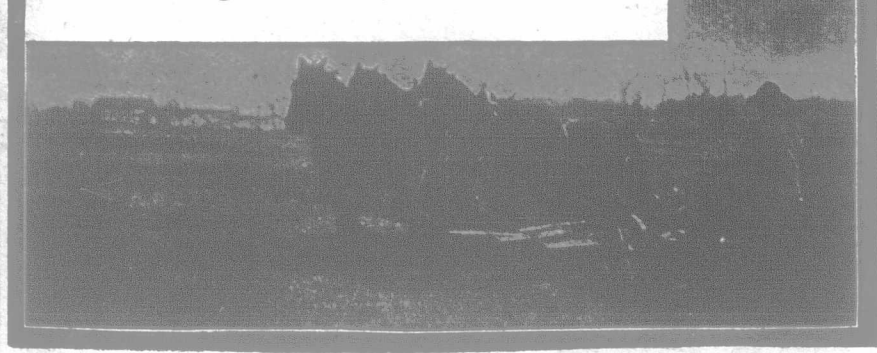
## VERITY PLOWS

are the development of over 55 years of Plow-Building by Experts in this line, and are built in a Factory which has every facility for the production of High-Grade Plows.

A CATALOGUE WILL INTEREST YOU.

Sole Sales Agents  
**Massey-Harris Co., Limited.**  
Head Offices—TORONTO, CANADA.

Branches at—  
Montreal, Moncton, Winnipeg, Regina,  
Calgary, Saskatoon, Yorkton, Edmonton.  
—Agencies Everywhere—



## Trade Topics.

**ACME TILE MACHINE.**—Evidence accumulates that well-made cement drain tile are serviceable and economical if properly made of good material, mixed in the right proportions. What is more, these cement tile can be made very satisfactory at home, by anyone who has a supply of material handy. On another page of this issue appears an advertisement of the Acme Drain Tile machine, manufactured by the Acme Tile Machine Co., of La Grange, Missouri, and sold by Wm. G. Joy, Box 278, Napanee, Ont. Write for quotations.

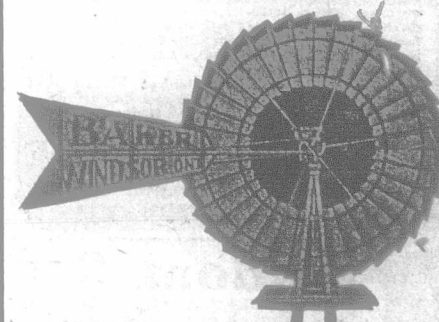
A comprehensive and superbly-illustrated booklet is that recently published for free distribution by the Massey-Harris Co., Ltd. This well-known firm manufactures all kinds of farm implements and machinery, and the catalogue covers the entire almost untold number of articles used every day on the farm. If in need of any new farm equipment, look up the advertisement in another column and write to the Massey-Harris Co., Toronto, Canada, for this booklet. You will be surprised when you see the number of different classes of farm machines and implements which they manufacture, and which are well and favorably known the agricultural world over.

An illustrated book of over 250 pages, entitled "Modern Silage Methods," has recently been published by the Silver Mfg. Co., Salem, Ohio. This book, comprising ten chapters, deals with a subject of vital interest to stockmen, as silos are increasing in numbers yearly, and the popularity of this method of storing feed is growing apace. Everything, including the history of the silo, its advantages, uses, and the best methods of building, with cost estimates of the various kinds, and the various crops suitable for ensiling, is given, besides tables of feed analyses, feeding standards, and methods of compounding rations. See the advertisement in this issue, and write the Silver Mfg. Co., Salem, Ohio.

## Gossip.

A. J. Howden & Company, importers and breeders of Shorthorn cattle, write: We have for sale several good young bulls that are the right stamp, all good colors, and of popular Scotch families, mostly by our stock bull, Lord Lavender =70558=, a Cruickshank Lavender. He is assisted by the red-roan, Nonpareil Lord =87184=, whose dam is Imp. Dalmeny Nonpareil 6th. This bull is also for sale, and is fit to head any herd. In females, there are a very choice lot of heifers of such well- and favorably-known families as the Marr Missies, Emmas, Cruickshank Villages, Duchess of Glosters, Butterfly, Nonpareil, Kinellar, Miss Ramsden, Claret, Crimson Flower, and a number of the old Atha milking families. These cattle will be priced reasonably. Some of our recent sales of females were six yearling heifers to F. W. Hodson & Co., North Battleford, Sask.; the roan 2-year-old Crimson Beauty 2nd, to Geo. Baker & Son, Burford; to W. R. & C. E. McGowan, ten two-year-old heifers. Mr. McGowan saw these heifers after travelling through the greater part of Western Ontario in company with the Hon. Duncan Marshall, Minister of Agriculture for Alberta, and chose these in preference to any he had seen. We have many more of same breeding and quality. Anything will be priced.

## "Baker" Wind Engines



Where a large quantity of water is required the BAKER windmill equipped with our hydraulic regulator that automatically stops when the tanks are full and starts when the water is lowered a few inches is deservedly popular because of its simplicity, reliability and self control.

A gasoline engine has its place on the farm for operating heavy machinery but not for pumping. It has to be attended almost constantly. Considering the high cost of gasoline, cylinder oil and expense of batteries and repairs, along with the time it takes to stop and start the engine in pumping for the average of stock on the farm you find it will buy a windmill every year.

Hundreds of farmers who have purchased gasoline engines for pumping have found out its disadvantages and are buying windmills. The supply of wind is free.

"BAKER" windmills embrace the most improved ideas in windmill construction, and require no fuel. They are the most economical. Write for full information and booklet.

THE HELLER-ALLER COMPANY,  
Windsor, Ontario

## Seeds and Seed Grain

O. A. C. 21 BARLEY—Fine sample, \$1.00 per bush.; 10 bush. lots, at 90c; bags extra.

OATS—Swedish Giant, New, at 85c per bush.; bags extra. 20th Century, at 85c per bush.; bags extra. Sensation, at 85c per bush.; bags extra. American Beauty, at 80c per bush.; bags extra.

PEAS—Early Centennial, at \$2.00 per bush.; bags included.

TIMOTHY—Pine Tree Brand, Grades No. 1 for purity, but No. 2 for general appearance, at \$3.00 per bush.; bags included.

RED CLOVER—Fancy No. 1, at \$16.00 per bush., bags included. No. 2, at \$15.00 per bush., bags included.

ALFALFA OR LUCERNE CLOVER—No. 1, at \$12.00 per bush.; bags included.

ALSYKE—No. 1, at \$18.00 per bush.; bags included. No. 2, at \$17.00 per bush.; bags included.

Cotton Bags, at 25c; 3 bush. Bags, at 35c; samples sent on request. All goods guaranteed to open to satisfaction or can be returned, and money refunded. Terms CASH with order.

## HEWER SEED CO.

GUELPH ONTARIO  
Established 45 years ago.

# FERRY'S

The sower has no second chance. A good beginning is the only safe rule; put your faith in the best seeds you can buy. Ferry's have had the highest reputation for over 50 years. For sale everywhere.

1913 Catalogue free on request.  
D. M. FERRY & CO., Windsor, Ont.

# SEEDS

## DAIRY FEED

Comprised of 50% Corn, the balance being Oats and Barley. This Feed has been tested by some of the prominent Dairymen of this section, and pronounced to be of A1 quality, both for milking and fattening purposes.

If your dealer does not handle the Archibald brands, write us direct for samples and prices. It will pay you. We also have Canada Western Seed Oats for sale.

## ARCHIBALD CEREAL COMPANY LIMITED.

WOODSTOCK - ONTARIO

**HORSE OWNERS! USE**



**CAUSTIC BALSAM.**

A safe, speedy and positive cure. The safest, Best BLISTER ever used. Removes all blemishes from horses. Impossible to produce scar or blemish. Send for circulars. Special advice free.

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Any person, however inexperienced, can readily cure either disease with Fleming's **Fistula and Poll Evil Cure**—even bad old cases that skilled doctors have abandoned. Easy and simple; no cutting; just a little attention every fifth day—and your money refunded if it ever fails. Cures most cases within thirty days, leaving the horse sound and smooth. All particulars given in Fleming's Vest-Pocket Veterinary Adviser. Write us for a free copy. Ninety-six pages, covering more than a hundred veterinary subjects. Durable bound, illustrated and illustrated. FLEMING BROS., Chemists, 75 Church Street, Toronto, Ont.

**Seldom See**

A big knee like this, but your horse may have a bunch or bruise on his Ankle, Hoof, Stifle, Knee or Throat.

**ABSORBINE**

Before After will clean them off without laying the horse up. No blister, no hair gone. \$2.00 per bottle delivered. Describe your case for special instructions and Book 8 E free. **ABSORBINE, J.R.**—liniment for mankind. Removes Painful Swellings, Enlarged Glands, Gout, Wens, Bruises, Varicose Veins, Varicocities, Old Sores, Ailays Pain. Price \$1 and \$3 a bottle at druggists or delivered. Manufactured only by W. F. YOUNG, P.O. 250 Lyman's Bldg., Montreal, Can.

For MORE Milk, Feed

**CEREMOL**

to your DAIRY COWS

WRITE

CHISHOLM MILLING CO., Ltd.

Toronto, Ontario

**CANADIAN PACIFIC**

SPECIAL CRUISE

AROUND THE WORLD

Emperesses of "Russia" and "Asia" (New C. P. R. Pacific Steamships)

The **Empress of Russia** will leave Liverpool April 1st, calling at Gibraltar, Villefranche and Port Said, proceeding via Suez, Colombo, Singapore, Hong Kong, Shanghai, Nagasaki, Kobe and Yokohama, arriving Vancouver June 7th, 1913.

Vessel remains 16 days at Hong Kong.

**Empress of Asia** will sail from Liverpool June 18th, particulars of trip will be announced later.

Most direct connection for April 1st sailing is via "Empress of Britain" from St. John, N. B., March 21st.

**Rate for Entire Cruise, \$639.10**

Exclusive of maintenance between arrival time in England and departure of "Empress of Russia," and stop over at Hong Kong. Particulars from Canadian Pacific agents, or write M. G. MURPHY, D.P.A., C.P.R., Toronto.

**The Call of the North**

Do you know of the many advantages that New Ontario, with its millions of fertile acres, offers to the prospective settler? Do you know that these rich agricultural lands, obtainable free, and at a nominal cost, are already producing grain and vegetables second to none in the world?

For literature descriptive of this great territory, and for information as to terms, homestead regulations, settlers' rates, etc., write to

**H. A. MACDONELL**  
Director of Colonization  
Parliament Bldgs. TORONTO, ONT.

**Gossip.**  
LAST CALL FOR J. COWAN'S SHORTHORN SALE.

Thursday, March 6th, will be a red-letter day for Shorthorn-breeders of this country, when James Cowan, of Seaforth, Ont., will give them the opportunity of purchasing at whatever prices they choose to bid, as there will be absolutely no reserve, one of the choicest lots of cattle ever sold by auction in a dispersion sale in Ontario. All the Marr Roan Ladys, and the cow Cecilia, and her daughters and granddaughters, are eligible for registration in the American Herdbook, at the regular fee; also the bull, Golden Emir, the sire of a number of the offering, is registered in the U. S. Herdbook, and the sire and dam of the present stock bull are also registered there, a matter of no little importance to Canadian breeders. The farm is just on the outskirts of the town of Seaforth, about ten minutes' walk from the station. Trains for Seaforth leave Stratford at 10 a. m., and at 12.30 noon. Returning, leave Seaforth at 3.25 and 5.32 p. m. The terms are most liberal, eight months' credit on bankable paper, or five per cent. per annum off for cash.

**A. H. TEEPLE'S BIG HOLSTEIN SALE**

For full information of the breeding, official backing, and records of the 48 head of Holsteins to be sold at the dispersion sale of A. H. Teeple, in the Sale Pavilion at Woodstock, Ont., on Tuesday, March 11th, write for catalogue to A. H. Teeple, Currie's, Ont. The entire lot are young, twenty-two are in milk, eight are rising three years of age, seven are rising two years, and seven rising one year, daughters of official-record dams, and sired by such famous bulls as Sir Bella Abbekerk De Kol, King Fayne Segis Clothilde, Brightest Canary, Count Mercena Posch, and Combination Posch Calamity. All of them will be in nice condition. They are the result of many years' intelligent breeding to develop the best-producing abilities of the breed and perfect the standard of type. That the owner has fairly well succeeded will be acknowledged by the breed's critical judges when they are brought into the ring on the day of sale. Also, it must be understood that the sale is a genuine dispersion, and under no circumstances will there be any withdrawals or by-bidding. Woodstock is easy of access from all directions, being on both the G. T. R. and C. P. R., with many trains daily.

**J. MCKENZIE'S HOLSTEIN SALE.**

Of the forty head of Holsteins to be sold at the dispersion sale of John McKenzie, at Willowdale, Ont., on Wednesday, March 12th, thirty-five are females and five are young bulls. Of the latter, two are old enough for service, the others younger. All are sired by Sir Lyons Hengerveld Segis, who has seven daughters in the A. R. O. records, he is sired by the renowned King Segis, with over 100 daughters in the official list, and his dam was the great cow, Blanche Lyons De Kol, seven-day record 33.31 lbs. butter, and butter-fat test 4.37 per cent; thirty-day record, butter, 134.56; average test, 3.95 per cent. She is the greatest producing daughter of the world-famed Pietertje Hengerveld Count De Kol, the sire of 90 daughters in the list. She is also a half-sister to Blanche Lyons Netherland, whose record is 34.71 lbs., and whose dam, Betty Lyons Netherland, has a record of 34.71, and a butter-fat test of 4.40. This grandly-bred bull is also sire of a number of the heifers to be sold, and all the females old enough will be in calf to him. This wonderful breeding, backed by Canada's best for generations, should surely make the offering very attractive. Among the many choice cows to be sold are such great producers as FAVORIT Clothilde Mercena, record at two years, 11.73 lbs.; Lady Somerville De Kol, record at two years, 16.30 lbs.; Countess Echo Verhelle, adult record, 19.14 lbs.; Rhoda 6th, adult record, 17.54 lbs., etc. Others in R. O. P. with records up to 11,000 lbs. Many of the older ones are daughters of Sir Mercedes 2nd, whose five nearest dam's records average over 14 lbs. at three years, and Mantell Kordyke, a grandson of Sarah Jewel Hengerveld, record 31 lbs.

**Build Up Run Down Stock**

Are your horses thin, rough-coated, unable to do heavy work; cows scrawny, weak, producing little; sheep in poor flesh, with uneven fleeces; hogs stunted, making no gains? Rather poor outlook for a profitable season!

These conditions are probably due to poor digestion, inactive liver and bowels, and sluggish circulation. Worms, too! Correct these conditions. Immediate improvement follows.

**Pratt's Animal Regulator**  
will do this. The greatest animal conditioner known. Has stood the test of 40 years.  
25c, 50c, \$1; 25-lb. pail \$3.50

**Pratt's Worm Powder**  
50c package  
Rids livestock of all kinds of worms.  
"Your money back if it fails"

1913 Almanac FREE at dealers, or write us. Our products are sold by dealers everywhere, or PRATT FOOD CO., OF CANADA, Ltd., Toronto.

**HORSES FEEL YOUNGER AND WORK BETTER WHEN CLIPPED**

If your horses are clipped before the spring work begins they will get all the nourishment from their feed—be healthier and look better. They will dry off quickly, be more easily cleaned and feel better generally—that means work better. Use a **STEWART'S BALL BEARING ENCLOSED GEAR CLIPPING MACHINE**

Not an expense—but a highly profitable investment. It turns easily, does more and closer work than any other machine—can't get out of order. Gears all file hard and cut from solid steel bar—protected and run in oil. Includes 6 feet new style easy running flexible shaft and celebrated Stewart's Single-Tension Clipping Head. You can make money clipping your neighbors' horses while yours will do better work. Each machine guaranteed. If it doesn't give perfect satisfaction, return it and get your money back. Complete from your dealer at... \$9.75. If he can't supply you send \$2.00 and we will ship one C. O. D. for balance.

**CHICAGO FLEXIBLE SHARP CO.**  
1101 LaSalle Ave  
Chicago, Ill.

**WOOL**

LOOK AT THE BIG PILE OF WOOL—A QUICK AND SLICK JOB

**Stewart No. 9 Ball Bearing Shearing Machine**

is a real profit device. Gives 15c to 40c more from each sheep. You know the size of your flock, so figure your profit and you'll find the machine will more than pay for itself the first season. Any boy can run it all day without tiring. All joints ball bearing with ball bearing shearing head. The equipment includes four sets of knives fully guaranteed. Price... \$15. If your dealer hasn't it send \$2.00 and pay balance C. O. D. Expert instruction on Sheep Shearing FREE

**FREE STYLE BOOK FOR 1913 OF "Quality Line"**

Save \$30

**VEHICLES AND HARNESS**

NINETEENTH YEAR OF SELLING DIRECT TO THE USER.

Vehicle or Harness you require, and SAVE YOU MONEY. It describes and pictures many styles, gives prices, FREIGHT PREPAID, and fully explains our method of Selling Direct and saving you the Middlemen's Profit. Remember, we pay the freight in Ontario and Eastern Canada. The Catalogue is Free, for the asking. Send for it To-day.

**INTERNATIONAL CARRIAGE COMPANY**  
Dept. "A," Brighton, Ontario.

**TWO HOURS OF YOUR SPARE TIME**

and 25c. will get you the best \$4.00 pair of shoes for man or woman ever made. Write for particulars to the Brantford Shoe Company - Brantford, Ontario

FOR SALE—TWO VERY CHOICE

**Imp. Clydesdale Stallions**

Sire Baron's Pride; right in every way and sure getters of AI stock.

WM. MEHAREY, Russell, Ont.

**Clydesdales and Percherons**

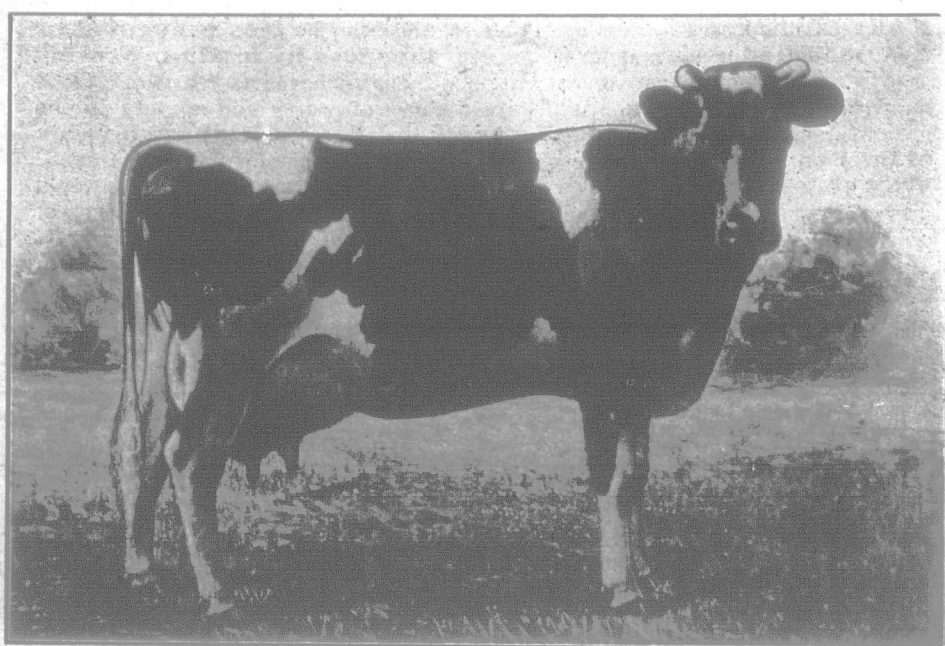
Thirty stallions of the above-mentioned breeds to choose from. All are government-inspected and approved. A large number of them have won high honors at the leading shows of Scotland, France and Canada. All are for sale at reasonable prices and the best of terms.

**T. H. HASSARD, Markham, Ont.** Stations: Markham G. T. R., Locust Hill C. P. R. Long-distance phone in connection.

Prize-winning **Clydesdales, Imported** Stallions and Fillies. Our record one or more winners in every class. We have now prize-winning Stallions and Fillies with breeding and quality unsurpassed—All are for sale.

**JOHN A. BOAG & SON, QUEENSVILLE, ONT.**





If you are interested in milk production, read the following letter :

*Rockburn, Quebec*  
The Caldwell Feed Co., Ltd., Dundas, Ont.

Gentlemen:—In reference to the benefit I have derived from feeding Caldwell's Molasses Meal to Milk Cows, would say that I have found it second to none to complete a balanced ration, and I consider it absolutely indispensable in Making Milk Records.

My Champion Cow, "Griselda," which gave 105 lbs. of Milk in one day and over 10,000 lbs. in less than four months, dating from the day she freshened, giving 2,700 lbs. In Her Fourth Month, Ate Caldwell's Molasses Meal during the time she made these records, especially when she produced 2,700 lbs. in August, For No Cow (to my knowledge) In The World, Regardless of Breed, Has Ever Produced That Amount of Milk on Her Fourth Month on grain and grass alone, and the grain ration contained Six Lbs. of Caldwell's Molasses Meal Daily.

I highly recommend this Meal to every dairyman interested in producing milk either for market or record-making.

Respectfully yours (Signed) GEORGE WINTER.

WE might follow the example of some advertisers, and make all the claims in the calendar regarding the marvelous nutritive and milk-producing qualities of

## Caldwell's Molasses Meal

84% Pure Cane Molasses and 16% Edible Moss

but that wouldn't satisfy you unless we tabled the proofs of the truthfulness of these claims. You will note from time to time that we make strong claims regarding the value of Caldwell's Molasses Meal as a stock-conditioner and milk-producer; but we always stand ready to prove our claims true. Read the letters reproduced in this advertisement and form your own conclusions. Then, if you have any lingering doubts regarding the value of Caldwell's Molasses Meal, put it up to us to prove our case beyond dispute.

You can buy Caldwell's Molasses Meal at your feedman's or direct from us. Write anyhow.

## CALDWELL FEED COMPANY, LIMITED, Dundas, Ontario

Still More Evidence

*Courland, Ont.*  
The Caldwell Feed Co., Ltd., Dundas, Ont.

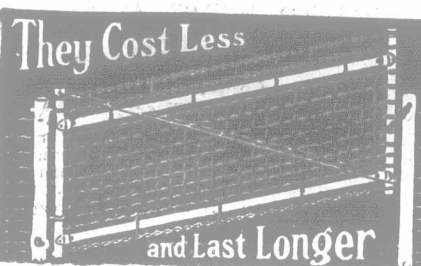
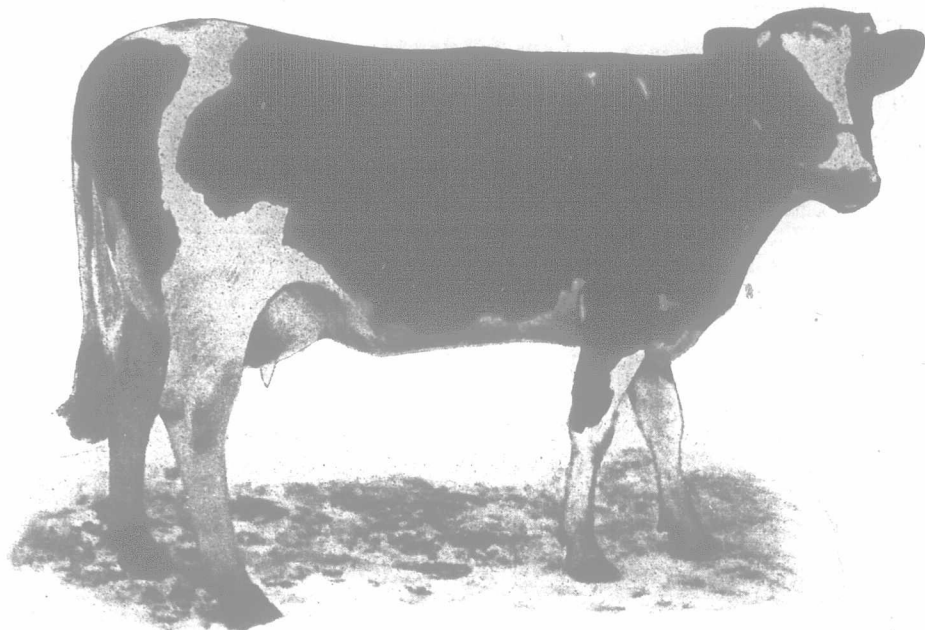
Dear Sirs:—I wish to express to you my appreciation of your Molasses Meal. I have been feeding it for over a year, and as to results, the best way for me to show them is by stating that my Holstein-grade cow, "Cherry," won the sweepstakes in the Ontario Provincial Winter Fair, held at Guelph in December, over 69 cows, also first in her class; first for total number pounds of fat, Norfolk County Special, and silver cup given by the Holstein-Friesian Association.

She gave 206.6 lbs. of milk in three days, making 252 points, testing 8.08 in butter-fat, also winning the prize for greatest number of pounds of solids. "Cherry" is seven years old, and has been fed daily on Molasses Meal, which, in my estimation, has helped materially to make the wonderful showing she has made.

"Cherry" was sold to Messrs. Reid & Co., of Ottawa, and has since been awarded first prize at the Ottawa Winter Fair.

I would highly recommend your Meal to dairymen.

Yours truly (Signed) G. B. RYAN.



They Cost Less  
and Last Longer

### "Clay" Gates

STRONGEST and best farm gate made. 30,000 sold in 1912. Can't sag, bend or break. Can be raised as shown. Good for Winter and Summer. Send for illustrated price list.

The CANADIAN GATE CO. Ltd.  
34 Morris St., GUELPH, Ont.

### CLYDESDALES—A NEW IMPORTATION

We have lately landed a shipment of Clyde stallions and fillies, several Scotch winners among them. Their breeding is unsurpassed. Comparison with any others in the country will make you a buyer from us. Our prices are as low as the lowest. L. D. Phone. GOODFELLOW BROS., Mackville P. O., Ont.; Bolton Station, G. P. R.



### Stallions — CLYDESDALES — Fillies

I have a big importation of Clyde stallions and fillies just landed; a lot that cannot be duplicated to-day in Scotland and never was in Canada. Let me know your wants.

BOBT. BEATH, Bowmanville, Ont.

Orchard Grove Herefords I have lately made a big importation of the leading herds of Illinois. In my herd you now have 25 Bulls to select from; a big range of Heifers and Cows. High-class show and breeding stock a specialty.

L. G. CLIFFORD, Oshawa, Ontario, G. T. R. and C. N. R.



### Gossip.

#### THE LAMBING SEASON IN ENGLAND.

Notes in a recent issue of the London Live-stock Journal, on the lambing season up to January 31st, give some idea of the size of flocks of pure-bred sheep in that country. Geo. Adams & Sons, Berkshire, write: We put about 500 of our registered Oxford Down ewes to the ram, and up to the last week in January we have 210 lambs from 190 ewes, have lost only two ewes, losses of ewes and lambs under two per cent. J. H. Chick, Dorchester, reports 426 Dorset ewes have lambed to date. Thomas Christian, Hampshire, writes: My flock of 310 Hampshire Down ewes commenced lambing January 8th, but though the lambs have come slowly this year, we are only now about half-way through. We have lost very few lambs, and only one ewe.

### SKIPPED HILLS RAISE NO POTATOES

Every hill you miss in planting means money lost out of your pocket. No machine can plant perfectly unless there is hand correction of misses and double sows.

IRON AGE (Improved Robbins) Potato Planter (Now made in Canada)



### HEREFORD BULL

Twelve months, sired by Bonnie Brae 21st; also a few well-bred two-year-old heifers.

H. D. SMITH, "Ingleside Farm" Rural No. 1, ANCASTER, ONT.

# LIPTOIL



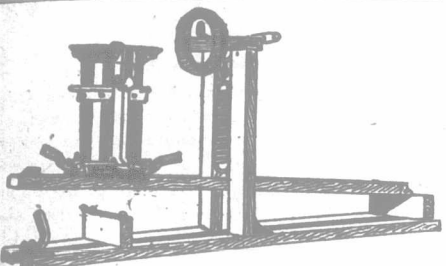
Best wash ever used for horses. All winter no scratches, no snow poisoning. All summer no sores, no flies on sores. Not a patent medicine—an all-round skin healer. Boils, sores, abrasions, galls, cracks, corns—all amenable to

## LIPTOIL

Wonderful curative and healing powers. The veterinarian's friend first, and all the time—and the foe of any sore on any living animal. Our words are the expression of veterinarians the world over. It is a healer—it is a salve—it is a poultice—it is a cleaner—and it does the work.

Put up in 50c. size sample tins—by mail any part of the Dominion. Sole agent for Canada:

DR. T. E. WATSON, V. S.  
Niagara Falls Ontario



### Farmers Should Profit by Their Past Experience.

Drain your land with cement tile and get an early crop. A Sure-Shut Tile Machine will do the trick. Price \$35. Agent for the Acme Adjustable Tile Machine; all sizes, 3 in. to 13 in. Also S'lo and Block Machines. For information and literature write WILLIAM JOY, Box 273, Napanee, Ontario.

### AGENTS \$24 A WEEK



15 IN ONE  
Forged steel. Patented. Low priced. Sells to auto owners, farmers, mechanics in the shops and the home. Not sold in stores. No competition. Sales easy. Big profits. Ten-inch sample to workers. Write at once. THOMAS TOOL CO., 2344 West St., Dayton, Ohio

For Sale—Angus Cattle. Some nice yearling bulls and good females, all ages. Use an Angus bull to cross and get the kind the butcher likes. J. W. BURT & SONS, Hillsburg P.O., R.R. No. 1, Ont.

Aberdeen-Angus of Show Form and Quality. For this season my offering in young bulls and heifers, are topers, every one. Show-ring form and quality, and bred from show winners. T. B. BROADFOOT, Fergus, Ont., G. T. R. and C. P. R.

### GLENGOW Shorthorns and Cotswolds

Our present offering in Shorthorn heifers and young bulls are modern in type and of richest Scotch breeding, and the prices are low; Cotswold Ewe and Ram lambs of high quality.

WM. SMITH & SON, COLUMBUS, ONT. L. D. Phone

### Oakland—50 Shorthorns.

Offering for winter and spring trade, is six excellent bulls from ten months to two years old. Out of fine dual purpose dams and sired by our noted Scotch Grey Bull 72892. He is a beautiful roan and all quality, he is also for sale or exchange. John Elder & Sons, Hensall, Ont. Station and P. O.

### Shorthorns, Cotswolds, Berkshires

For sale: 10 bulls, from 7 to 10 months; also cows, heifers and heifer calves. Would sell a few young Cotswold ewes. No Berkshires to offer at present.

CHAS. E. BONNYCASTLE P.O. and Station, Campbellford, Ontario

GEDARDALE SHORTHORNS—To make room for newcomers, I am now offering some rare value in Scotch-bred cows and heifers, beautifully bred and high-class in type; also 1 yearling bull. Dr. T. S. Sproule, Markdale, Ont.

### ATHELSTANE SHORTHORNS

For sale: Five choice young bulls, sired by Roan Chief (imp.) = 60685—. They are a choicely-bred lot, and will be priced right; also a few heifers. They are of good milking dams. WM. WALDIE, R. R. No. 2, Stratford, L.-D. 'phone.

### Clover Dell Shorthorns

Choice young stock of both sexes. Dual-purpose a specialty. Herd headed by (imp.) Ivanhoe. L. A. WAKELY, BOLTON, ONT.

## Questions and Answers. Miscellaneous.

### Statute Labor—Homesteading.

1. I was taxed five days' road-work. The pathmaster asked me to come a certain date to do work. Night before appointed day he notified me he could not have road machine, so I need not come out. I was not asked out again. Road-work was charged on my taxes. Will I have to pay for road-work?

2. May a girl twenty-one years of age homestead land in Manitoba, Alberta, or Saskatchewan?

Ans.—1. We do not think that you are legally compellable to do so, unless the statute labor has been regularly commuted by the municipal council by by-law passed pursuant to Sec. 10, of the Act respecting Statute Labor (Ontario Statutes, 1904, Chap. 25).

2. Not unless she is the sole head of a family.

### Lake Sand for Cement Tile.

Is lake sand as good for cement-work as pit sand? Would like to make some cement tile, and have been told that lake sand is no good. We are near the lake sand.

Ans.—It is astonishing how much error gets into circulation. True, there is sometimes a certain basis of fact which seems to justify the error, but that is merely because the whole truth is not comprehended. Only one side is known, and half-truths are proverbially misleading. One of the finest cement-tile plants in Canada is situated on the shore of Lake Erie, and utilizes lake sand exclusively. The business is growing enormously. Clean, hard, lake sand, when not mixed with quicksand, is ideal for cement-work. It could be used if containing quicksand, but a good deal more cement would be required to make strong tile, and it is found impracticable, we are told, to screen quicksand out, as it clogs the screen.

### Real Estate Agent.

About three years ago I wanted to sell my farm, and do yet, as we are too old to work it. Mr. M— was recommended to me as a very good real-estate man. We wrote to him, and he came and prepared a paper for me to sign. As near as I can remember, if he sold, I was to pay him 2½ per cent. If I sold any other way than through him, I was to pay him 1½ per cent. for his trouble, advertising, etc. That was three years ago. I have never seen nor heard from him since. He has never sent any buyer or anyone here, nor come himself. I have gone to see him—he is never "home." I have written to him—I get no reply. I want to know now if that claim of his would stand law, and if there is not a limit to it, say, some time. A note outlaws in time. Does this agreement stand good for ever? If I give the farm to my son, would that \$90 still be due? If he makes no apparent effort to sell, and I get another real-estate man after it, am I still liable? He won't give me a copy of what I signed. At least, I wrote and asked him, and he does not answer. Perhaps other farmers have been as foolish as myself, to sign such a paper, and if so, what redress is there?

### SUBSCRIBER.

Ans.—Assuming that your recollection of the agreement, as the same is set forth in the document you signed, is substantially correct, we think that you are in a position—under the circumstances you state—to put an end to the contract. You should notify him by registered letter, or by service on him, personally of a written notice, that the contract is terminated. It would not be safe, or prudent, for you to make an arrangement with another real-estate agent until you have disposed of this one. The language of the old adage, "better be off with the old love before you are on with the new," is quite applicable to your case. It may be, however, that the man has done something ever, that the man has done something in the way of advertising of the farm, for whatever he may have actually done in that way prior to his receipt of your notice revoking his agency, you will be legally liable to reasonably remunerate him.

# HIGH-CLASS SHORTHORN SALE

MR. JAMES COWAN, of Seaforth, Ont., having sold his farm, will, on

Thursday, March 6, 1913

At the farm, one mile from the G. T. R. station at Seaforth, sell by auction, positively without reserve, his entire herd of 33 Scotch Shorthorns, imp. cows of the Lady Ythan, Miss Ramsden, Roan Lady and Scotch Beauty tribes, their daughters and g. daughters. Also the 2,450-lb. stock bull, Royalist, a Marr-Clara-bred son of Imp. Blood Royal. The big majority are heifers, nearly all eligible for the American Book. A strictly high-class offering in prime condition.

TERMS: 8 months on bankable paper, or 5% per annum off for cash. CAPT. T. E. ROBSON, Auctioneer.

Catalogues on application to: JAMES COWAN, SEAFORTH, ONT.

# 15 SHORTHORN BULLS 15

We have been breeding Shorthorns on this farm for over 60 years, and I never saw a better lot of young bulls for sale than I have at the present time. Nearly all of the best Scotch breeding; reds and roans, from 10 to 20 months old. Also a few females and several registered Clyde fillies. Prices within the reach of all. Will quote prices, freight paid to your nearest station.

Claremont Sta., C.P.R., 3 miles. JOHN MILLER, Brougham, Ont. Pickering Sta., G.T.R., 7 miles.

# SHORTHORNS!

Have now a choice lot of young bulls to offer; also with something nice in heifers. Catalogue of herd and list of young animals on application. H. Cargill & Son, Props., Cargill, Ont., Bruce Co. John Clancy, Manager.



# The Auld Herd and Pleasant Valley Shorthorns

We are putting three bulls in the Guelph sale March 5th. We have females of all ages and the best of breeding for sale. Correspondence invited.

A. F. & G. AULD, Eden Mills, Ontario Bell 'phone. Guelph or Rockwood stations.

MEADOW LAWN SHORTHORNS of richest and most fashionable Scotch breeding, and of high-class type and condition. I can supply young bulls and heifers—Clarets, Roan Lady, Mildreds, Stamfords, etc. F. W. EWING, SALEM, ONTARIO L.-D. 'Phone. Elora Station.

# I Have SHORTHORN Bulls and Heifers, SHROPSHIRE and COTSWOLD Rams and Ewes, CLYDESDALE Fillies and Colts

that are as good as I have ever had, and that I will sell for prices within the reach of all. We have been in the business 75 years, always in the front rank, and propose to keep that position. You cannot afford to buy without writing us for prices. ROBERT MILLER, STOUFFVILLE, ONTARIO

Willow Bank Stock Farm—Shorthorn Herd Established 1855. The grand imported Butterfly bull, Roan Chief = 60865—, heads the herd. Young cows and heifers bred to him; also an exceedingly good lot of young bulls on hand, fit for service and at very reasonable prices. Some from imp. dams. JAMES DOUGLAS, Caledonia, Ont.

SHORTHORNS of breeding and quality. Our present offering: One grand young cow with calf at foot; also heifers, old enough to breed, got by Mildred's Royal. No bull to breed to. Will sell cheap. Also one first-class young bull. GEO. GIER & SON, WALDEMAR P. O., ONTARIO.

Springhurst Shorthorns—Four of the first-prize Shorthorns at the late Guelph show, including the champion and grand champion fat heifer, were all sired by bulls of my breeding. I have now for sale ten young herd headers of this champion-producing breeding. HARRY SMITH, HAY P. O., ONT Exeter Station. Long-distance 'phone.

Shorthorns—Records show that cattle bought from the Salem herd won numerous ribbons the past season. We have others. Several young bulls are priced reasonably. Elora G. T. R. and C. P. R. J. A. WATT, Salem, Ont.

5 Shorthorn Bulls 5—We have for sale at moderate prices five Scotch Shorthorn bulls, including one of our herd bulls. Also a number of high-class heifers and heifer calves. A. J. HOWDEN & CO., Columbus, Ont. Myrtle G. T. R. & C. P. R. Long-distance 'phone

Elmhurst Shorthorns—We will sell Chancellor's Model = 58524—, the straight Marchioness-bred son of the great Bapton Chancellor, together with 4 young bulls of his get; thick, low-down, mossy-coated fellows, from dams from 1,400 up. Write for particulars, or better come and see. H. M. VANDERLIP, Langford Stn. Brantford & Hamilton Radial, Cainsville P.O., 6 miles from Brantford, Main Line, G. T. R.

DAIRY-BRED SHORTHORNS We have for sale Scotch- and English-bred Shorthorns. A few bulls of improved breeding on big milking lines; also others pure Scotch and heifers of both breed lines. L.-D. 'Phone. G. E. MORDEN & SON, Oakville, Ont.



## Pedlar Culverts Make the Township Roads "O.K."

**INSTEAD** of wood, brick or concrete culverts, taking days to make, simply use Pedlar Culvert in nestable bundles, set it up at the job, roll it into place, and build your road across it. In a few hours you make a roadway good for years, frost-proof, strong, and freshet-proof. It can't wash out. You save weeks of statute labor. Use it on your place. See your Reeve gets it for 1913.



### You Can Use It on Your Farm

**YOUR** township ought to use Pedlar Culvert, as most of your statute labor can then go in graveling and grading highways, instead of repairing rotten wood culvert and bridges, or excavating for cement culverts which frost will crack. A few hours' work installs a Pedlar Culvert. Use it on your farm for bridging ditches and gate entrances or lining wells. All sizes from 8 ins. to 7 ft in diameter. See your township adopts it. It means miles of good roads made with the labor now wasted on culvert repairs.

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Court Lodge, Egerton, Kent, Eng.  
 Exporters of Pedigree Live Stock of All Descriptions. Draft Horses a Speciality.  
 Draft horses are high, and feed is low; imported horses bought well are easily the best value for money that can be bought in horse flesh. Write us for full particulars. We can give highest references, many being to entire strangers who have dealt with us by correspondence only.

### Woodholme Shorthorns

I have for sale a number of choice young bulls, from 8 to 14 months old (pure Scotch); also a number of heifers, 1 to 2 years old, of this level type, and richest breeding. G. M. FORSYTH, North Claremont, Ont.

### SPRING VALLEY SHORTHORNS

Herd headed by the two imported bulls, Newton Ringleader, -73783-, and Scottish Pride, -36108-. The females are of the best Scottish families. Young stock of both sexes for sale at reasonable prices. Telephone connection.

KYLE BROS. - - - - - Ayr, Ontario.

### 1854 Maple Lodge Stock Farm 1913

Am offering a very fine lot of young Shorthorn bulls just now. Excellent breeding and most from splendid milking dams. The kind that is needed.

House is one mile from Lucan Crossing, G. T. R.  
**A. W. SMITH, Maple Lodge P.O., Ont.**

**Shorthorn Bulls and Heifers**—I have a choice lot of young bulls and heifers in calf now to offer. Former sires, Joy of Morning (imp.) -32070- and Benachie (imp.) -69954-. Present stock bull, Royal Bruce (imp.) -55038- (89909) 273853.

**GEO. D. FLETCHER, R. R. No. 2, Erin, Ont.**

**Spruce Lodge Shorthorns & Leicesters** Present offering: Young bulls and heifers from grand milking dams. Also a choice lot of Leicester rams and ewe lambs, and ewes of all ages bred to imp. rams. W. A. Douglas, Tuscarora, Ont.

## ANNUAL PROVINCIAL SALE OF PURE-BRED CATTLE

Under the auspices of the ONTARIO DEPARTMENT OF AGRICULTURE and management of the GUELPH FAT STOCK CLUB, will be held in the Winter Fair Building, GUELPH, ONT., on

Wednesday, March 5th, 1913, at 1 o'clock p.m.

The sale will comprise 40 head of Shorthorns, principally bulls, including representatives of the following Scotch families: Nonpareils, Flower Girls, Clippers, Brawith Buds, Rosemarys, Duchesses of Glosters, Amaranths, Roan Ladys, Mildreds, Miss Ramsdens, Stamford, Matchless, Golden Drops, Crimson Flowers, Cecilias, Buckinghams, Orange Blossoms, Mysies and others. For catalogues and further information, apply to

**A. E. MEYER, Guelph** President  
**J. M. DUFF, Guelph** Secretary



### SCOTCH SHORTHORNS FOR SALE

Two high-class imported yearling bulls. Eighteen bull calves, 8 to 14 months old, by the imported sires Bandsman and Village Duke. Forty heifers and young cows of best Scotch families, bred to imported sires. Some Toronto and London prizewinners. Both sexes; also some imp. yearling heifers.

**MITCHELL BROS.**  
 Burlington, Ontario  
 Farm 1/4-mile from Burlington Junction Station

## 10 SHORTHORN BULLS 10

If in need of a bull those that we are offering should interest you. They range from 8 to 14 months old, and are nearly all bred direct from imported stock. We also have females of all ages. Bell phone, Burlington Junction, G. T. R. **W. G. PETTIT & SONS,** Freeman, Ontario.

### Questions and Answers. Miscellaneous.

#### Operation of Boiler.

1. Is it lawful for a company to run a factory where the boiler has been inspected by a Government Inspector, and a stated number of pounds of steam allowed, and exceed that amount every day from 10 to 20 pounds, and with a fireman who has not got the lawful papers to run the engine?

2. What steps can be taken for the safety of the employees, as there are quite a number of them?

Ontario. OLD SUBSCRIBER.

Ans.—1. No—assuming that the steam plant in question has a capacity of not less than fifty horse-power.

2. We would refer you to the Ontario Statutes, 1911, Chapter 46, and more especially to Sections 8 and 15 of the Act.

#### Foul Brood in Apiary.

A buys 58 colonies of black bees from B, and B said they were free from all disease when B put them in the cellar. A takes them out in the spring and places them on their old stands for about three weeks. A takes them home, and when going through them to straighten up any combs that may have been shaken out of position in moving, he finds they have European foul brood. A notifies B at once, and B says he does not want full price for bees. A worked hard with the bees all summer and Italianized them, saving 23 colonies of the 58. A was to pay \$300 for the bees, but since diseased will not. B only wants to throw off \$50.

1. Are B's terms reasonable?

2. What would be reasonable terms?

3. In case B tried to force A to an unreasonable settlement, what would the law regarding the selling of diseased bees do for A?

Ontario. M. L.

Ans.—We think that we can best deal with your questions by referring you to The Foul Brood Act, Ontario Statutes, 1912, Chapter 73. It may be that both A and B are in a dangerous position, having regard to the provisions of the Act.

#### Earliest Sweet Corn.

In your Question and Answer Department, will you please give:

1. The names of two of the earliest commercial varieties of sweet corn?

2. Some points on cultivation of same?

3. Points to avoid in packing for shipment to market?

4. The best varieties of popcorn?

B. C. W. M. W.

These queries were submitted to F. M. Clement, B.S.A., Macdonald College, Que., who replies as follows:

1. The two earliest commercial varieties of corn grown here are Early White Malakoff, a low-growing, almost dwarf variety, of good quality, but small ears; and Peep-o'-Day, a larger-growing variety of equal quality. Golden Bantam and Early White Cory are better yielders, and possibly of little better quality, but later ripening.

2. We have never given corn any special care, beyond thorough cultivation. We have attempted starting seed in pots in the green-house and removing to the field in suitable weather in second or third week in May, but have not met with success. Corn requires warm conditions, and does not seem to thrive when taken from the green-house to outside conditions, at that time of year, even when carefully hardened off. I believe the change could be safely effected if protected for a time as the Montreal melons are, but this would be too expensive.

3. We have never shipped corn, as local demands take all we can grow generally. Corn will not retain its quality more than 24 hours after pulling, if stored in the sun or in a warm place, but if pulled in early morning while cool, and stored at from 35 to 40 degrees, it may be kept for about four or five days. Keep corn cool, and get it to the consumer as soon as possible.

4. We have never tested varieties of popcorn.

## Profitable Poultry and Egg Production

That is the title of Cyphers Company's 1918 free book. It is the most important book we have ever published in the interests of men and women who want to make the greatest success with poultry. The Special Canadian Edition contains 164 pages, each page 7 1/4 x 9 3/8 inches in size; also many illustrations. It goes to the heart of the poultry subject—tells what you need to know—bells down facts and suggestions that will help you. It tells the whole story of

### CYPHERS Incubators and Brooders

—the World's Standard Poultry Equipment—especially suited to the cold, changeable climate of Canada. Used and endorsed by more well-known poultry raisers—Government Experiment Stations—Agricultural Colleges—than all other makes combined. No heat or moisture troubles. Highest percentage hatches guaranteed. 1918 will be a big year for poultry raisers—prices high and profits larger, with cost of production lower. Don't risk your chance of success. Don't experiment! Learn more about these dependable machines. Our 1918 FREE BOOK also fully describes Cyphers Company's "Free Bulletin and Personal Letter Service" of daily benefit to all Cyphers customers. Write for the book today. Mailed free to any address. Write a postal now.



**A Difficult Sanitary Problem Solved**  
**The Guelph Chemical Closet**  
Convenient, Odorless, Inexpensive,  
**COST ONLY \$18.00 COMPLETE**



Are you living as your ancestors lived two hundred years ago? You certainly are if you have not installed a Guelph Sanitary Closet in your home. Why endanger the health of yourself or family, or pay unnecessary doctor bills?

The Guelph Chemical Closet is a wonderful advancement in refinement, comfort and sanitary convenience. It can be placed in the bathroom, cellar, or any desirable place. It requires no plumbing, sewage, or flushing system,—only a stove-pipe connected to a chimney-hole for ventilation. The up-keep is trifling. Less than one cent a day. Write for descriptive circulars. Agents wanted. This closet sells on sight. Seeing one is wanting one.

**THE GUELPH MFG. CO.**  
256 YORK ST. GUELPH, ONT.

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Wholesale and Retail  
Write for literature and quotations on **DAVIES FAMOUS MIXED BRANDS (24)**  
Muriate of Potash      Acid Phosphate  
Sulphate of Potash      Bone Meal  
Kainite                      Basic Slag  
Nitrate of Soda            Blood Meal  
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Rock Phosphate            Salt, etc., etc.

In bag, ton, carload lots.  
High-grade materials. Low prices and easy terms. Special booklet, "Farm Davies Way," free. Patronize our agents.  
**THE WM. DAVIES CO., LTD.**  
West Toronto, Ont.  
Commercial Fertilizer Department,  
R. INNES, B.S.A., MANAGER.

### ISLAND OATS

If the farmers of the Maritime Provinces, Quebec and Ontario want to make sure of getting the highest possible grade of seed oats for the spring of 1918, apply to us at once. To prevent a repetition of the disaster that befell so many farmers last year by sowing devaluated grain, we have stored at Point Du Chene and Pictou 50,000 bushels of large, selected, separated white seed oats, true to name and free from noxious weed seeds. If will be the farmers' own fault if they do not procure good seed, as the extra yield of these oats pays twice over the cost of the seed. Our firm name is stenciled on every bag. Do not allow the dealers to give you other than Read's oats for seed.

**JOS. READ & CO., Ltd., Summerside, P. E. I.**

**High-class Ayrshires**—If you are wanting a richly-bred young bull out of a 50-lb. a day and over cow, imported or Canadian-bred dam and sire, write me. Females all ages. Prices are easy.  
**D. A. MACFARLANE, Kelso, Que.**

### Questions and Answers. Miscellaneous.

#### Registration—Silage for Bull.

1. I have a heavy draft filly top-crossed to the fourth generation. I want to register her. What proceedings must I take?
2. Who should I send to for papers necessary?
3. What is the number of the papers necessary to do it properly?
4. I bought a Shorthorn cow and she was never transferred over to me. What is the number of the transfer papers?
5. Does silage injure a bull for service?

T. P.  
Ans.—1, 2, 3 and 4.—For necessary papers for these purposes, address simply "The Accountant," National Livestock Records, Ottawa.

5. No, not an ordinary amount fed in an ordinary, careful manner. Silage is a wholesome feed for a bull.

#### Training Horns.

Which is the proper method of training the horns of young cattle to incline downwards and forward? Will scraping and paring off the top and back side, or opposite way, bring the desired results? Would be pleased to hear from you, or anyone who has had experience with same.

J. A. M.  
Ans.—There is difference of opinion as to which is most efficient, filing and scraping on the side to which it is desired to train the horns, or vice versa. Our own opinion is that weakening the side to which it is desired to train the horn is most reasonable. What do others say? An instrument called a horn-trainer, regulated by a screw, is in use by some breeders and exhibitors, and is, we believe, quite satisfactory. This may be ordered from the Jersey Bulletin, Indianapolis, Indiana, by express.

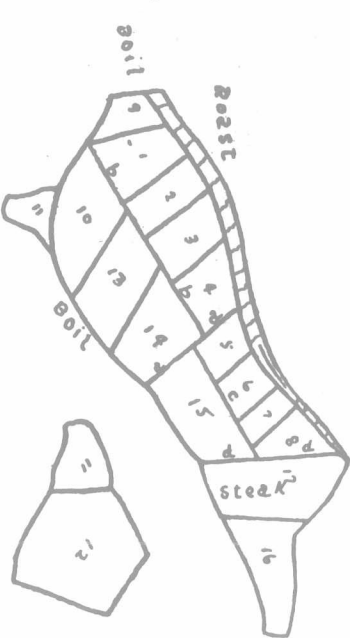
#### Luxation of Patella.

Colt, one year old last June, when let out of box stall at first will walk a few steps all right, but drags the toe of hind foot, then the foot will fly up suddenly, similar to stringhalt, then will walk off again. When let out for exercise you will scarcely notice it.

A. \*McD.  
Ans.—This is luxation of the patella, commonly called stifled. It is due to the stifle bone slipping out of place. (Clip the hair off the front and inside of the stifle. Get a blister made of two drams each of biniodide of mercury and cantharides, mixed with two ounces of vaseline. Tie his head so that he cannot bite the parts. Rub well with the blister once daily for two days; on the third day apply sweet oil. Turn him in a box stall now and oil every day. Keep him loose in his box stall when in the stable. If necessary, repeat the blistering.

#### Chart for Beef-ring.

Would you kindly publish, through "The Farmer's Advocate," a chart for a 32-share beef-ring, on two-piece cut? I presume a double-sixteen chart would be the one we require.  
J. W. B.

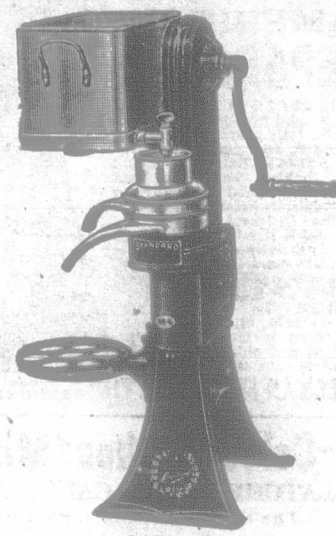


Ans.—This chart is for a sixteen-share ring, but if each share were cut in two it would work out all right. The chart represents one half of the beef lying on the table ready to saw.

## The Results At The Kerwood Cheese Factory

EVERY week or so we receive letters from creameries and cheese and butter factories, reporting tests made with the STANDARD Cream Separator. For example, the Kerwood Cheese and Butter Factory reports as follows on tests made October 29, 1912:

Test No.	Percentage of butter-fat in cream.	In skim milk.
1	36	.02
2	43.5	.02
3	45	.03



In each of the above tests the milk was fed to the machine at the rate of 684 lbs. per hour (machine listed at 600 lbs.) and the bowl was flushed, and when taken apart was free from cream and in good condition. The milk skimmed was not new milk, but had been kept over, some of it two days old. You will note by the above figures that the milk was fed to the machine nearly 100 lbs. per hour faster than its rated capacity, and that the cream skimmed contained a high per cent. of butter-fat, so that I consider the work done in this test exceptionally good.

(Signed) **W. WADDELL,**  
Proprietor Kerwood Cheese and Butter Factory.

The above test again emphasizes the superiority of the STANDARD in close skimming. Even old milk, fast-skimming and heavy rich cream did not prevent the STANDARD from skimming closer than other separators do under most favorable conditions. Figure it out. It will pay you to discard your old machine and get a "STANDARD," and do it now. There is no other that can give you equal results, and it's results that count. Send for descriptive catalogue.

**The Renfrew Machinery Co., Limited**  
Head Office and Works: **RENFREW, CANADA**  
Agencies Everywhere in Canada



## MAPLE LEAF BRAND OLD PROCESS OIL CAKE MEAL

Is the best food to fatten an animal in the shortest time; it multiplies the feeding values of all grains fertilizing the soil. A ton of "MAPLE LEAF" OIL CAKE MEAL contains three times the digestible protein or muscle-making element contained in a ton of corn, and protein is the most costly, necessary and valuable element in food. Feed "MAPLE LEAF" OIL CAKE MEAL and WATCH THE RESULT. If your dealer cannot supply you, write direct to our nearest mill.

**THE CANADA LINSEED OIL MILLS, LIMITED**  
Notre Dame Street, East, MONTREAL, QUE.      Sarauren Avenue, TORONTO, ONT.

## MALASOFAT A BALANCED FOOD

Wholesome, nutritious, palatable, digestible. Feed your milk cows "Malasofat" and increase your profits. "Malasofat" produces maximum results at a minimum cost. Ask your dealer, or send direct for information.

**DAIRY MEAL**  
**PARK FEED MILLING COMPANY, LIMITED**  
17 River Street      Toronto, Ontario, Canada

## 80 Imported and Canadian-bred Ayrshires

I am now offering by private sale my entire herd of 80 Ayrshires, imported, imp. in dam and Canadian-bred; big producers, show stock, high-class in quality, with best breeding. L.-D. PHONE. **DAVID HUNTER, MAXVILLE, ONTARIO**

**Ayrshires and Yorkshires**—We now offer at bargains bull calves dropped in July, 1912. All bred from (imp.) sire and from either dams with good records, or their daughters either imported or home-bred. Some choice February **Alex Hume & Co., Menie, Ont.** pigs; also young pigs.

**Stonehouse Ayrshires**  
Of choicest imported stock and with imp. sires and dams. I am offering young cows, 3, 4 and 5 years of age; a grand bunch of imp. yearling heifers, and a particularly good pair of young bulls.  
L.-D. Phone.      **HECTOR GORDON, Howick, Que.**

**City View Ayrshires**—Three young bulls fit for service; females from 3 months to 9 years; all young stock 3 years and under from R. O. P. ancestors. Always something for sale. Bell phone connections; 1 1/2 miles from 5 railroad stations.  
**JAMES BEGG & SON, R. R. 1, St. Thomas, Ont.**

# 15<sup>95</sup> AND UPWARD

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THIS OFFER IS NO CATCH. It is a solid proposition to send, on trial, fully guaranteed, a new, well made, easy running separator for \$11.95. Skims hot or cold milk; makes heavy or light cream. Designed especially for small dairies, hotels and private families. Different from this price, which illustrates our latest capacity machines. The bowl is a sanitary marvel, easily cleaned. Write for a copy of our circular from WINNIPEG, MAN. TORONTO, ONT. and ST. JOHN, N. B. Whether you buy a large or small, write us and obtain our handsome free catalog. Address: AMERICAN SEPARATOR CO. DANBURGH, N.Y.



### Calves Without Milk

#### BLATGFORD'S CALF MEAL

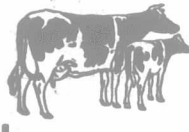
The Complete Milk Substitute  
The result of over 100 years' experience with calf-raisers. The only Calf Meal made in an exclusive Calf Meal Factory. As rich as new milk at less than half the cost. Makes rapid growth. Stops scouring. Three calves can be raised on it at the cost of one. Get Bulletin, "How to Raise Calves Cheaply and Successfully Without Milk," by sending a post card to STEELE, BRIGGS SEED COMPANY Toronto, Ont.



## Raw Furs

Our specialty is Canadian Raw Furs. Write for our free price list of Canadian Furs. We pay all mail and express charges. Remit same day as goods received. Hold shipments separate when requested. Prepay charges for returning furs if valuation is not satisfactory. We do not buy from dealers, but from trappers only.

HALLMAN FUR COMPANY  
141 King St. East TORONTO, ONT.  
N. Hallman, Mgr. Four years with John Hallam



### PURE-BRED REGISTERED Holstein Cattle

The most profitable dairy breed, greatest in size, milk, butter-fat and in vitality. Send for FREE illustrated descriptive booklets. HOLSTEIN-FRIESIAN ASSOCIATION, V. L. Houghton, Sec., Box 127, Battleboro, Vt.

Special Offering at Maple Grove, Crescent Ridge and Welcome Stock Farms. To make room for the spring calf crop, we offer at bargain prices, considering their quality and breeding, young cows, Record of Merit backing, fresh and shortly to freshen. Also heifers due to freshen, bred to our great bulls; also one of the stock bulls and a young bull fit for service, out of our 21-lb. 3-year-old. Come and see them, or write  
H. BOLLERT, Tavistock, Ontario  
R. R. No. 1.

## Registered Holsteins

Cows in splendid condition, all large, straight animals and due to freshen before 1st April. Also some young stock of excellent breeding, both sexes.  
Collver V. Robbins, Riverbend. Bell Phone.

### Hawthorne Glen Holstein Herd

Offers young bulls ready for service, one from Calamity Howdy, winner of 1st prize in cow class at Guelph, 1912; also a half-brother to Pontiac Jessie, sweepstakes heifer under 36 months; also a few females. Prices reasonable.

Write for particulars, or come and make your choice.  
MARTIN McDOWELL  
Eastwood Sta., G. T. R. Oxford Centre, Ont.

Glenwood Stock Farm 5 BULL CALVES fit for service, out of big milking strains, at low figure for quick sale. THOS. B. CARLAW & SON, WARKWORTH, ONT., Campbellford Sta

### Questions and Answers. Miscellaneous.

#### Ochre and Fish Oil Paint—Enlarged Knees.

1. I have been thinking of painting a roof with red ochre and fish oil. How much ochre would I put to a gallon of fish oil?  
2. I have a cow that gets bunches on her knees when standing in the stable. She has always been right in summer. How can I treat her to cure, and prevent the bunches growing another winter?  
G. F. B.

Ans.—1. We have never used or heard of this mixture, but one member of our staff has used yellow ochre, linseed oil, and turpentine, with satisfaction as a kitchen-floor paint. Five or ten cents' worth of ochre will suffice for an ordinary kitchen floor. The exact amount is determined by trial. A little turpentine is added as a drier.  
2. Your statement of the case suggests the means of prevention. Keep the cow well bedded. If you can stand her with her fore feet on earth, it will help. Let her have exercise on nice days.

#### Feed for Dairy Cows.

What would you consider the best value for my money for dairy cows, oil cake at \$37 per ton, molasses meal at \$38 per ton, or cotton-seed meal at \$35 per ton?  
C. B.

Ans.—It depends a good deal on what else you are feeding. If, as is probably the case, your ration is deficient in protein, the oil cake or cotton-seed meal would be much the more economical supplement. A mixture of these two feeds is very good. The best grades of cotton seed carry a higher percentage of nutrients than oil cake, but the oil cake is laxative, and rather a more wholesome feed, even for mature stock, while for calves or pigs there is no comparison. Fed together, you get the value out of the nutrients in the cotton seed, while the oil cake counteracts the constipating effect of the latter. We use these feeds mixed ourselves. Molasses meal we use in small quantities to supplement oats for horses, and have at times fed a little of it to cattle and pigs with apparently satisfactory results. It is, however, too dear to employ extensively for dairy cows.

#### Scratches—Ringworm

1. Our horses all have scratches on the hind legs. They do a great deal of scratching and stamping. There is only one that shows the scratches much on the leg. We would like to know what is good for them.  
2. My yearling calves have something much like the ordinary ringworm, and it spreads very fast. I have tried oil and phenyl, and other things, but can't stop it. Can you please give a cure?  
J. L.

Ans.—Except to any that may be in foal, give a purgative of 9 drams aloes and 2 drams ginger. To all that are affected, whether in foal or otherwise, give one to one and a half ounces Fowler's Solution of Arsenic night and morning for a week, then stop for a week, and repeat, etc. Administer the Solution of Arsenic on grain, or as a drench. Wash the legs thoroughly with a solution of corrosive sublimate 1 dram to a gallon of water, every second day, and rub with cloths until thoroughly dry. Give regular exercise, and feed little grain. Dress the scratches, where they show, three times daily with oxide-of-zinc ointment to which has been added 20 drops carbolic acid to each ounce.

2. Moisten the scales with sweet oil, remove them, and dress with tincture of iodine daily until cured. Disinfect the stable, and give a coat of hot lime wash, with five per cent of carbolic acid. Disinfect all pails, clothing, etc., that may have been exposed. The vegetable parasite that causes ringworm is easily conveyed from animal to animal. It adheres to stables, floors, pails, etc., and is always ready to attack a fresh victim. Disinfection and whitewashing are therefore in order. As for medicants, a simple treatment which has been successful in many cases is a mixture of three parts borl, two parts sulphur, and one part saltpetre. Lard and sulphur alone often give very good results.

# HOLSTEINS

## By Auction

Owing to having sold his farm, Mr. A. H. Teeple, of Currie's, Ont., at the big Sale Pavilion, in the City of

## WOODSTOCK, ONTARIO

Tuesday, March 11th, 1913

Will sell by Auction, without any reserve, his entire herd of 45 head of richly-bred and producing Holsteins. This is one of the noted herds of Oxford County, the result of many years' breeding, the produce of high, official backing on both sides for generations; including a big number of very choice heifers, and the two grandly-bred stock bulls, King Fayne Segis Clothilde and Prince Abbecker Mercena. The entire offering is an exceptionally high-class one and in splendid condition.

TERMS: Cash, or 11 months on approved note with 6%.

COL. WELBY ALMAS - Brantford  
COL A. SIPLE, WM. PULLIN, Woodstock } Auctioneers

Catalogues on application to

A. H. TEEPLE - CURRIE'S, ONTARIO

## BIG DISPERSION SALE OF Holsteins and Tamworths

Mr. John McKenzie, of

### Willowdale, Ontario

6 miles north of C. P. R. Crossing, on Yonge St., having sold his farm, will, on

WEDNESDAY, MARCH 12th, 1913, AT THE FARM

Sell by auction, his entire herd of 40 registered Holstein cattle, and a number of registered Tamworth Swine, Brood Sows, Young-bred Sows, Stock Boars, Etc. There are cows with A.R. records up to 19.14 lbs. Two year-old heifers with A.R. records up to 16.30 lbs., R.O.P. records up to 14,000 lbs.; B.F. tests up to 4.51%. A strictly high-class lot in high-class condition. Nearly all in calf to a son of the great King Segis; and many of the young ones, sons and daughters of the same bull.

Metropolitan Electric Cars pass the farm every hour. STOP 34.  
TERMS: Cash, or 8 months with 6%.

JOHN PRENTICE, Toronto, Auctioneer. For catalogues, write.  
JOHN MCKENZIE - WILLOWDALE, ONTARIO

### FAIRVIEW FARM'S HERD OFFERS sons of Pontiac Korndyke

25983, the greatest sire that ever lived, and the only bull that ever sired 19 daughters that have made 7-day records above 30 pounds each. Do you want your next bull to be a brother to such cows as Pontiac Lady Korndyke (38.02), Pontiac Pet (37.67), Pontiac Clothilde De Kol 2nd (37.21), Sadie Vale Korndyke (36.20), and eight others above 30 pounds? If you do, write me for price on a son of Pontiac Korndyke. I also have sons of Rag Apple Korndyke and Sir Johanna Colantha Gladi. E. H. DOLLAR, HEUVELTON, NEW YORK. Near Prescott.

### LAKEVIEW HOLSTEINS

We are now testing some of the daughters of Count Hengerveld Fayne De Kol, and they are running from 16½ lbs. with first calf to 20 lbs. with second calf. There are still a few young bulls from these heifers that we are offering at half their value, in order to make room. They are sired by Dutchland Colantha Sir Mona. Come to the farm and see the dams of these bulls and their dams.  
E. F. OSLER, BRONTE ONTARIO

### Summer Hill Holsteins

Would you like your next bull to be from the same sire as the heifer that holds the world's record for yearly work, and the same sire as the Champion Cow of Canada in the seven day work, and the same sire as the Champion four-year-old of Canada in the thirty day work? We have bulls of this breeding to offer whose dams have records of over 27 lbs. We have also some extra choice heifers bred to our junior herd bull whose dam has a record of 34.60 lbs. butter in seven days and 113 lbs. milk a day. Yorkshires of all ages. D. C. FLAIT & SON, R. R. No. 2, Hamilton, Ont.

**Holsteins:** \$250 buys two 2-year-old Reg. Holstein heifers, bred to freshen in September. A. Watson & Sons, R.R. No. 1, St. Thomas, Ont.

**Choice Bull for Sale**—One year old and ready for service. Wonderful depth and constitution, his dam, "Jan the Jewel Mechtild 3r 1," champion cow at Toronto. Price \$200. Also young females.  
M. L. HALEY & M. H. HALEY, Springford, Ont.

**Woodbine Holsteins** Herd headed by King Segis Pontiac Lad, whose sire's dam is the champion cow of the world. Sire's sire is the only bull that has sired five four-year-olds that average 30 lbs. each. Dam's sire is the bull that has sired two 30-lb. three-year-olds. His two great grand sires are the only bulls in the world that have sired two 37-lb. cows. Bulls and bull calves for sale. A. KENNEDY, AYR, ONT.

**Evergreen Stock Farm High-class Registered Holsteins**  
For sale: A few choice young bull calves and females, all ages; good enough for foundation stock  
A. E. HULET, Norwich, Ontario.

**Maple Hill Holstein-Friesians** Special offering: Bulls from 1 to 15 months old. The growthy kind that will give good service. One from a son of Evergreen March, and all from Record of Merit dams. Write for particulars. G. W. CLEMONS, St. George, Ont. Bell telephone.  
When writing please mention 'The Advocate'

**The Maples Holsteins**  
I am now offering for sale 10 young bulls, official record backing on both sire's and dam's side. They are old enough for service, and my prices should soon sell them.  
WALBURN RIVERS, Foldens, Ont. Oxford County  
Phone.



## Bog Spavin

Cure the lameness and remove the hunch without scarring the horse—have the part looking just as it did before the blemish came.

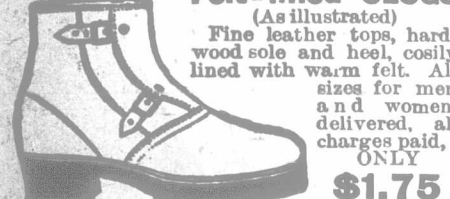
**Fleming's Spavin Cure (Liquid)** is a special remedy for soft and semi-solid blemishes—Bog Spavin, Thoroughpin, Splint, Orb, Capped Hock, etc. It is neither a liniment nor a simple blister, but a remedy unlike any other—doesn't irritate and can't be limited. Easy to use, only a little required, and your money back if it ever fails.

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4 cent spent now may be the means of saving you three calves next fall. Send your name and address for free sample and circular. It is no trouble, and you can judge them for yourself. Write to-day.

**F. G. JAMES, Bowmanville, Ont.**

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Phone L-D, Agincourt. Duncan Stn., C. N. R.

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The oldest established flock in America. Present offering: a few two-shear and older ewes of both breeds, bred to our imported champion ram. Also a few nice ewe lambs by imported sires. Prices reasonable. **Henry Arkell & Sons, Arkell, Ont. L.-D., phone in house.**

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### Quality Oxford Downs

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**F. BARBOUR, Erin P.O. & Sta. L.D. Phone.**

### Oxford Down Sheep,

Shorthorn Cattle, Yorkshire Hogs—Present offering: Lambs of either sex. For prices, etc., write to **John Cousins & Sons, Buena Vista Farm, Harrison, Ont.**

### Questions and Answers. Veterinary.

**Result of Collar Bruise.**  
When two years old my mare had a collar bruise which got better. Last fall it reappeared, and has all disappeared except a little hard substance, down deep. She is in foal.

N. L. E.

Ans.—This was a fresh bruise, not a reappearance of the one she had when two years old. The thickening mentioned is fibrous, and in most cases we recommend dissection. In some cases it will become absorbed, hence an operation is not necessary. As we do not advise any operation that can be avoided on a pregnant mare, we, in this case, think it would be wise to try absorbents. Get a liniment made of 4 drams each of iodine and iodide of potassium, and 4 ounces each of alcohol and glycerine. Rub a little well in once daily, and if the thickening has not disappeared when she foals, get your veterinarian to operate.

V.

### Miscellaneous.

**Wart.**  
I have a heifer that has a wart in the corner of its eye. What would be the best treatment for it without injuring the sight?

J. P.

Ans.—Castor oil, applied carefully in small quantity every day, is said to remove warts in some cases. A sure treatment is that of touching the wart with a silver nitrate pencil, but it would need to be very carefully handled if used in this case. If used, follow the instructions of the druggist, or better, have a veterinarian treat.

### Cement and Wooden Basement.

I intend erecting foundation for a bank barn next summer, and would like your advice. How would it do to build first four feet of wall cement, putting in heavy girts for the floor four feet from the top of cement, the posts to continue from cement to top, the windows to sit on top of sill? Would you advise this, or build it all of concrete? Would it make a drier stable?

L. S.

Ans.—This is something like our stable at Weldwood, which has a three-foot-high stone foundation. It makes a dry, warm stable, and we like it very much. Above the stone, the wall is double-boarded, with paper between.

### Determining a Fall.

Is there any way of getting at the way water would run on a level field for a distance of, say, 125 rods? The land is so flat—we don't know whether the water would drain from the far end or not.

X. Y. Z.

Ans.—An accurate spirit level, with peep sights, sighted both ways to check any possible error in adjusting the level, would probably reveal a fall one way or the other. For fuller particulars, apply to Prof. Wm. H. Day, O. A. C., Guelph, for a copy of his bulletin on farm drainage. By the way, why not apply to Prof. Day for a drainage survey of your farm? His field staff could detect a fall where your level and peep sights might fail.

### To Prevent Spread of Abortion.

Can there be anything done for cows that have not aborted, but are in a herd that has contagious abortion? We have two cows that have been bred about a month, to an infected bull, and two that have not yet been bred. All the rest of the herd have aborted.

FARMER.

Ans.—Not much can be done with any surety of success. Would advise spraying the vulva and hinder parts twice daily with Creolin solution, using an ordinary fly sprayer for the purpose. Whitewash your stable with lime wash, to which carbolic acid has been added. Keep stable clean, and avoid handling feed with any utensils which come in contact with the manure. There is an anti-abortion serum with which cows may be vaccinated by your veterinarian. It costs two dollars per treatment, but in a case which we are watching, it seems to be proving successful, though we cannot speak positively as yet.

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This fall I have the best lot of lambs I ever bred. I have plenty of show material, bred from the best stock procurable in England. Order early if you want the best. Ram lambs, shearings and ewe lambs. Yorkshires of all ages.

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Bradford or Beeton stations. Long-distance phone.

### Belmont Shropshires, Southdowns

I have a grand lot of rams and ewes for sale, both breeds. Anyone wanting a good ram, or a few good breeding ewes, should write me at once and get the first choice.

### C. Hodgson, Brantford, Ont.

### COTSWOLDS AND SHROPSHIRE

At Toronto I won 1st on flock, champion on both ram and ewe in Cotswolds. I have for sale a big lot of shearing rams and ewes, ram and ewe lambs of both breeds; strictly high-class.

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**How to Have the Best Cough Syrup and Save \$2, by Making It at Home**

Cough medicines, as a rule, contain a large quantity of plain syrup. If you take two cups of granulated sugar, add one cup of warm water and stir about 2 minutes, you have as good syrup as money could buy.

If you will then put 2½ ounces of Pinex (50 cents worth) in a 16-ounce bottle, and fill it up with the Sugar Syrup, you will have as much cough syrup as you could buy ready made for \$2.50. It keeps perfectly. Any housewife can easily prepare it in five minutes.

And you will find it the best cough syrup you ever used—even in whooping cough. You can feel it take hold—usually stops the most severe cough in 24 hours. It is just as effective, has a good tonic effect, and taste is pleasant. Take a teaspoonful every one, two or three hours.

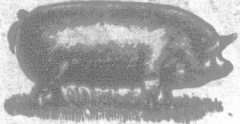
It is a splendid remedy, too, for whooping cough, croup, hoarseness, asthma, chest pains, etc.

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A guaranty of absolute satisfaction or money promptly refunded goes with this recipe, if the genuine Pinex is used. Your druggist has Pinex, or will get it for you, if you ask him. If not, send to The Pinex Co., Toronto, Ont.

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Have a choice lot of sows in pig. Boars ready for service and young pigs of both sexes supplied not akin at reasonable prices. All breeding stock imported, or from imported stock from the best British herds. Write or call on

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Present offering. Seven boars from 6 to 10 months old; boars and sow pigs 6 weeks to 4 months; sows bred and others ready to breed, from such noted stock as Colwill's Choice, Canada's champion boar, 1901, '02, '03 and '06, and Imp. Cholderton Golden Secret. Also a few choice Shorthorn heifers in calf; beef and milk combined. Show stock a specialty. Prices right. L. D. 'Phone A. A. COLWILL Newcastle, Ontario.

**SWINE OF ALL BREEDS FOR SALE.**

Yorkshires, Tamworths, Berkshires, Hampshires, Chester Whites, Poland-Chinas and Duroc-Jerseys. I have constantly in hand both sexes of all ages. Show stock a specialty. Prices right. JOHN HARVEY, Frelighsburg, Que.

**Poland-Chinas and Shorthorns**

Am offering now 20 good young sows for spring farrow. This herd contains more Toronto winners than all other herds of the breed combined. Also choice young Shorthorns of either sex. Prices easy. GEORGE G. GOULD, Edgar's Mills, Essex Co., Ont.

**Cloverdale Berkshires**

Present offering: Sows bred and others ready to breed; also younger stock of both sexes. Prices reasonable. G. J. LANG, Hampton, Ont. Durham Co.

Nothing is more silly than the pleasure some people take in "speaking their minds." A man of this make will say a rude thing, for the mere pleasure of saying it, when an opposite behaviour, full as innocent, might have preserved his friend, or made his fortune.—Steele.

Some people don't care how many patches they may have on their souls, so long as they don't have any on their clothes. And they don't care how wrinkled their hearts get, so long as their faces remain smooth.

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if instead of soap you use SNAP, the original hand cleaner.

SNAP contains no lye or acids, but glycerine and neutral oils which keep the skin smooth and in splendid condition.

Try SNAP for a week and notice the difference.

**S N A P**

Order from your dealer to-day. Save coupons.

**Questions and Answers.**

**Miscellaneous.**

**Pigs Biting Each Other.**

Re pigs worrying each other, I would say that I do not know the cause, but I have found ringing them, when they start fighting, to be a good cure. It gives them something else to think of. G. A. S.

**Butter and Butter-fat.**

How many pounds of 3.50-per-cent. milk will it take to make a pound of butter-fat, and also how many pounds of milk to make a pound of butter?

M. J. McP.

Ans.—Three and a half pounds of butter-fat are contained in one hundred pounds of three-and-a-half-per-cent. milk. One pound is contained in two-seventh times one hundred, equals twenty-eight and four-seventh pounds. Three and a half pounds of butter-fat should make about seven-sixth times three and a half, equals four and one-twelfth pounds butter. Ignoring the small fraction, for convenience of reckoning, this means that four pounds butter should be made from one hundred pounds milk, or one pound from twenty-five pounds.

**Beekeeping Books—Plumber's Wages.**

1. Do you sell good books about bees? If so, how much would a good one cost, and how much for postage?

2. Could you let me know what a man's fare from England to Canada is, second class?

3. What are good wages for a plumber?

H. P.

Ans.—1. ABCXYZ of Beekeeping, price \$1.75, postpaid; or Langstroth on the Honey Bee, price \$1.60 postpaid.

2. Enquire of your local railway ticket agent.

3. Plumbers in Canada charge fifty to sixty cents an hour, or upwards. This includes all the time they are thinking about the job, all the time they are going to or from it, all the time they are considering how to go about it, and in some cases all the time they are sitting by the stove watching the clock. The wages paid to employees in the trade are somewhat less than this, running forty to forty-five cents an hour.

**Hens Ailing.**

My hens are in a well-ventilated house, and apparently in first-class condition, healthy and active, fed on wheat, oats, buckwheat, bran, meal mash, and table scraps, etc. They sit around for from ten hours to two days, and then die. In some, the bowels protrude. Can see no outward form of disease whatever. R. M. D.

Ans.—This is a very peculiar condition, and I am not positive that I can give the correct answer, that is, there is not sufficient information in the letter. I would say from the description that it is a case of the inversion of the oviduct, the cause of which is very hard to be at all positive. We had, a few years ago, a certain strain of birds of a particular breed in which we were endeavoring to get a very large egg. The round egg, or one thick through center, was the one in favor. After two or three years' selections along this line, we found that almost 50 per cent. of the pullets at laying would act very similar to your correspondent's birds, and, of course, we lost them by inversion of the oviduct. The oviduct may be washed and replaced, but this is usually unsatisfactory, as when the hen lays again in a few days, the same trouble occurs. We also got a very large number of eggs from the above-mentioned birds that were badly smeared with blood. This trouble occasionally occurs at this season of the year with pullets just beginning to lay, that is, birds that have been well fed all winter, and are in high condition. I would suggest that your correspondent increase the amount of exercise by making the hens work a little harder for their feed, and if any of the birds get in a stupor, just stand them in hot water, as hot as the hand will bear. Possibly it will be advisable to oil the vent by means of a feather dipped in sweet oil or other clean oil, and insert the same in the vent. This ordinarily assists the bird to lay. I do not think this is what is commonly called a disease. W. R. GRAHAM.

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Grand stock, either sex, constantly for sale. Price reasonable. MAC CAMPBELL & SONS, Northwood, Ontario.

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Bred from the Prize-winning herds of England; have a choice lot of young pigs, both sexes, pairs not akin; and also the dual-purpose Shorthorns. Satisfaction guaranteed. C. Currie, Morriston.

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are founded on the famous old Sally tribe, noted for big size, length of body and strength of bone. We can supply pairs and trios not akin. Show stock a specialty. Also high-class Cotswolds, ram and ewe lambs, shearlings. E. BRIEN & SON, RIDGETOWN, ONTARIO

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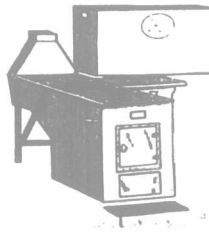
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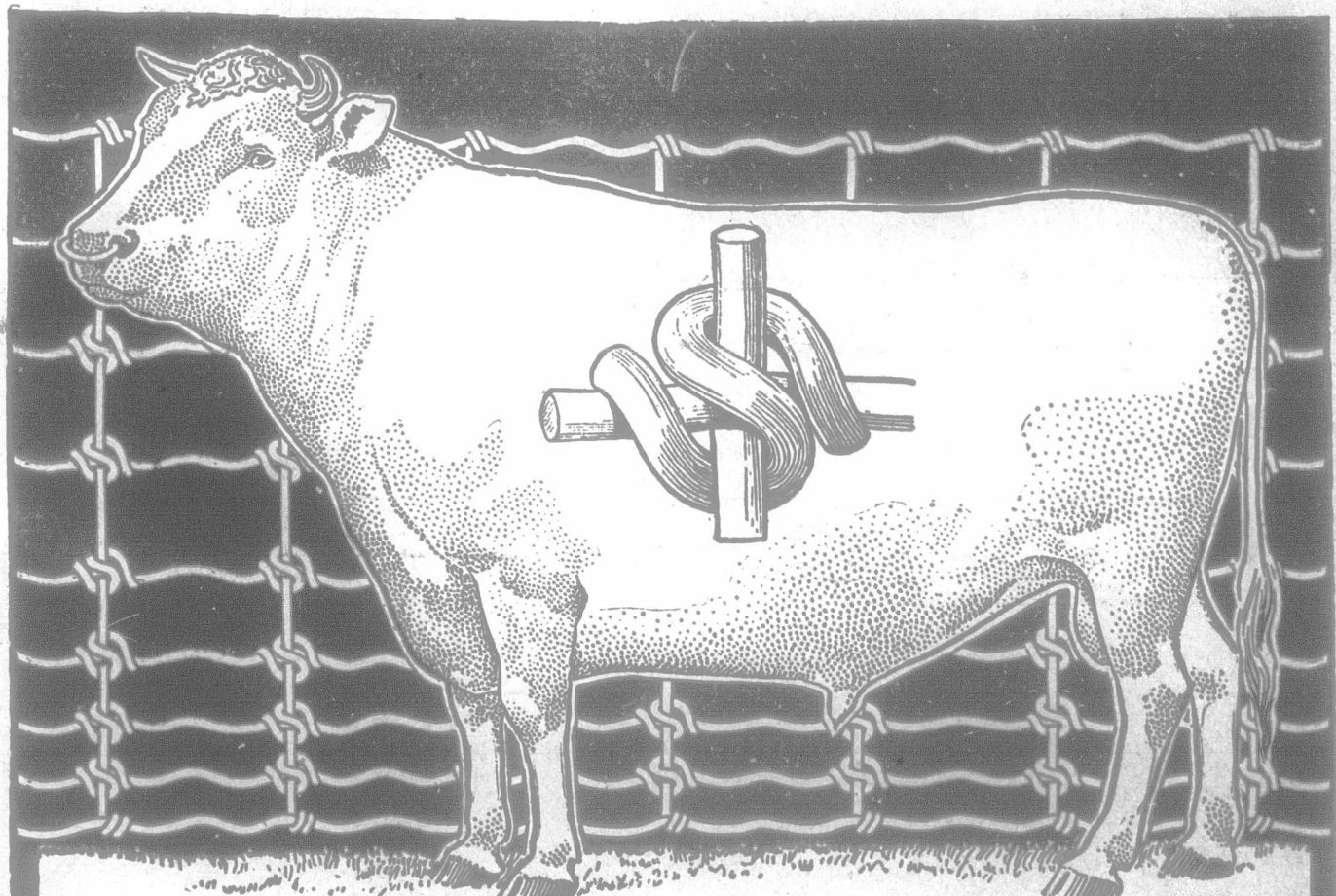
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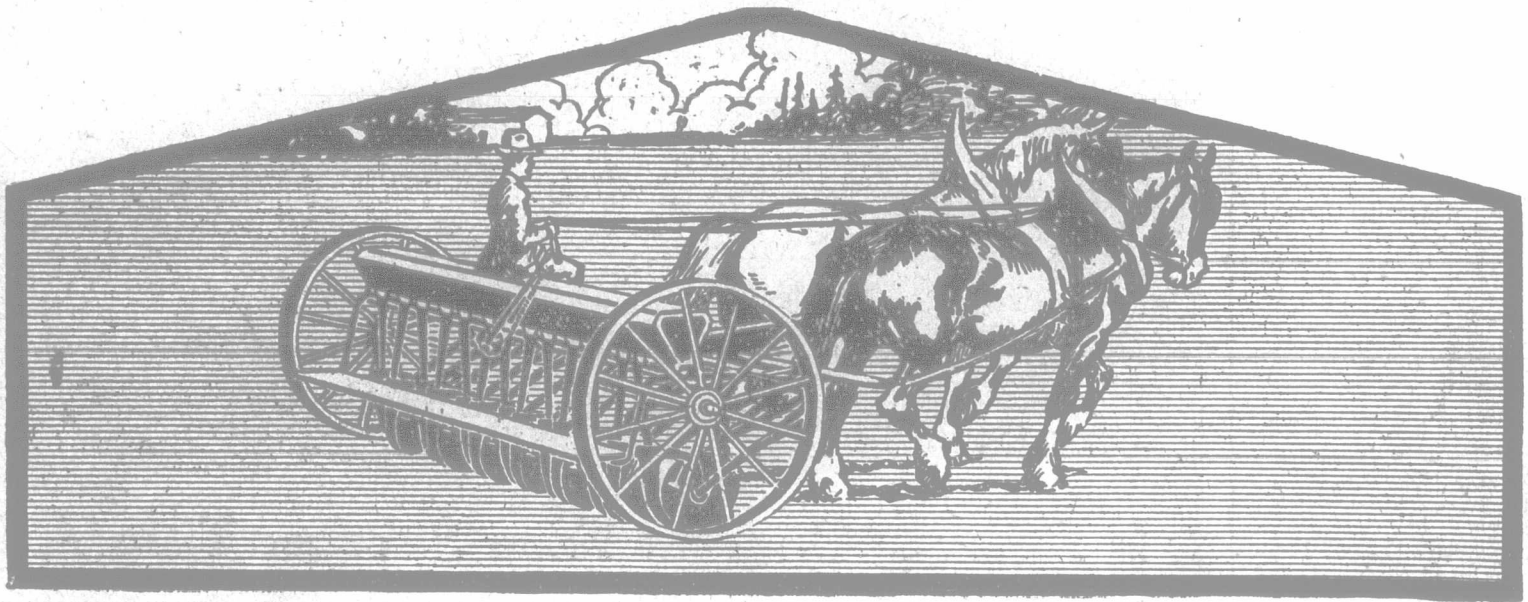
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## Cockshutt Drills Make Perfect Seeding Easy



**Y**OU disc, plow and harrow your land in preparing for seeding. This takes labor and time. Yet you only get a partial return if your seed and the drill you sow with do not give you the biggest possible crop return. The quality of your seed is a matter we cannot help you in. But the Cockshutt organization can stand back of you in guaranteeing the perfect quality of the sowing of your seed.

The famous Cockshutt Disc Drill is designed to guard against the defects of ordinary types of seeders. The Cockshutt sows at even depth across the drill. It sows in rows only six inches apart, instead of the standard seven inches, and protects the land against crusting and drying. The Cockshutt feed device is protected against injury and disturbance from the wheels, and sows accurately. Lastly the Cockshutt Drill is light in draft, has constantly oiled discs, and these discs have scrapers, and are so arranged that they drop trash.

This last feature is of immense importance. It means quick seeding in spring. It avoids stops and delays for hand-cleaning. It prevents clogging and missing rows. All your land is properly seeded, in the quickest possible time.

Get a Cockshutt Drill. It assures you three to five extra bushels per acre, even ripening, crop that is practically drought-proof.

Write to-day for the Cockshutt Catalogue, or see our nearest agent. You have a choice of Cockshutt Drills in 13 to 22 discs, and in single, double disc, or drag-shoe style. It means three to five bushels of crop extra per acre every year you use it. Get a Cockshutt Seeder and seed right.

Sold in Western Ontario and Western Canada by

**COCKSHUTT PLOW CO., Limited**  
Brantford, Ont.

Sold in Eastern Ontario, Quebec and the Maritime Provinces by

**The FROST & WOOD CO., Limited**  
Smith's Falls, Ont.

### Perfect Design

The Cockshutt Grain Box is upheld, and the centre drills are kept in alignment by a strong I-beam of steel, to which short axles with reversible bushings are attached.

This makes the Cockshutt drill proof against sagging at the centre, which means sowing too deep, delayed crop or lost seed.

The discs are arranged zig-zag and close together. This gives a row of seed every six inches. All rain reaches the crop roots, and the sun cannot readily dry out the land owing to the close-set growth. The close seeding utilizes your land to best advantage.

These discs have each an oil-reservoir, sufficient for a whole season. The Cockshutt Drill runs light, and crop is speedily put down during the valuable spring days.

The grain boots behind each disc "draw away" from the disc. Trash carried up by the disc merely drops off, instead of wedging. This avoids stops and delays to clean the discs.

Get full details from the Cockshutt Catalogue.

IMPLEMENTS OF QUALITY