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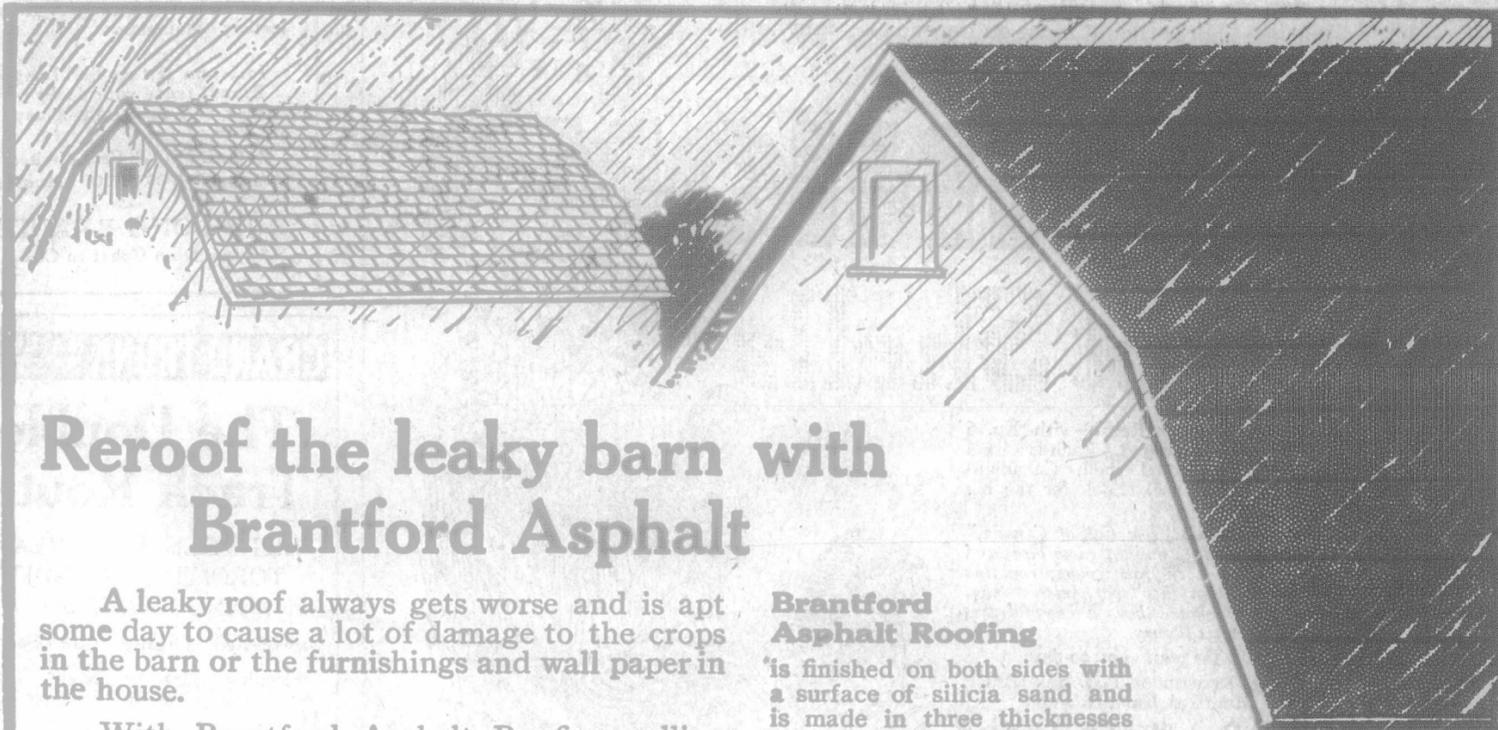


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LV.

LONDON, ONTARIO, SEPTEMBER 30, 1920.

No. 1462



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### Brantford Asphalt Roofing

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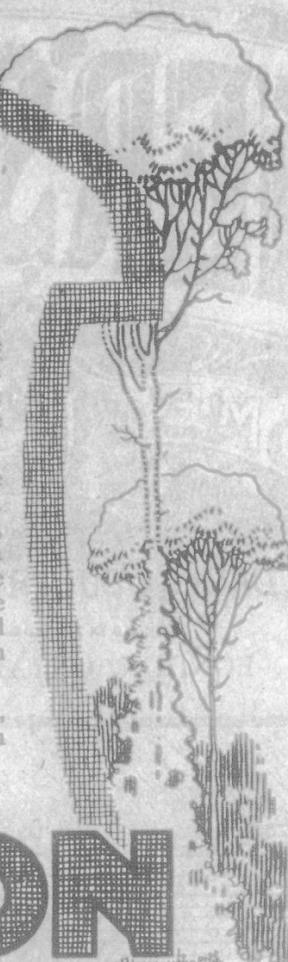
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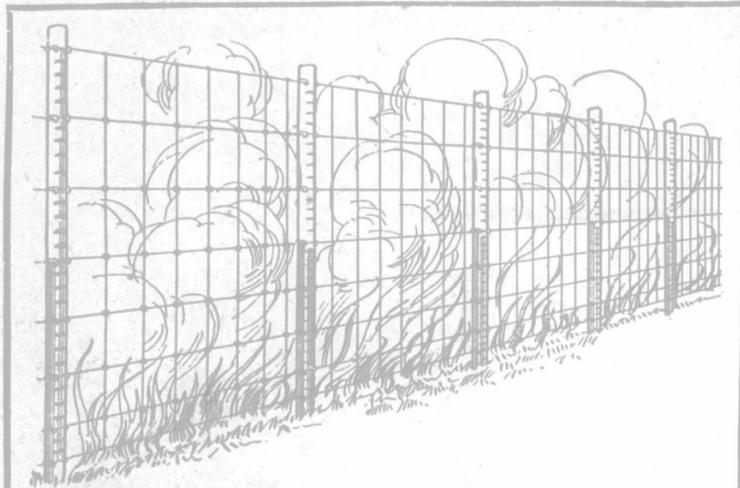
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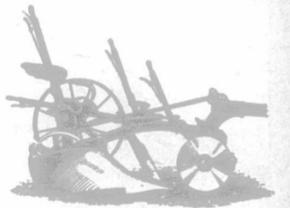
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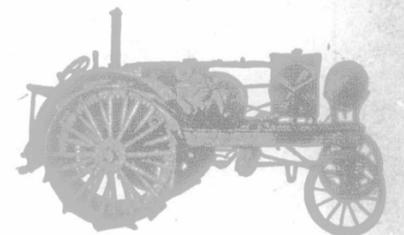
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LV.

LONDON, ONTARIO, SEPTEMBER 30, 1920.

1462

## EDITORIAL.

After the cockerels have helped to clean up the harvest fields, put them into crates and fatten them.

Manure spread as a top-dressing on old or new meadows is wisely placed. This is a practice that will grow as more experiment with it.

Fall versus spring plowing may still constitute good material for argument, but in these times the farmer, with a full amount of fall plowing done, never regrets it.

Don't skimp the calves because grain is short till after threshing. Purchase some concentrates and get all the development possible at this, the best growing season of the year.

Harvest the fruit carefully and store it. There is usually a good market for farm-grown fruit after the surplus is cleared away. Our markets cannot absorb a season's crop in six weeks.

Some dairymen like to give spring-born calves a short period on good pasture in the fall. This grass experience seems to fit them better for the pasture season which follows the first winter.

In many parts the corn crop is a splendid one. All possible should be put into the silo and the remainder carefully preserved. Any silage that can be carried over to next summer will be appreciated when the pastures are dry.

No kind of food will contribute more abundantly to the development of a healthy, vigorous race of people than dairy products. All our dairy organizations should be generously supported in order that they may do honor to the dairy cow and popularize dairy products in the urban homes throughout Canada.

Prices of manufactured commodities are being held at a high level when, in fairness to all, they should be allowed to seek a normal plane. When raw material drops in value it is only reasonable that finished goods should follow suit, but organization and full control of the situation has enabled manufacturers to keep their price lists propped up. Henry Ford's example, if universally followed, would soon bring about normal conditions. Prices are still inflated beyond reason.

The Dairy Branch of the Provincial Government or the Dairy and Cold Storage Branch of the Dominion Department of Agriculture could very profitably perfect plans and specifications for combination milk plants in dairy districts. Some day the producers will erect small combination plants in the rural districts and equip them so as to cater to the most convenient and remunerative market. Thousands of dollars can be saved to farmers by having suitable specifications for such plants.

Farmers throughout the Dominion of Canada have struck a hard blow this season at exorbitant prices. It is now the duty of our banking institutions to assist in the moving of the crops, but loans should not be made to those who attempt to corner markets or hoard products. Money is also required by growers to assist them in housing and preserving their harvests until the market can absorb them. A steady flow of product into consumption will make the food problem easy for all, but if profiteers get control of any appreciable volume the situation will become tense and there will be no war to blame for it.

### Marketing Live Stock.

As live stock producers we in Canada have worn deep and definite grooves out of which we make no effort to escape. These channels or beaten ways are the outcome of certain conditions which influenced trading in years gone by, but in some instances they are due to seasonal and climatic conditions. If all were to change their ways or methods of marketing we would be little better off. What is needed is a gradual swing away from the months of congested markets, and some relief for what exists now in the lamb trade. For twenty years the rush of good and poor lambs to market during a period of six weeks in the fall has sent prices tumbling to the bottom. We expect the market to absorb in less than three months what it takes us a year to produce. Half the lambs are not ready for the shambles in September, but in they come, good and bad, fat and thin, with the inevitable result—lower prices and disappointing returns. Were half of these lambs given a small ration of grain and some good fall pasturage, the market would be stronger throughout and the returns far in excess of the annual receipts under present and past methods.

While the f. o. b. method of selling hogs may satisfy the individualistic farmer it is bad business from the standpoint of hog production and marketing. Sometimes the buying at country points becomes so keen that the competitive market at the stock yards is not as reliable a guide to values as we should have. Without an open market it is difficult to establish prices and ascertain values.

The one outstanding need of the live stock industry is more co-operation. This can take many forms, varying all the way from a small community organization that will breed one type of hog and be able to obtain a premium on every carload sent out up to big Provincial or even Dominion enterprises, such as the Canadian Co-operative Wool Growers Ltd. If we don't hang together, we shall all hang separately.

### Threshing and Silo Filling.

While farm operations are, as a rule, being conducted with implements much larger and more intricately constructed than those of ten or fifteen years ago, we are gradually making adjustments in another direction as regards threshing and silo filling. There is a tendency back to the small separator that can be efficiently operated and owned by half a dozen farmers. Threshing and silo-filling equipment will eventually conform with the 8-16 or 10-20 tractor, and small groups of farmers will be masters of their own destinies in regard to these operations. Conditions demand these changes, and it is usually easier to adapt our operations to conditions than to alter the circumstances which have a direct and powerful influence on agricultural affairs.

Never in the last quarter-century has it been more difficult to get threshing done than it has been this season. Outfits have gone into the scrap heap and new equipment is exceedingly expensive. Many of the big outfits require overhauling which would cost in the neighborhood of \$1,000, and they are not repaired. A scarcity of outfits has developed during the last five years, and, at present prices, few seem inclined to invest in heavy equipment. The fall wheat seems to keep the gangs busy up to early in September, when threshing is halted because of the demand for silo filling. Not until after the corn is housed can many farmers get grain threshed, and in the meantime they are inconvenienced through lack of feed.

Whether farmers like the medium-sized separator and a few more hours' threshing is not the determining factor now. The fall of the year usually finds one in need of grain when a half day's threshing is very desirable. An 8-16 or 10-20 tractor, with a separator to match, will do the trick nicely, and five or six farmers

could operate the equipment among themselves to advantage. With this step taken the same co-operating group might just as well obtain a cutting-box of corresponding size and fill their own silos. The gang and outfit employed at Weldwood this year have 35 silos to fill, which means that some patrons will be delayed far beyond their wishes. More than that, there is a big demand for a few hours' threshing to tide the horses, cows and hogs over the fall season, but this will have to wait. Tractors are becoming common; threshing and silo-filling equipment is being manufactured to conform with the belt power of the tractors in use, and unless something unforeseen develops farmers will be forced, by the inconveniences experienced, to group themselves together for the purchase and operation of threshing, silo-filling and grinding equipment.

### The Milk Market.

September has been a rather unsettled month for dairymen in Ontario because of somewhat serious disturbances in the market. The sudden proclamation by the Canadian Milk Products Company that they required no more milk for an indefinite period came at an inopportune time, especially as production costs were unprecedentedly high and producers contributing milk to Toronto were then striving for fair treatment and a fair price. These two situations were more or less local in character in that they affected certain dairymen directly, but their influence should not be minimized as the whole industry cannot escape the indirect and psychological effects the outcome will produce. For years we have been speaking of the cheese industry, the butter industry, the market for whole milk, the ice cream trade, etc., as separate and distinct enterprises and the great truth has been lost sight of, namely, that the dairyman's product is milk and his market for it is made up of various units, all closely related, all competing, all manipulating, and each one exerting a direct influence on the others. Wheat may be graded into various categories, but it would not be good business for farmers selling No. 2 hard to separate themselves from those with No. 1 hard to dispose of. The same is true of dairymen; their product is milk and there should be the closest possible connection between all those contributing to the various demands peculiar to the milk market. This suggests community organization of such a character as will give producers control of their own product.

Cheese and butter have been and still are the cornerstones of the dairy industry in Canada. Farmers are acting unwisely when they allow factories manufacturing these staples to become scrapped, or absorbed by large corporations interested in other lines of product. We are not condemning any line of goods made from milk, for the more diversified is the market the greater will be the demand for the product of our herds, but it is suicidal for producers to relinquish all local control and place themselves unreservedly in the hands of operators whether they be makers of cheese, butter, powdered or condensed milk, ice cream or what not.

Disturbances in the market are not new—they recur periodically. In 1914-15 the condenseries were overstocked with manufactured goods. There have been seasons when cheese was a better paying proposition than butter, and other years or periods again when the reverse was true, while in the winter, milk can often be disposed of for domestic consumption to good advantage.

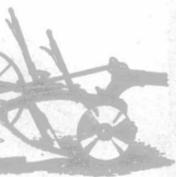
The one best solution of the whole milk marketing problem, as we see it, is local control of the product and the local organization affiliated with and acting in harmony with a central provincial body. One hundred farmers might invest \$150 each in a local plant that would be equipped as a receiving station or for the manufacture of cheese or butter. This slight investment which might only be a note to be used as collateral security

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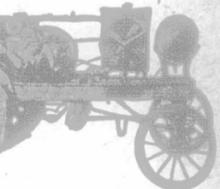
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DOMINION.

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JOHN WELD, Manager.

Agents for "The Farmer's Advocate and Home Journal,"  
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ADDRESS—THE FARMER'S ADVOCATE, or  
THE WILLIAM WELD COMPANY (Limited),  
London, Canada.

would safeguard the farmer's investment in his farm and herd, amounting, perhaps, to fifteen or twenty thousand dollars, and make him master of the situation. After a survey of the whole Province by a representative of this paper, we recommended just such action, and recent developments have convinced us that our suggestions were sound. A small plant locally owned or controlled might not alter the routine or affect farmers locally so far as the organization of their farms was concerned, but it would afford a protection for their investment in farm and herd that could not be obtained in any other way.

### Nature's Diary.

BY A. BROOKER KLUGH, M. A.

#### LUMINOSITY IN ANIMALS AND PLANTS.

The production of light by animals and plants is a commoner phenomenon than is usually supposed. In every part of the globe, in the air, in the woods and meadows, and in the waters, there are organisms which emit strange and shimmering gleams of light. Upon the surface of the ocean, sometimes over immense areas, the sea shines with a splendor which rivals the starry firmament, while in the depths of its abysses there are many creatures with light-giving organs. Plants also produce light. In the gloomy galleries of mines the mycelium of various fungi shine with a pale moonlight gleam. It is these vegetative organs of fungi which in the forests produce the so-called phosphorescence of dead wood, leaves and old stumps, and in Brazil and Australia there are species which emit an emerald light of such brightness that one can read a newspaper by means of this living torch. There are also many bacteria which produce light.

Some of these light-giving organisms have attracted the attention of man for ages and for many years scientists have been seeking the explanation of their light-producing powers. No one has done more in the investigation of these organisms than Dr. Raphael Dubois, of the University of Lyons, who has recently given some of his conclusions in "Science et La Vie." Some years ago Dr. Dubois, while working on the luminous bacteria constructed a "living lamp" which he exhibited in Paris. This lamp was composed of a convex glass vessel of which the silvered dome served as a reflector, and with an inside coating of gelatinous bouillon in which were planted colonies of the photobacteria. This lamp "burnt" for a month at a cost of two cents, and with these lamps Dr. Dubois illuminated, as with moonlight, the underground chambers of the Palace of Optics.

One of the forms upon which Dr. Dubois has worked is an insect of the Antilles known as *Pyrophora* (i. e. "the fire-beetle"), which has three "lanterns," two on the thorax and one on the underside of the abdomen. It makes use of the first two when walking, of the third when

swimming, and all three when flying. The natives use these insects as lanterns by enclosing them in a perforated gourd, and by means of these lanterns, which are extinguished neither by rain nor wind, they carry on a sort of optical telegraphy. Dr. Dubois found that the eggs of this insect, and also the larvae, were luminous, so that in this case the phosphorescence is transmitted, like the flame of life itself, without being extinguished for a single instant from generation to generation throughout the ages.

From his investigation of this insect and of the dactylated Pholus, a marine mollusc found on the coast of France, which produces a luminous mucus, Dr. Dubois has been able to show that the generation of light by animals is due to the interaction of two chemical substances. One of these is an oxidizing agent, a ymase which he terms *luciferase*, the other an albuminous substance which he has named *luciferine*. When either of these substances is brought separately in contact with air or water no light appears, but upon mingling aqueous solutions of the two substances a very beautiful glowing light is at once produced. Dr. Dubois has further shown that various oxidizing agents can take the place of *luciferase* in bringing about the reaction, but has so far not succeeded in manufacturing *luciferine* artificially.

Dr. Dubois has not, as far as I am aware, worked upon our light-producing beetles commonly termed "fire-flies" or "lightning-bugs", but since in all the light giving animals which he has investigated he has found the same two substances it is extremely probable, if not certain, that their light is produced in the same way by the interaction of *luciferase* and *luciferine*.

The light produced by animals and plants is of a kind which man has been seeking to produce commercially for many years, that is a "cold light," or a light produced with the accompaniment of only an infinitesimal quantity of heat. Such "living light" is almost 100 per cent. efficient while the light of the most improved quartz mercury lamp is not more than 1 per cent. efficient, the rest of the energy being consumed in the production of heat and chemical action, both of which are useless and the former of which is often decidedly objectionable. Since Dr. Dubois has succeeded in isolating the compounds which produce this "living light" there seems every reason to hope that future research will result in the artificial manufacture of these substances and thus revolutionize our present systems of lighting.

### The Modern Church.

BY SANDY FRASER.

Just for a change, which is as good as a rest, ye ken, the auld wumman and I thought we'd try gaen' to a church that we hadna been in the habit o' attendin', and which Jean thinks doesna follow the Scripture in some o' its practices an' beliefs. But I tauld her that it sometimes happens that a chap will learn mair from seeing the mistak's that anither fellow makes than he will by listenin' for a week tae guid advice. We've had sae muckle o' that sort o' thing in oor lives, beginnin' shortly after we were weaned and continuing right up tae the time o' Dr. Frank Crane and oor ain meenisters last sermon, that we're gettin' a wee bit fed up, in a manner o' speakin', and it finally gets tae be like the rain that falls on the ducks back, in that it never reaches the skin.

Onyway, Jean an' I thought we'd hear thisither meenister. He's bound to be different frae the rest we've been listenin' to, thinks I, for they say that Nature never made two blades o' grass alike, and it must be the same wi' preachers.

Of course we took it for granted that we'd hear the same auld sangs an' hymns, and there's some o' them that will stand a guid deal o' repetition, I'll say that for them. There are ithers that hearing them once or twice ought to satisfy ony reasonable mon, especially gin he's a lover o' guid music. And it was a couple or three o' this latter class that we had that night. "Hark, from the tombs a doleful sound," and the likes o' that.

In one o' his prayers, that came before the sermon, the preacher asked that we all might be led tae do our best to keep oor religion frae "deteriorating and becoming extinct." "We'll ken before we leave," says I to Jean, "how much he is daein' himself in that line."

"I'm afraid Sandy," replied Jean, "that ye're gettin' ready tae criticize the sermon." "Sure," says I, "that's what they're for, isn't it? Are ye supposed tae shut yer eyes an' open yer mouth and swallow ilka thing the preacher hands oot tae ye? Ye'll be liable to get a guid mony queer doses o' stuff intae yer system gin ye dae that. When ye eat yer dinner ye're careful to tak' juist what agrees wi' yer stomach, an' I'm thinkin' ye'll find that the same rule will apply tae the food ye give yer mind. It's got tae agree wi' yer reason an' experience." "Whisht! Sandy," says Jean, "dae ye no' ken we're in the kirk? Gie the meenister a chance." "A'richt", I replied, "but I'm afraid frae the look o' him that he doesna ken enough to tak' it."

The sermon made up in length what it was lacking in depth, I'll say that much for it. The next had to dae wi' one o' the women mentioned in the Auld Testament and there was a chance for something guid to be taken oot o' it, especially at the present time when women are gettin' tae the top o' the pile throughout the world in general and in oor ain country in particular, where the rule o' the woman is recognized and where her word is law. Like a wee story I heard theither day about a small boy who was asked what his father's last words were before he died. "I dinna think that feyther had ony last words," replied the boy. "Mither was with him tae the end."

But the preacher didna say muckle about the women.

He seemed tae consider it a dangerous subject. He got on to it once when he started tae talk about their rights an' privileges in Bible times, compared tae noo, but the thought seemed tae strike him that he was skating on pretty thin ice and he changed the subject juist as I roused mysel' up, thinkin' I was about tae hear something. There are ony number o' guid orthodox subjects in the Scriptures an' oor friend was soon hammerin' at one o' these an' tellin' his congregation what they all believed an' what ilka one o' them had heard about a thousand an' fifty times before. He cam' tae an end at last, juist as I had given up all hope, and, after the performance o' a few mair ceremonies, he gave us oor liberty.

"Weel, Sandy," says Jean tae me on the way hame, "ye're pretty quiet, for you. Are ye suffering frae anither attack o' mental indigestion or are ye meditating revenge on that preacher?"

"Jean," I replied, "it's men like him that make me wish that I could talk frae the pulpit as weel as I can haul the plow or swing a scythe. Not only is he wasting his ain time but he's stealing the time o' all those people who thought it was their duty to come there to-night tae listen to him. He had an opportunity to say something and mony a man would hae jumped at it; but all he did was to keep on talking till his watch said it was time to quit."

"It's time somebody put in a kick about the kind o' sermons that are being handed oot frae a lot o' oor church pulpits in this 'enlightened age,' as they call it. Men an' women, to-day, need, above all things, practical advice in the effort we are all supposed to be making tae raise ourselves and ithers to a higher plane o' living, baith mentally an' morally. What does it matter tae me what Abraham or Moses or Paul did under certain circumstances gin those circumstances bear no relation to what I hae to deal with? What I need is help an' inspiration to tide me over the difficulty o' to-day."

"I mind o' hearin' a preacher say once that he didna believe in the preachin' o' 'daily duties.' Gin ye hae the right kind o' faith, says he, the 'daily duties' will be attended to. But experience tells us that this isn't so. It's only by continued effort that we can be true tae oor higher instincts and it is juist here that we need the help an' inspiration that can come frae a sermon preached by a mon wha is in touch wi' the lives o' his people, wha kens their difficulties, wha understands their temptations and can sympathize wi' them in their sorrow."

"Oor churches are not drawing the people intae them to-day as they should. And why, can ye tell me? Is it no', perhaps, because these same churches are no' supplying the moral an' spiritual needs o' the world? When we go tae the toon and find that we can't get what we want in one store we juist naturally turn tae anither where we can. Sae is it wi' the world in general. It canna mak' use o' the shop-worn, second-hand material sae mony o' the churches are still tryin' tae hand oot and it is ceasing tae patronize them."

"Gie us men in oor pulpits wha are no' afraid to tak' the unbeaten path that leads frae dreamland oot intae the life an' activity o' every-day existence, and who will be leaders o' their fellow-men, inspiring them by word an' example to higher ideals an' better lives. Then, an' no' before it, will the church be fulfilling her true mission on earth and takin the place that belongs tae her, by right, in the spiritual life o' the nation."

"Amen," says Jean, who had listened tae me langer than usual wi'oot interruptin'. "That mak's twa sermons that I hae had the benefit o', to-night. Ye're an auld man but a young preacher, Sandy. Onybody can see that. But na doot yer high ideals for the Church will become a reality some day or ither, even gin we dinna live tae see it ourselves. Changes are unco' slow in comin' in this world, and nowhere dae they come slower than in the Church, but Revolutions an' Reformations may cut a figure in the history o' the future as weel as they have in that o' the past. But here we are at hame, Sandy, sae get awa' tae bed an' forget it. You have tae start silo fillin' in the mornin, ye ken."

### A Clear Field for Fall Fairs.

With the big fairs cleared away or drawin' to a close in the various Eastern Provinces, the field is now open for the district, township or county fairs, which are the order of the day. They can be made abundantly useful if properly managed and patronized by the people within their sphere of influence. If left solely to the secretary and directors without support these small fairs become a local holiday and nothing more. They should be made a community affair and all should do their part. A great many can exhibit; others can assist in putting the grounds into condition and giving their services on fair day. Too many feel that the town people are running the fair, and consequently hesitate to take any active part or offer their services. In many cases the town people do operate the fall fairs because farmers are not sufficiently forward in taking part and assisting. This is one event where town and country can get together advantageously, and a get-together meeting prior to the fair would be a splendid thing to harmonize all the various departments and make each official and his helpers feel the responsibility imposed upon them. Grants, in themselves, can never make a fair. Enthusiasm, assistance voluntarily offered, and willing hands are the greatest factors contributing to the success of a fall fair.

FOUNDED 1866

# THE HORSE.

## Wounds and Their Results

While it is usually wise for the average horse-owner to secure professional attention in cases of serious wounds, it is well that all owners of horses, or those in charge of them, should have an intelligent idea of the proper treatment for accidents of this nature. In many cases, where important blood-vessels are severed fatal hemorrhage would result before aid could be got, unless effective means were taken to check the bleeding, while in other cases it may not be possible to secure the services of a veterinarian, and treatment must, of necessity, depend upon the skill procurable, hence we believe it wise to consider rather minutely the different kinds of wounds, and the necessity or advisable manner of treatment. Wounds are classified under the following heads: Incised, punctured, contused, lacerated, gunshot and poisoned.

**Incised Wounds.**—An incised wound is one made by a sharp-cutting instrument. The textures are divided evenly and smoothly. There is practically no tearing or bruising of the parts, hence, on account of the blood-vessels being cut instead of torn, the bleeding is usually greater than in wounds of a different nature. If the wound be made parallel to the course of the muscular fibres of the parts there will be little gaping of the edges so long as the parts are kept in apposition; but if the incision be transverse, or across the direction of the muscular fibres, or to the axis of a limb, the lips of the wound will be drawn apart in proportion to the tension of the muscles, the deep seated tissues often dividing further than the superficial owing to the retraction of the muscular tissue, and a cavity is sometimes formed in which blood and pus will collect and retard healing.

**Treatment.**—The treatment of incised wounds may be said to be somewhat simple, but some important points must be observed, viz., first, to arrest bleeding; second to remove all foreign bodies and cleanse the wound thoroughly; third, to effect and maintain co-adaption, to guard against excessive inflammation, and prevent infection. Bleeding, whether from an artery or vein, unless slight, must be arrested promptly. If from an artery the blood will be of a bright red or scarlet color and escaping in jets; if from a vein the color will be a dark red and the stream constant. Arterial hemorrhage is the most serious. If the vessel be small and only partially severed, the blood will escape more or less freely in jets, as stated, and in many cases if the artery be completely severed with a knife or shears the ends will contract and check bleeding. The coats of an artery are composed largely of elastic tissue, the fibres of which curl up when severed, hence when a vessel is torn, lacerated or cut with a dull instrument which makes a more or less fimbriated edge, the fibres curl inwards and thereby close the opening and check the flow of blood. This is the reason why bleeding is more profuse from incised wounds than from others. When the vessel is small, even though cut with a sharp instrument, the contractile power of its coats is sufficient to close the orifice, but if the artery be one of considerable size this cannot take place as the force of the steam of blood is sufficient to overcome the contractile efforts of the coats of the vessel. Hence bleeding will continue and may become serious, even though the vessel be completely severed. In such cases the end of the severed artery from which the blood is escaping, should be searched for, drawn out with a pair of forceps and tied by a ligature. Carbolized silk or catgut makes the best ligature, but when these cannot be secured, a clean string or thread may be used. In many cases it is necessary to enlarge the external wound in order to be able to secure the end of the artery, and occasionally a wound is in such a position that it is dangerous or inexpedient, hence the hemorrhage must be checked by other means. If the wound be in a limb or where the vessels run close to a bone, and there is little muscular tissue external to it, bleeding can be checked by pressure applied to it between the wound and the heart if it be an artery, and between the wound and the extremity, if it be a vein. Pressure can be applied by buckling a strap or applying a strong bandage or cord tightly around the limb. This will, of course, check the circulation in all the vessels enclosed in the part, hence the pressure must be left on only such time as is necessary to have the wound properly dressed, or until skilled assistance arrives. When such assistance cannot be secured the isolated part will check the bleeding until the wound is cleansed and stitched, after which a pad can be placed over the stitches and a bandage applied moderately tight, to exert considerable pressure upon the pad without materially interfering with other vessels. And in a few hours a clot will have formed in the end of the severed vessel and there will seldom be danger of a recurrence of the hemorrhage. When the severed vessel is deep seated in muscular tissue, and cannot be taken up and ligatured, the wound must be plugged firmly with batting or other clean material, which is first rendered antiseptic by being saturated in a 4 or 5 per cent. solution

of carbolic acid or one of the coal tar antiseptics, then firmly packed into the wound and maintained there by bandages or sutures. It should be kept thus for 8 to 10 hours and the patient kept as quiet as possible in the meantime, when, in most cases, a clot will have formed, and the packing can be removed and the wound dressed. Venous bleeding is usually more easily controlled than arterial. If the vessel be small, bleeding will usually stop spontaneously if the wound be exposed to the air, but if the vessels be large it is necessary to proceed as in arterial bleeding. Veins being more superficially situated than arteries are usually more easily taken up and ligatured.

We expect to discuss the further treatment of incised wounds, in a future issue. WHIP.

## LIVE STOCK.

With oat prices lowering the market for young pigs should strengthen.

Hog prices hold at a fairly even level, with receipts rather below par on most markets.

Windfall apples, defective vegetables, etc., are relished by swine and if gathered and fed will aid in reducing the grain ration.

We have heard of from ten to twelve cents per pound being paid for stockers. These men are optimistic regarding the future of the cattle market.

Exercise is important with the herd sire. The well-fenced paddock leading from a box-stall furnishes possibly the ideal housing condition for the bull.

Have you tried feeding silage to hogs? Let a bunch of shoats loose in a pile of silage and see if they like it or not. What an animal likes is very often good for it.

If the ewes are rather thin it will pay to feed them a few oats and if possible, turn them on fresh pasture. Having an ewe in gaining condition at breeding time is advisable.



**Mack and Knight.**  
First and Second in class for Fillies or Geldings at the Western Fair, and first as a pair for John McIntosh, Embro.

For all classes of stock there is no one grain that excels the oat as feed. The bumper oat crop should materially assist stock men in carrying their stuff through the coming winter.

Give the boys an interest in the herd and flock even if it is only a ewe lamb or a young sow that they can call their own. The product of these will in a short time enable them to purchase a promising heifer.

Don't forget the herdsmen's competition. Liberal prizes are offered for essays on the Fitting and Showing of Beef Cattle. Particulars of the competition were published in September 2 issue of 'The Farmer's Advocate.'

If you haven't got a good farrowing pen, make an enclosure in the barnyard with fence rails or posts and build the straw stack over it. The sow and her litter will ask no finer quarters and if they can root in a near-by paddock and secure green feed so much the better.

When \$3.75 per hundred is charged for present day quality bran one thinks of the days when millers were glad to get rid of this by-product of their industry at ten, or twelve dollars per ton. But, then few of us would care to move the calendar back to those balmy days.

Few breeders own a cow that has produced four prize winners, two of them champions at one fair in keen competition, yet that is what Morning Blossom 2nd did for Jas. Douglas. The sire no doubt, had something to do with the quality shown by this quartett.

The producer complains about the low price of hogs while the consumer is aghast at the price of bacon and hams. Were our system of getting the products of the farm into the hands of the city folk less wasteful and extravagant both the producer and consumer would benefit.

Some stockmen apparently do not try to improve their herds by use of better sires even after it has been proven to them that it pays well to do so. Too often such men are loud in their condemnation of farming as a profitable occupation. The fault too often lies in themselves.

Buyers are busy in the grazing districts purchasing bullocks that are about ready for the shambles. From shipping points in the northern part of Middlesex county fat cattle by the hundreds will soon be loaded on cars in route for the leading live stock markets. From Ailsa Craig cattle are shipped by the train loads.

In looking over the reports of the larger fairs one notices quite a few new names among the list of prize winners; and many of these names are young men. This is a very good sign. So long as young breeders are coming out with their herds there is no danger of retrogression in the breed or in the live stock exhibits at the fairs.

One cannot tell what a herd sire is really worth. Browndale at one time was offered at a very moderate price, but to-day it would no doubt take a long price to buy him from his present owner. He has stamped his good qualities upon his offspring and each year is further demonstrating his ability to produce outstanding calves which are able to top strong classes. Off course the owner knows how to feed, fit and show stock.

A bull is not past his usefulness at three or four years of age; in fact he is only beginning to prove his value or worthlessness as a breeder. The good ones should be kept in service for the benefit of the industry. We realize that at three years his progeny are of breeding age and to avoid inbreeding a new bull must be secured, but why slaughter the good one? Is there not a breeder in the adjacent locality that will exchange? There are far too few outstanding herd sires in service compared with the multiplicity of poor ones.

## The Effect of Breeding Ewe Lambs.

By Prof. A. A. DOWELL, UNIVERSITY OF ALBERTA.

It is the general opinion of sheep growers that ewe lambs should not be bred but allowed to run open until the fall or early winter of their second year, so that they will lamb at approximately two years of age. It is felt that the demands of early motherhood result not only in a greater percentage of weak lambs, but if practiced continually, would gradually reduce the size of the breeding flock. Then, too, some breeders report rather discouraging losses among these young ewes at the time of lambing. It is evident that if early breeding does result in weak lambs, loss of young ewes at time of lambing, or decreased growth of body or fleece, it is a practice of doubtful value. On the other hand, if early breeding can be followed successfully, it means quicker returns and greater profit from a given number of sheep. To get some definite information on this important question, the Department of Animal Husbandry of the University of Alberta bred a few 1919 ewe lambs in the fall of that year, and allowed others to remain open according to the usual practice.

The 1919 ewe lambs used in this experiment were of common white-faced range ewes, showing a predominance of Merino blood, and sired by pure-bred Oxford, Shropshire and Suffolk rams. They were dropped in May, 1919, allowed to run with their mothers on pasture during the summer, and then fed some grain in the fall after weaning. Of the twenty-five ewe lambs used in this test, eleven were bred and thirteen left open. Those bred were mated to a pure-bred Hampshire ram lamb the latter part of December, so that they would lamb the following May, when just twelve months old. These ewes were weighed on the day bred and re-weighed eight hours after lambing to get the exact gain in body weight during pregnancy. The open ewes were weighed on December 24th, which was the average breeding date of those bred, and again weighed on May 22nd, which was the average lambing date of their mates.

Both the open and bred ewes were wintered in the same yard and fed exactly alike—receiving one-half pound whole oats, one pound prairie hay, and one pound oat green feed hay per head per day. From these statements it will be evident that all ewes were fed and housed alike throughout the summer, fall and winter. The only difference was that part of them were bred to lamb when one year old.

To secure information on the effect of early breeding on the growth of wool, each fleece was carefully weighed at the time of shearing—the first week in June, 1920. The results are interesting.

On December 24th, 1919, the open ewes averaged 103.53 pounds. They averaged 109.92 pounds on May 22nd, 1920, showing an average gain of 6.39 pounds. At the time of breeding the other ewes averaged 105.09 pounds and eight hours after lambing weighed 109.00 pounds, a gain of 3.91 pounds per head. In other words, the open ewes gained 2.48 pounds per head more than those bred.

The average weight of fleece for the open ewes was 8.27 pounds, as compared to 8.76 pounds for the bred ewes—showing an advantage of .49 pound in favor of the latter.

Each of the bred ewes gave birth to good, strong single lambs, weighing an average of 8.43 pounds at birth, and raised one hundred per cent. They proved good mothers, though apparently the milk flow was not as abundant as with more mature ewes.

From our experience we cannot agree with the state-

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## For Fall Fairs.

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ment that early breeding results in loss of young ewes at time of lambing. Nor have we found that immature ewes give birth to weak lambs. Our results do indicate that when young ewes are bred to lamb when twelve months old, they will make slightly less gain in weight during pregnancy than if allowed to run open, though this difference of 2.48 pounds is not sufficient to condemn early breeding providing the difference has been due to lack of fat development rather than growth of frame. This cannot be definitely stated until both the bred and open ewes have reached their mature form. In this test, even though the bred ewes sheared the heaviest fleeces, we would not want to say that this was due to the fact that they were pregnant, but rather credit the difference to individuality.

In presenting the results of this experiment it is too early to give any definite conclusions. That can be done only after the ewes in question have fully matured. They will all be bred this fall, weighed at that time, and re-weighed after lambing next spring, so that the effect of early lambing can be definitely determined. Up to the present time early breeding has not proved unsatisfactory, though it should be kept in mind that the young ewe lambs used in this test were well grown at the time of breeding, and fed a little whole oats with their roughage during pregnancy.

### Offsetting Sharp Declines in Autumn Lamb Markets.

By H. S. ARKELL, LIVE STOCK COMMISSIONER.

We can go back twenty years into market history and practically without exception we will find that the main lamb crop and the heaviest percentage unfinished lambs are marketed during the period between September 1 and November 1; during that time, prices are at the lowest levels of the year. Further investigation of price movements and the curve of receipts shows that from November up to the commencement of the next fall run, the market for lambs and the quality of the offerings is at its best levels, and receipts at their low points.

The causes of sharply declining fall markets are obvious; we market over 50 per cent of our annual lamb crop between September 1 and November 1 and approximately 75 per cent. of the annual crop during the last four months of the year. In an effort to gain the benefit of the usually high August price we market with more regard to quantity than to quality, and we do not castrate our ram lambs. During the period from January 1 until the commencement of the next fall run we are short on supplies but fairly long on finish. No market can take care of three parts of a year's lamb supply in four months and show a high average of prices, especially if the offerings are largely unfinished.

Commencing with August of the present year prices on lambs moved sharply upward and toward September 1, heavy marketings of lambs of all sorts and conditions came out as a result. The effect was no different than during the same period of the previous nineteen years; prices dropped sharply.

When lambs are ready they should be marketed it is true, but over half of our lambs are not ready at this period of the year and it is the heavy increase in the receipts that send prices to sharp and unprofitably low levels. This is the case even though during the fall months we make practically eighty per cent. of our annual exports of live lambs.

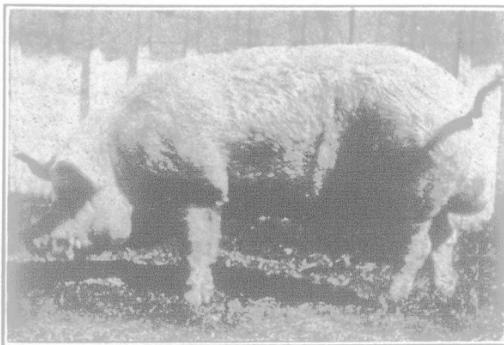
Lambs that are ill-bred and unthrifty should not be held for any length of time; they are as a rule unprofitable feeders. The thrifty well doing lambs should not, however, be sacrificed by being offered on a declining or a low market. During twenty years the high prices of each year have invariably been paid during December and January, especially on quality stock. The year of 1920-21 promises to be no exception to the rule. We can utilize feed to good effect by bringing about a more even distribution of supplies, and, therefore, a higher level of prices on a more dependable market.

### Junior Farmer's Live Stock Judging Contest at Ottawa.

There were 135 entries in all for the Junior Farmer's Live Stock Judging Competition, which is held annually at the Central Canada Exhibition. This compares with 85 in 1919 and 124 in 1918. The number of entries was distributed among the various classes of live stock as follows: Heavy horses, 27; beef cattle, 21; dairy cattle, 50; sheep, 11; swine, 26. The number of competitors in sheep judging was less in sheep judging than in any other year. The following are the awards, with the name and address of the prize-winner, his county and total score. The possible score in each case was 200, and the judges were Messrs. R. S. Hamer, A. R. Ness, W. J. Bell, E. S. Archibald, A. A. McMillan, G. W. Muir, G. B. Rothwell and J. E. Brethour.

**Beef Cattle:** 1, Joseph Hughes, Balderson, (Lanark) 182; 2, J. Loyd Tait, Newington, (Stormont), 180; 3, D. E. Croskery, Kinburn, (Carleton), 178; 4, Ralph Wallace, Prescott, (Grenville), 176; 5, R. Bruce Ness, Howick, Que., (Quebec), 175; 6, Sheffield Graham, Almonte, (Lanark), 173; 7, John M. Chapman, Almonte, (Lanark), 171; 8, C. L. Ferguson, Spencerville, (Grenville), 170; 9, A. M. Ewart, Perth, (Lanark), 168. **Heavy Horses:** 1, Melvin Burke, Lachute, (Quebec), 178; 2, Harold E. Wilson, Merrickville, (Grenville), 168; 3, John S. Wilson, Merrickville, (Grenville), 162; 4, Lawrence Gordon, Lachute, (Quebec), 161; 5, Gordon Diog, Lachute, (Quebec), 155; 6, Wilbert Davidson, Kemptville, (Grenville), 152; 7, Mackie Henderson,

Athens, (Leeds), 147; 8, Walter H. Sparks, Carp, (Carleton), 144; 9, Harvey Burnie, Spencerville, (Grenville), 142. **DAIRY CATTLE:** 1, Harold E. Wilson, 178; 2, Gordon Diog, 176; 3, Joseph Tennant, Almonte, (Lanark), 172; 4, Douglas A. Ness, Howick (Quebec), 168; 5, Lawrence Gordon, 165; 6, C. J. Greene, Athens, (Leeds), 156; 7, A. Goodin, Spencerville, (Grenville), 154; 8, Ralph Wallace, 152; 9, Mackie Henderson, 150. **SHEEP:** 1, E. Armstrong, Kinburn, (Carleton), 165; 2, Herb. Cuthbertson, Perth, (Lanark), 162; 3, Garret Poapst, Northfield Stn., (Stormont), 148; 4, Roy E. Keays, Almonte, (Lanark), 147; 5, A. M. Ewart, 136; 6, C. C. Tennant, Almonte, (Lanark), 114; 7, Merrit Campbell, Finch, (Stormont), 111; 8, Lloyd Poapst, Northfield, (Stormont), 108; 9, Wilbert Davidson, Kemptville, (Grenville), 106. **SWINE:** 1, C. C. Tenant, 173; 2, Geo. Byers, Cardinal, (Grenville), 162; 3, Trevor R. Beckett, Kemptville, (Grenville), 147; 4, Wesley Eamen,



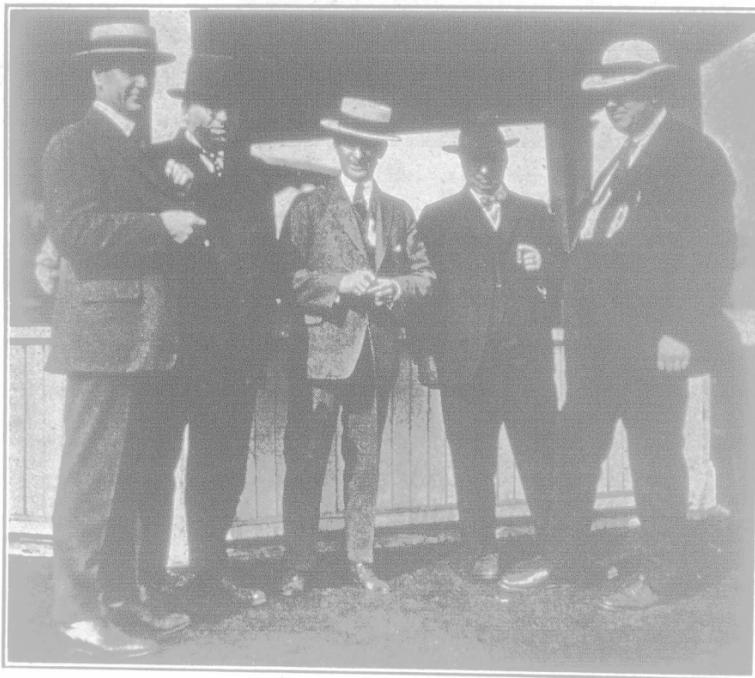
First Prize Yorkshire Boar, Two Years and Over at Ottawa.

For the Kemptville Agricultural School, Kemptville, Ont.

Northfield Stn., (Stormont), 144; 5, R. Bruce Ness, 140; 6, Lloyd Poapst, 134; 7, Harry Lee, Kemptville, (Grenville), 128; 8, Victor Kellough, Almonte, (Lanark), 127; 9, Merritt Campbell, 125.

### Live Stock Markets.

A review of the live stock markets, sent out by the Markets Intelligence Division of the Dominion Department of Agriculture, for the past month indicates that in a comparatively heavy offering of cattle there was but a small percentage of choice grades. Compared with a year ago, receipts were low. There was an increase in the export movement of live cattle as compared with the previous months, but exports were 50 per cent. lower than during the same month in 1919.



Prominent Agriculturalists at the C. N. E.

C. F. Bailey, Secretary Royal Show; Hon. Dr. A. Cambell, Minister of Agriculture, Newfoundland; Hon. Manning Doherty, Minister of Agriculture, Ontario; Hon. F. C. Biggs, Minister of Public Works, Ontario; Wm. A. Dryden, President Royal Show.

The general satisfaction in the way the Canadian wool crop is moving should offset any unwise liquidation of sheep. The fall months see a large number of lambs marketed, and the market is maintained on the basis of good quality. Receipts of hogs were far below normal, and in the West there were scarcely enough hogs received daily to make a market. The report indicates that any weakness that may be found in the hog markets is not due to a surplus supply of pigs in the country, and states that "as time progresses it becomes more and more certain that there is a shortage of hogs in the Province of Ontario, and a famine in this regard in the Western Provinces. When conditions on the British market become more favorable for export trade it is believed that there will not be nearly enough hogs to

supply the trade, and as a result high prices will rule." In the Toronto yards, 15,500 hogs were received in August, as compared with 26,800 received during the same month last year. Many of those marketed were under weight, owing, no doubt, to the scarcity and high price of feed.

### Demonstrating to Dad.

Some men become so "sot" in their ways that little short of an earthquake would move them. Because things were done in such a way when they were boys they think it is the only way to do it now. Unfortunate, indeed, is the young man, whose aims and ideals are to establish a choice herd of pure-bred stock, but who cannot convince his father of the advisability of paying extra money for a choice individual. Most young men are content to start with one or two good breeding females and gradually work into a herd. However, most fathers are from Missouri and if shown that better bred stock, different systems of farming, etc., pays in dollars and cents they yield grudgingly at first, but later become enthusiastic and back their sons in their endeavor to keep abreast of the times and adopt twentieth century methods. Some boys require the restraining hand of father to prevent them from going headlong into a scheme before first considering the foundation upon which it is built. Many of our good herds of to-day have been handed down from father to son, but some are the direct results of the boy's effort.

Tom Jones, an Ontario boy, was brought up on a well-kept farm, but being one of several boys the labor saving machinery did not appear on the farm until it had proven its efficiency as a money-maker on the neighboring farms. One by one the boys started farming for themselves until Tom was the only boy left on the old homestead. Tom and his father got on well together and kept the work well in hand, but whenever the question of better live stock was mentioned the subject was quickly changed by the father. The brindle cows gave a fair quantity of milk, and the calves could be disposed of when two years old although the price was not as good as that received by neighbors for stockers of the same age but better bred. Tom usually attended one of the large exhibitions in the fall and always went to the local fair. The live stock and farm products offered more attraction for him than did the midway. A keen delight was taken in watching the different classes of cattle judged, but always there was that longing to have stock of similar quality to show. When he visited the local fair one year and saw boys of his own age leading out steers and heifers in a special class he determined that he would be an exhibitor some day. But how he did not yet know. Father would not hear to the purchasing of even a calf to fit and Tom knew that the calves from the mating of the brindle cows with a grade sire were none too promising as a show proposition. Two miles up the road lived a neighbor

who had recently purchased a topnotcher of a bull at a very high figure, at least the neighbors said it was. Tom visited the farm occasionally and greatly admired the new herd sire. Finally the neighbor consented to use this bull on one of the cows from the grade herd although he made it clear that too much money was invested to practice indiscriminate breeding. The intention was to use him on his own herd only. Tom's father was somewhat against him taking the cow to the neighbor's herd sire, but yielded and grudgingly handed over the service fee of ten dollars. Tom picked what he thought was the best cow in the herd to breed to the registered sire. During the following months a study was made of feeding calves, looking after cows, etc., and the information gathered was practiced on the stock on hand. Tom wondered what kind of a calf the grade cow would drop. He knew full well that if it was no better than the other calves his arguments for use of a better sire would be in vain. Then, too, a well-built, breedy-looking calf was wanted for the competition

at the local fair. In due time a fine heifer calf was dropped and it really exceeded Tom's expectations. He viewed it critically as days and weeks passed and found that its straight lines, spread of rib and depth of body with that breedy head was good to look upon. The father, silent at first, was frequently found looking at the calf, inwardly admiring its beauty, but loathe to admit that the use of better blood was entirely responsible. The calf grew big and fat under Tom's care.

Another year had almost past and the fairs were again being held. Tom entered the calf and although there was considerable competition secured the blue ribbon. He would like to have carried away the red, but he saw that his competitor held a superior youngster. The father became convinced that good blood in the herd

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pays not only in dollars and cents, but in general satisfaction. As he was willing that more money be spent on herd improvement he began to realize that his boy was more contented with the farm life and work than he hitherto had been. The boy now has an interest in the farm and is an exhibitor at some of the larger fairs. There are grade cows in the herd, but they are good grades and a few registered cows have been purchased as a foundation for a pure-bred herd.

Many farm boys have gone to the city because of lack of sympathy, on the part of the parents, in their desire for better live stock or the practice of modern methods of farming. Value the boys' opinion and give them a share in the business and nine times out of ten they will double their efforts in keeping the herd in condition and in getting the farm work done on time. There is little incentive to do good work with mediocre stock, and the ambitious boy does not like to see his chums carrying off the prizes at fall fairs when through no fault of his own he has nothing of show-ring calibre to bring out. The farm-bred boy is the best help on the farm, and those inclined towards agriculture should be encouraged to keep the farm and stock in ship shape.

**THE FARM.**

**Standing Field Crop Competition Awards at Ottawa.**

The awards in the Standing Field Crop Competition for sheaves, grain and vegetables were as follows:

**Sheaves.**—Fall wheat: 1, Garfield Kennedy, Bobcaygeon. Oats: 1, H. L. Goltz, Bardsville; 2, A. J. Bushfield, Lyn; 3, W. T. Arkinstall, Dunvegan; 4, A. R. Ascough, Kenora. Barley: 1, A. W. Vansickle, Onondaga; 2, Wm. Cleland, South Mountain.

**Grain.**—Fall wheat: 1, Geo. R. Barrie & Son, Galt; 2, Garfield Kennedy. Spring wheat: 1, Wm. G. Wood, Maple. Oats: 1, H. L. Goltz; 2, W. T. Arkinstall; 3, S. McMillan, Cobden; 4, J. R. Fallis, Brampton. Barley: 1, Wm. Cleland, South Mountain.

**Vegetables.**—Potatoes: 1, C. Aymer, Humber Bay; 2, T. K. Aymer, Humber Bay; 3, Cooke Bros., Cataragui; 4, Dunlop Bros., St. Catharines; 5, Jno. McMullen, Cumming's Bridge; 6, J. McFarlane, Brantford. Onions: 1, Brown Bros., Humber Bay; 2, W. H. Trick, Ottawa; 3, Con. McConnell, Aylmer; 4, W. E. Crandall, Ingersoll; 5, C. Aymer; 6, T. K. Aymer. Tomatoes: 1, Geo. Harris, Belleville; 2, W. H. Trick; 3, E. D. Morgan, Westboro; 4, Cooke Bros.; 5, J. McMullen; 6, T. K. Aymer. Celery: 1, C. E. Post, Brighton; 2, Geo. Harris; 3, W. H. Trick; 4, P. R. Bell, Humber Bay; 5, G. W. Bycroft, London; 6, Arthur Cailton, Lambton Mills. Muskmelon: 1, W. H. Trick; 2, Jas. Cox, Ottawa; 3, Jas. Little, St. Catharines; 4, W. S. Thompson, St. Catharines; 5, P. T. Jean, London; 6, G. W. Bycroft. Cabbage: 1, C. Aymer; 2, T. K. Aymer; 3, J. A. Farquharson, Aylmer; 4, John Baker, Cataragui; 5, W. H. Trick; 6, Chas. A. Wilson, Sarnia.

**Fruit and Vegetables.**

The exhibit of fruit and vegetables this year was very good indeed. There were a number of very attractive vegetable displays, and the quality of the products shown, both in the plate exhibits and in the displays, was satisfactory. It is worthy of note that in fruit as well as in live stock the Central Experimental Farm was an exhibitor and carried off quite a large number of prizes among which were about a dozen firsts. Among the vegetables the competition among the public schools for displays of garden stuff was worthy of a great deal of attention, and the various displays were the objects of much favorable comment by the large crowds entering the Horticultural Building. The awards in the school competition were as follows: 1, Winchester, S. S. 20 (Miss Helen Baker, Teacher); 2, Huntley S. S. 3, (Geo. Moore, Carp, Principal); 3, Stittsville, (Ina M. Hodgins, Teacher); 4, Winchester, (Tillie M. Baker, Teacher); 5, Spencerville, (Blanche Mundle, Teacher); 6, North Gower, S. S. 4, (Ida M.

Brownlee, Teacher); 7, Merivale, (Mary E. Wilson, Teacher); 8, Kemptville, (Bessie Higgins, Teacher);

**Poultry.**

As usual the upper floor of the Howick Pavilion was fairly well filled with poultry of all kinds. A much larger number of birds could have been accommodated than were entered, but the exhibit was, we believe, satisfactory. An interesting feature of the Central Canada Exhibition every year is the egg-laying competition. This year the competition was held as usual, but the representative of "The Farmer's Advocate" was unable to get the results before it was necessary to leave the grounds. The exhibit of eggs in the Dairy Building along with the dairy products was not large, but there were some eggs of good quality entered in dozen lots and in case lots as well.

**THE DAIRY.**



**J. F. Singleton.**

Recently appointed Chief of the Markets Division, Dairy and Cold Storage Branch, Department of Agriculture, Ottawa.

**The Salting of Butter.**

The fundamental reason why salt is added to butter is to season it to the taste of the consumer. At one time it was believed that salted butter kept better in storage, but it is now known that although salt has antiseptic qualities it has no appreciable effect upon the keeping quality of butter. The addition of salt is also of value from the standpoint of the creameryman, because salt is cheaper than butter-fat and it is usually the object of every creameryman to incorporate all the salt that the market will stand. Every creameryman likes to get as large an over-run as possible, and the addition of a considerable amount of salt makes a larger over-run possible.

The amount of salt that can be added to advantage, however, depends upon the market to which the product of the factory is being sent. It is the practice in Eastern Canada to manufacture butter that is much more highly salted than the butter manufactured in the Prairie Provinces. Nothing illustrates this more clearly than a glance at some of the churning records of the Dominion Educational Butter Scoring Contest. These records show that the per cent. of salt added at the time

the butter is being worked varies from 1.25 per cent. in the case of a Western creamery, to 4 per cent. in the case of a Quebec creamery. The majority of the creameries add from 2.5 to 3.5 per cent. of salt at this time, and secure a final per cent. of the salt in the butter of from 1 to 2 per cent. It is noticeable, however, that the Western creameries, particularly Manitoba, each have less than one per cent. of salt in the butter. Saskatchewan creameries run from 1 to 1.5 per cent. of salt, while the three Alberta creameries run from .7 to 1 per cent. The highest percentage of salt shown is from New Brunswick, where one creamery shows 2.8 per cent. of salt in the butter. There is a strong tendency among Eastern creamerymen to reduce the amount of salt in order to market a milder product which is generally considered to be of a higher quality. As a matter of fact, according to Hunziker, the salt requirements of different markets where salty butter is wanted are salt tolerance rather than requirements. This author who is the manager of one of the largest creamery companies on the North-American Continent, says: "American markets demand a relatively high salted butter, with the exception of the Jewish trade which requires unsalted butter. The English market calls for a butter that is lightly salted, while Continental Europe, especially France, Southern Germany, Switzerland, etc., demand unsalted butter; thus the salt content of butter as regulated by distant markets may vary from no salt to about 4 per cent. of salt. There is not really a very marked difference in the amount of salt which the salted butter trade demands, but it is rather a question of how much salt the trade will stand for or tolerate. The manufacturer of butter naturally aims to salt his butter heavily because salt is cheaper than butter-fat. He will furnish the trade just as highly salted butter within the limitations regulated by the effect on quality as the trade will accept and tolerate. Some markets are more critical and quicker to resent the imposition than others, but none really demand a very highly salted butter."

It is very easy for the consumer to detect any variation in the salt content of butter, and for this reason the amount added should be uniform. Generally speaking, the best method is to use an amount of salt based upon the pounds of butter-fat in the churn. The proper amount of salt for the average American market is said to be about three-quarters to one and a half ounces of salt per pound butter-fat, this amount being based on the desired salt content of from 2.5 to 3.5 per cent. Such an amount of salt, however, is much in excess of the ideal which many progressive Canadian creamerymen apparently have in mind, which apparently requires in the neighborhood of one per cent. of salt in the butter when it is made.

The amount of salt that remains in the butter depends on the size and condition of the butter granules, the amount of working the butter receives, the method of salting, and the amount of moisture in the butter. If the granules are very small, it is difficult to dissolve the salt, and much of it is lost in the brine. There is also little loss of salt if the butter has been allowed to drain thoroughly before salting. Butter-fat, however, will not dissolve salt, and for this purpose there must be moisture present. Butter with a low moisture content cannot hold much salt in solution, and over-worked and gritty butter is usually the result of trying to incorporate a high content of salt in dry butter. Butter containing a large amount of properly incorporated moisture is capable of retaining a relatively high per cent. of salt. The commonest method of salting in our creameries is the dry salting method. Salt is sprinkled over the butter, either in the churn or on the workers and the butter is worked until the salt is evenly distributed and dissolved. With hard butter the proper distribution of salt by this method is sometimes very difficult and requires much extra work, while in soft, slushy butter there is a tendency for the grains of salt to become encased in films of fat, which makes it impossible for the moisture to gain access to the salt in order to dissolve it.

Salt should be of the very best quality in order to



**Queen's Edward.**

Senior champion Angus male at London for Col. Robt. McEwen, London.



**Cavalier Perfection.**

Junior and grand champion Hereford male at Toronto for L. O. Clifford, Oshawa.

make good butter. It should be both chemically and bacteriologically pure and, in addition, should be of the proper physical consistency. So far as bacterial contamination is concerned, the better brands of salt on the market are largely sterile and the processes through which the brine passes before the completion of manufacture have been improved so as to eliminate any undue numbers of bacteria. If salt is allowed to stand open in the creamery, however, it may become damp and attract large numbers of bacteria, among which will almost invariably be the types which render butter rancid and cheesy. For these reasons salt should be kept well covered after the barrel is once opened. Sometimes salt is stored in a special chest or bin, and in such cases the cover should fit well and the chest should be located in a place free from excessive dampness. The best butter salt contains from 98 to 99 per cent. of pure sodium chloride. Any impurities other than the pure salt are likely to encourage deterioration in the butter. Any appreciable quantity of gypsum in the salt also decreases its solubility, and if magnesium chloride is present a bitter flavor is imparted to it.

In connection with the physical condition of salt, Hunziker advises as follows:

"It is very important that the salt be present in the form of crystals of the proper form and size. This factor controls its readiness to dissolve and its ease of being retained in the butter. The crystals must be of medium coarseness. When the crystals are excessively large they dissolve with comparative difficulty, tending toward gritty butter, or necessitating the over-working of the butter. Their distribution also tends to be less uniform; the individual crystals are farther apart so that their action on the casein and the expulsion of buttermilk are uneven; and the fusion of brine and water in the butter is slow and relatively incomplete. This in turn tends to cause an uneven color in butter.

"When the salt crystals are too fine, the salt is prone to be pasty, which renders its uniform distribution difficult. Excessively small crystals hinder the expulsion of buttermilk because the drops of buttermilk which each crystal is capable of taking up are so small that their complete and ready expulsion is hampered.

"Salt crystals of medium size, and which will pass through a screen having 25 to 30 meshes to the inch, are best suited for butter salt.

"With reference to the shape or form of the salt crystals, the butter salts are divided into two classes, the flake crystal salt and the cube crystal salt. The flake grain represents a thin and flat crystal usually of rhomboid or pyramid form, while the cube crystal grain appears in the form of regular-shaped solid cubes. Since the flake grain, with the flat, thin crystal, exposes more surface in proportion to its cubic contents, than the cube crystal with its cube shape, it is obvious that the grain salt dissolves somewhat more readily and is therefore better suited for butter salt than the cube crystal grain, unless the cube salt is of sufficiently smaller grain to reduce the cubic contents of the cube crystals in proportion to their surfaces to that of the coarser crystals of the flake salt. The difference in the shape of the crystals is due to the temperature at which the brine is evaporated. The flake grains are the product of evaporation at a high temperature (under atmospheric pressure) while the cube crystal grains result from evaporation at a relatively low temperature (in partial vacuum).

### Number Each Churning.

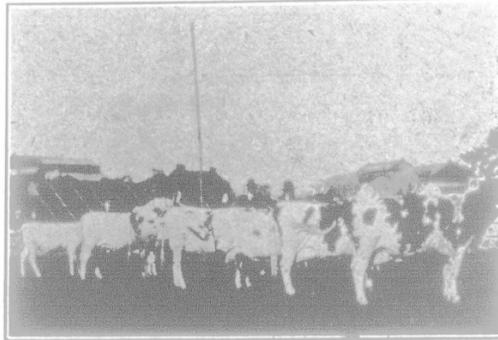
Evidence of the fact that it is to the advantage of creamerymen to mark each churning with a separate number that is stamped on each box or package of butter sent to market is furnished by the Market Division, Dairy and Cold Storage Branch, Department of Agriculture, Ottawa, as follows:

"A Canadian wholesaler shipped a car of butter to New York. On arrival there it was found that part of the car contained excess water. As the churnings were not marked, presumably each box in the car will be tested in order to sort out that which is adulterated.

"Two different Ontario wholesalers each shipped a car of Ontario Creamery butter to Montreal during the week. A part of each car is reported from Montreal as containing excessive water. One of the cars contained the make of four different creameries, all of which were not branded with the name of the creamery or churning number. Arrangements are being made for testing each of the six hundred boxes in the car at a cost of one hundred and fifty dollars. Had the churnings been

numbered, only one box of each churning need be tested and the cost of picking out the butter containing excessive water would only be one-tenth or less of the present cost.

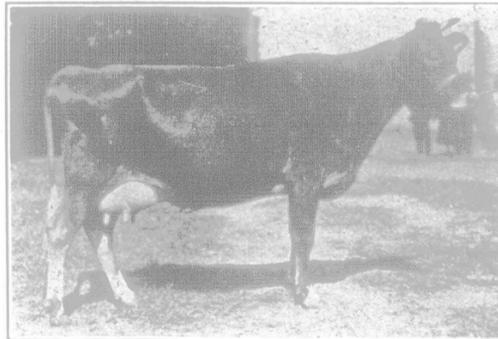
"It may be impossible in these cases to fix the responsibility on the creamery and the dealer may have to take the loss due to cost of testing, reworking, decrease in weight and quality but such losses eventually work back to the creamery. If the dealer must bear such losses, he must have a wider margin on which to do business. As most wholesalers to-day are testing the shipments from each creamery when received, and in cases of excessive water, are charging the creamery with the cost of testing, reworking and loss in weight and quality, the creamery shipping such butter will reduce the loss by numbering each churning."



Line-up for the Ayrshire Female Championship at the Central Canada Exhibition, Ottawa, 1920.

### Dairy News Notes.

It is reported in the London Grocer, of August 14, that "Messrs. Lovell & Christmas, Ltd., West Smithfield, London, E. C., and Liverpool, who have large branch houses in Manchester, Bristol and Glasgow, have just concluded an important arrangement in regard to the development of the cheese industry in the Province of Quebec." A. Trudel, the Manager of the Quebec Farmers' Central Co-operative Society, visited the Old Country some time ago when the cheese market suffered a decline. The London Grocer comments on Mr. Trudel's visit as follows, and says that he "came on a visit to this country for the purpose of arranging for the cheese produced by the members of his society (about 10,000 boxes weekly) to be sold direct to the



Castlehill White Easel.

First three-year-old cow and champion Jersey female at the Central Canada Exhibition, 1920, for W. Lyall, Magog, Que.

British provision trade, and as a result of the negotiations, just concluded, Messrs. Lovell & Christmas, Ltd., have been selected to act as selling agents. This is the first time that a society of cheese producers in Canada has arranged for its output to be sold direct to the provision trade in Great Britain."

The Dominion Bureau of Statistics reports a decrease of 27.58 per cent. in the holdings of cheese in Canada, on August 1, 1920, as compared with the same date last year. The holdings of creamery butter show a decrease of 16.58 per cent.; dairy butter, 29.65 per cent., and oleomargarine an increase of 31.35 per cent.



A Class of Young Jerseys Seen at the C. N. E., Toronto, 1920.

The quantity and value of Canadian milk and milk products exported from Canada during the month of July, 1920, is reported as follows: Fresh cream, 221,031 gallons, valued at \$337,049; fresh milk, 284,993 lbs., valued at \$62,065; butter, 1,966,915 lbs., valued at \$1,051,287; cheese, 25,187,191 lbs., valued at \$7,551,461; condensed, canned or preserved milk, 7,277,790 lbs., valued at \$1,152,902. The fresh cream, fresh milk, and about 40 per cent. of the condensed milk, as well as about 80 per cent. of butter was exported to the United States. Of the cheese, 24,875,349 lbs. were exported to the United Kingdom. During this same period, according to the monthly report of the U. S. Bureau of Markets, Canada imported from the United States 21,062 lbs. butter, 249,961 lbs. oleomargarine, 37,052 lbs. cheese, 442,811 lbs. condensed milk, 48,430 lbs. evaporated milk, and 5,440 lbs. of powdered milk.

A news note from the Dairy and Cold Storage Branch at Ottawa, states that new regulations have been passed under authority of the Oleomargarine Act, 1919, and of an Act to amend the Oleomargarine Act, 1919, governing importation, manufacture and sale of oleomargarine in Canada. All previous regulations have been retained and new provisions have been introduced. We are glad to note that the use of the words "butter", "creamery", "dairy", or the name of any breed of cattle is prohibited (a) in any form of advertising or description of oleomargarine, or (b) on any package containing oleomargarine. Furthermore each package of oleomargarine manufactured, imported, or sold, offered, exposed, or had in possession for sale, must have the word "oleo" stamped on the surface of the oleomargarine, in capital block letters, at least one and a half inches high and of proportional width.

During 1919, Wisconsin led all other States in the production of American types of cheese, as well as Swiss, Brick, and Munster cheese. The total production of these types amounted to 257,952,275 lbs.

Before the war, according to the London Times, the total annual supply of imported butter available for Great Britain amounted to more than 200,000 tons. For the year ending March 31, 1921, the supply will not exceed 90,000 tons. Moreover, British production over the winter months is practically negligible and no appreciable supplies of Irish butter will reach the British market from November to April. During July, according to the Times, the British Ministry of Food purchased butter from the following countries:

"Denmark, 9,000 tons, spread over July, August and September at 24s. per cwt., (52½¢ per lb.), c. i. f., British port; Canada, 25 tons, at above price; Australia all the exportable surplus, estimated at 8,000 tons, at 240s. per cwt., (about 514/10c. per lb.), f. o. b., releasing a quantity for the African and Eastern trade; Argentina, about 200 tons. Price about 200s. per cwt., (about 427¢ per lb.), c. i. f., less than half the quantity offered. Balance now going to the United States of America."

A cable some time ago from A. E. Griffith, Cargo Inspector, London, England, reported that the British Government had practically secured the total export of New Zealand butter up to March 31st, at a net price of 280 shillings per hundred, f. o. b. This would be retailed in London at 60 cents per pound. At that time the Australian Cheese Producers' representatives were in Great Britain, arranging for the sale of an exportable surplus of 3,000 to 4,000 tons to a group of large importers, at a price not likely to exceed 28 cents per pound, f. o. b. Australia. In connection with the retail price of controlled butter in Great Britain, the London Grocer in late August, contained the following:

"The Food Controller announces that the maximum retail price for Government butter will be increased from 2s. 8d. (64c.) to 3s. (72c.) per lb. on Monday, August 23. The return to the retail price of 3s. per lb. for Government butter, is unavoidable in view of increased continental competition for the limited supplies available, and of the importation by the United States of America of large quantities of Danish and Dutch butter, for which high prices are being paid. Butter continues to be in very short supply, and the Ministry has found it necessary to pay high prices for recent purchases of butter."

A letter also from the Cargo Inspector of Bristol, England, says: "In connection with the export of Irish butter, an order has been made prohibiting the export of butter from Ireland except under license in order to secure stocks for Irish requirements during the coming winter. Licenses will be issued fortnightly for the export of such a quantity as can safely be let out, while each producer will be required to cold-store a quantity proportionate to his output, or to sell such a quantity to some wholesale merchant who will undertake to cold-store it."

The following regarding the British cheese supply is from the Irish Homestead: "A Government distribution of 50 per cent. is assured until about March next. To meet the remaining demand there is the Canadian make, which is generally of fine quality, and an abnormally large British make, due to a fifty per cent. reduction in the consumption of milk. When milk became too high in price people simply used less of it, and in Great Britain it was turned into cheese. There are also considerable supplies of Dutch Cheddar and the Irish make. The Irish Cheddar, as at present made, simply cannot compete with the English Cheddar, unless at a difference of about 4d. per lb. to our disadvantage. In pre-war days the Canadian and British make supplied the demand. The Canadian import has fallen off by about 15 per cent., but the British

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make is abnormally large. If meat goes higher in price, the demand for cheese as a substitute will increase. This always happens. When any particular article in general demand becomes expensive the housekeeper looks for the next best substitute; margarine succeeds butter and cheese succeeds meat."

According to a recent writer, the Union of South Africa is rapidly developing a dairy industry of considerable importance. It is stated that "Whereas a few years ago very large quantities of butter and cheese were imported, during the twelve months of 1916-17, not only was sufficient butter made in the Union for all local requirements, but a surplus of over 4,000,000 lbs. was exported overseas. During that season considerable quantities were again exported. The production of cheese during the year 1917 also increased rapidly, and large quantities have been sold and exported. The Union may now be said to be self-supporting as regards butter and cheese, while there is every prospect of a remunerative export trade developing in both commodities. Experience has shown that a very considerable portion of the Union is well adapted to dairy farming. The climate is mild, and cattle thrive well on the natural veldt from six to eight months of the year."

### A Summary of the Milk Situation.

Two weeks ago this paper carried a report of the investigation by the Board of Commerce into the question of a winter milk price for producers supplying the Toronto city milk trade. During this investigation, which lasted two days, the distributors as well as the producers came under fire and although during this hearing the three members of the Board of Commerce, Messrs. Whyte, Dillon and Acland were non-committal in their attitude toward the producers' arguments, the same could not be said for Major Duncan, counsel for the Board, who on no single occasion that we can recall, deviated from the position of a prosecutor in a criminal court. The result of this attitude was that instead of acting in the capacity of a fair price officer responsible to producer as well as the consumer, Major Duncan apparently chose to assume an "arrogance and high-handed injustice" in the producers' demands and endeavored to prejudice the Board as well as the consuming public against the producer. Figuring prominently in this investigation was the report of the Ontario Milk Commission, which, based upon the average yearly cost of production of milk on 88 York County farms for the year ending June, 1920, and the analytical judgment of the five fully representative and capable members of the Commission, showed a cost of production of \$2.96 per can of 82½ pounds at the farm. Adding transportation, the cost laid down at the distributor's plant is almost identical with the price of \$3.25 per can agreed upon between the producer and distributor. For some reason the Board may have been prejudiced against this provincial government report, possibly because of the prejudicial advertising given it before the investigation. At any rate the producer's case, which under other circumstances could safely have been allowed to rest upon this report alone, was made somewhat more difficult on account of the circumstances just recounted.

The Board reserved decision pending further consideration of the evidence. Meanwhile 1,500 milk producers, patrons of the Canadian Milk Products Company and largely resident in the counties of Brant, Oxford and Middlesex, were notified on September 14 that this company would cease the manufacture of milk powder on Saturday September 18, due to the accumulation of stock valued at \$587,000. When this sudden action reached the Board we understand that it was influential in further prolonging consideration of the Toronto price until it could be determined whether a much larger supply would be available from milk powder patrons deprived of a market. The confusion caused in milk powder districts, notably those surrounding the five C. M. P. manufacturing plants at Brownsville, Burford, Hickson, Belmont and Glanworth, was reported in last week's issue. During the ensuing week "The Farmer's Advocate" has kept as closely in touch with the situation as possible and has endeavored to discover more fully the reasons for closing down these plants and especially on such short notice. It is generally appreciated we believe, that the money market is tightening up and this might be a factor in the company's decision. Then too, the foreign market for condensed milk has been none too strong and if the company was doing an export business this also would influence any decisions as to manufacturing policy. We have always understood, however, that the C. M. P. could not take care of its domestic business and that their very rapid expansion during the past few years has not in any way been dependent upon export trade. Whatever the real reason for closing down—and we are convinced it has not yet been fully, if even partially, given—the company will have a difficult time justifying such drastic action on such short notice. Of course there were no contracts and legally they were entitled to take any action over night if they liked, but modern democracy tends more and more to stress moral as well as legal obligations. If there are no hidden and insidious reasons underlying the company's action officers of the company can never successfully argue that necessity for such action took them unawares. Or if they can they are not business men and producers should by no means trust over 100,000,000 pounds of milk to them annually.

At any rate, this was an angle of the provincial milk situation that was interjected into the Toronto milk price question. It had greater poignancy also,

because of the fact that such a considerable factor in the dairy industry as the manufacture of milk powder has grown to be, inevitably has its influence upon the methods practiced by dairy farmers; and in this particular instance there were far too few hogs available to utilize the skim-milk or whey even if it could be separated and an ample sweet cream, butter, or cheese market found. Very fortunately—far more so than is appreciated by the average producer, even of the 5,000 who may be regarded as members—the Ontario Milk and Cream Producers Association was able to assist in handling the situation with a minimum of actually wasted milk, by finding a considerable cream market in Toronto. The company offered butter prices for milk (about \$2.10 plus skim-milk as compared with \$2.90) less the cost of hauling the cream to the manufacturing plants; and local creameries were promptly on the spot looking for cream patrons. And cheese factories that were still available and had not been acquired by the company also took care of some milk, while the company began making some cheese at one receiving station on the 20th. Thus a bad situation is being tided over, after a fashion, but with a very large, although indeterminable loss to the producer.

Still another factor in the situation was the rumor, still current at the time of writing, that some at least of the condenseries will close down on October 1, fortified by a press despatch in a Toronto daily paper that the condenseries of Prince Edward County had already closed. This last was false, as we know from a visit to the county where there is one condensing plant operated by a Toronto firm that condenses its milk at Bloomfield and transports it to Sydenham for sweetening. This plant has not curtailed its operations. Another plant owned by a confectionery company is located at Picton and manufactures dried milk by the roller process. This plant did partially curtail its operations to the extent that it is making some cheese daily, but as a factor in the dairy industry this plant has no particular significance, as a simple inspection would readily show. At the time of writing there is nothing to justify rumors that condenseries will close down. On the contrary there are repeated assertions from condenser managers that they know of no conditions that would justify such rumors.

So far the greatest disturbance in the milk situation has centred in Western Ontario where the bulk of Toronto's milk supply is produced and where the bulk of Canadian milk powder is manufactured. It is here also that a large number of Ontario's condenseries are located and, fortunately, where the creamery is most strongly represented. At the same time the cheese market, which for Canada is the basic indicator of world's prices for dairy products, is not very strong largely on account of exchange conditions, and this primarily affects Eastern Ontario dairymen who provide the bulk of Ontario's cheese production as well as supply several large condenseries and maintain a goodly number of creameries. Because of present market levels cheese prices must also be regarded as a factor in the matter now before the Board of Commerce and one, too, which can vitally affect the stability of the industry. The present situation should point out to producers as nothing has ever done before, the absolute interdependence of one branch of the dairy industry upon the others; and the urgent need for a provincial organization—such as the Ontario Milk and Cream Producers' Association has more than proven itself to be—which can assume the duty of correlating productive efforts in all branches of the industry. We understand that there are about 97,000 milk producers in Ontario. Suppose 30,000 of these could be arbitrarily regarded as "commercial" milk producers. The present provincial membership is about 5,000 which leaves room for much more effective work. Organization means education and we are convinced that provincial organizations with a large national outlook can and will make of themselves efficient servants of the great dairy industry as well as public service bodies amply fulfilling their moral as well as legal obligations to the public at large.

The matter of public opinion is one not to be lost sight of in the consideration of matters such as are discussed here. Milk and milk products are vital national foods, but increased consumption depends upon public opinion. Public opinion is fickle and easily influenced, sometimes by men with small ideals of citizenship. In the present instance producers have been placed in an awkward light by virtue of the present political situation in the province and also because of the fact that many of those who are most active against the producer are being guided less by the vast amount that they do not know than by the little knowledge they may have gained. They forget that "a little knowledge is a dangerous thing" when relentlessly attacking the farmer for asking cost of production for his products and a fair wage for himself. The farmer should not rely on ignorance to meet ignorance and organization is necessary in order that the situation may always be fully under review by someone representing the large body of producers. We have in the past advocated a much more complete type of organization than now exists and we are convinced that if organization of milk producers continues to progress, our suggestions will be followed out.

In the meantime the Toronto situation, which has a provincial aspect, is not yet settled by a decision of the Board of Commerce. We believe, however, that the Board is disposed to regard the matter with more than the ordinary consideration accorded to producer's problems. A meeting of the Ontario Milk and Cream Producers' Association was held at the Carls-Rite Hotel, Toronto, on Saturday, September 25, to review the whole situation and again discuss the question of the Toronto price. The attitude of those present was

uncompromising so far as \$3.25 per can was concerned. It was argued that every evidence had been presented to show that this was no more than a fair price and that no evidence had been produced to indicate that it was not. A resolution was passed confirming the price as above stated and authorizing an appeal in the event of an order from the Board declaring \$3.25 per can unfair. This meeting, however, was a precautionary review of the matter, and we do not anticipate that an appeal will be necessary. With feed conditions as they are the present price is undoubtedly fair. It is probable that the Board will issue no order at present, and it is not improbable that in order to reduce milk prices to the consumer in the most logical way, it will endeavor to bring down feed prices. Producers want only what is fair, and if the price of millfeeds, such as bran, cottonseed meal, oil cake and gluten can be reduced there will not be the same justification for the present price to the producer. The Board has a chance here, which we hope it will take advantage of, to throw farther into the background its past and none too glorious reputation.

### A Correction.

In our report of dairy products at the Canadian National Exhibition a statement was made, in connection with the butter awards, as follows: "It is interesting to note from the awards that while there were entries from the Western Provinces as usual in the butter classes, they did not always win over Ontario and Quebec entries. Last year no Ontario entry achieved higher than eighth place, but this year they are found distributed all the way down the list." This last statement was a mistaken one and should have read: "In 1918 no Ontario entry achieved higher than eighth place." In 1919, at least one first-prize went for Ontario butter, and several other Ontario entries secured higher than eighth place.

## HORTICULTURE.

### September Fruit Crop Report.

A change has been made in the date of publication in the Fruit and Vegetable Crop Report, issued monthly during the marketing season by the Fruit Branch, Department of Agriculture, Ottawa. These reports will henceforth be issued in the middle of each month, instead of the first as has been the custom.

The September report shows little variation in the estimates of the commercial apple crop in the Provinces of Nova Scotia, New Brunswick, Ontario, Prince Edward Island and British Columbia. A crop of about 900,000 barrels, or approximately 55 per cent. of last year, is expected in Nova Scotia, the estimate of the crop in the various districts, as compared with last year, being given as follows: Round Hill, 75 per cent.; Bridgetown, 60; Granville, 50; Clarence, 50; Middleton, 50; Kingston, 50; Berwick, 75; Morristown, 75; Waterville, 70; Lakeville, 65; Kentville, 60; Wolfville, 60; Falmouth, 50; Canning, 55; Bridgewater, 40; Caledonia, 40. The percentage of high grades will probably be greater than last year, since even in unsprayed orchards there is a large percentage of clean fruit. Where no spraying has been done, however, Gravensteins have developed more scab than any other variety.

In New Brunswick the crop will be less than 50 per cent. of that of 1919. Wealthys are a full crop in Prince Edward Island; Spys, 75 per cent.; Gravensteins, Ribston, McIntosh, Wagner, Greening, and Mann, about 50 per cent. The fruit is clean and growing fast, and on the whole the crop will be from 20 to 25 per cent. less than last year.

Much fruit is reported as absolutely clean in many Ontario orchards, although scab is reported to have developed in a few districts where the orchards were not sprayed. In the Bay of Quinte District, where the weather has been very dry and warm, the fruit is slightly under-sized for the season. In some parts of the Lake Ontario District, color has not developed as well as is usually the case at this time of the year, but throughout the whole Province the advantages of well-cared-for orchards have been clearly demonstrated. Generally speaking, there is prospect of a crop which, as regards both quantity and quality, will be better than for a number of years.

Quebec reports favorable weather conditions since the last report, so that a crop of 50 per cent. of normal, and very much in excess of 1919, is expected. The quality will also be good in well-cared-for orchards.

British Columbia has had an extremely hot summer, and in some districts, because of lack of water, rapid growth has not been possible. The Vernon and Summerland districts show the best crops throughout, although Rome Beauty, Winesap and Winter Banana are 80 per cent. of last year at Penticton, while Winesap is 90 per cent. of last year at Naramata, and Delicious is 90 per cent. of last year at Peachland. Jonathan is about the poorest crop at Vernon and Summerland, being 45 and 50 per cent., respectively, of last year. Wagner is 55 per cent. of last year at Vernon, while McIntosh is only 50 per cent. of last year at Summerland.

The English apple is reported very poor as late as August 28. Kent County, the chief apple-producing county in England, has a particularly short crop; late varieties being estimated at less than 10 per cent. In addition to this, and because of removal of all restrictions on the sale of apples, growers have been rushing supplies to market which has caused a wide range in prices. It is expected that by the time price control is resumed, on November 15, English-grown apples will not seriously compete with those from North America.

The United States Bureau of Crop Estimates, on

September 9, gave the estimated apple crop in the United States as 223,000,000 bushels, and the commercial crop at 33,900,000 barrels, which is an increase of 3,666,000 barrels over the July estimate. It is expected that the State of Washington will have an apple crop located about as follows: Walla Walla district, 326 cars; Spokane territory, 1,500 cars, Benton, Franklin and Adams Counties, 726 cars; Wenatchee district, 9,553 cars; Yakima County, 8,000 cars; other districts, 175 cars. Oregon will have 2,500 cars of apples, and Idaho 3,500 cars. One correspondent estimated the combined crops of Washington, Oregon and Idaho at 24,000 cars, as against 30,000 shipped last year. Illinois will have a crop of winter varieties equal to 30 per cent. of a crop; Ohio will probably harvest in excess of 1,200,000 barrels; Virginia, something over 1,600,000 barrels; and New York, will have at least four times as many apples as last year, but in one of the largest producing sections much of the crop will not pass as "A" Grade, while there is some doubt if the total quantity barreled will exceed 150 per cent. of last year. If cars can be obtained a considerable portion of the crop will probably be shipped in bulk to large cities. The Delaware crop is estimated at nearly 100,000 barrels, or twice as much as last year. Massachusetts may have 335,000 barrels, or a crop equal to last year, while the Maryland crop will run 40 per cent. in excess of 1919.

With regard to prices, one of the largest shippers in British Columbia reports that there has been more demand for export apples than has been experienced for quite a long time, and that many sales have been made at good prices. The price situation in Ontario shows considerable variation. One association reports having sold their output at \$5 per barrel, tree run, in barrels, f. o. b. shipping point. Some orchards in the Georgian Bay district have been sold at a price which will cost \$5 to \$6 per barrel, packed, for No. 1's and 2's, and \$3 for No. 3's and domestic. East of Toronto a number of orchards have been sold at \$2.50 or \$3 per barrel, on the tree. Packers are taking contracts to pick and pack at \$1 per barrel. Several sales have been made in Nova Scotia at from \$3 to \$3.75, picked down in barrels, price including the package.

The following notes contained in the report should be carefully read by shippers:

"Owing to the shortage of cars in general, and which in some districts has reached a very acute stage, we urge shippers to load and release cars promptly and load to capacity having due regard to the safe carrying of the fruit. The various railways are uniting in an effort to move the freight cars with as little inconvenience as possible to growers and shippers, and co-operation with railroads is absolutely necessary.

"On and after August 14 the following refrigerator and ordinary shortage rates are effective from Canadian ports to United Kingdom ports: Apples and pears in barrels under refrigerator \$3. This is a reduction of \$1 per barrel from last season. Box apples 85 cents and pears 90 cents. Apples in ordinary storage \$2.50 per barrel and in boxes 70 cents. Steamship companies are this season not insisting upon the prepayment of ocean freight charges. This is optional."

## POULTRY.

### Fall Work With the Flock.

EDITOR "THE FARMER'S ADVOCATE":

The summer is over and the growing stock nearly matured. There is nothing that grows so quickly as a chick, and it is only a short time ago that they were little fellows just able to walk around and now they are large, husky birds. With the birds matured, new responsibilities arise for the poultry keeper, for these birds must have especially good care if they are to make good as layers this coming winter when egg prices are at their highest.

This is the time of year when the poultry houses should have a thorough cleaning. First remove the old birds that are to make room for the pullets, and then go at the cleaning. Make a business of it and have the work done in such a way that lice will be exterminated, filth removed and every trace of former occupancy removed. When this is accomplished your house will be a suitable place for the pullets. Otherwise a dirty house would be a drawback to the young birds. After having removed the old birds remove every nest, box, water fount and hopper; in fact, everything that is removable. Give these a thorough cleaning outside. Then go at the inside of the house. Brush down the cobwebs and dust; clean everything off the floor and so have everything ready to begin using the sprayer. The entire inside should be sprayed with some good disinfecting solution which is advertised for this purpose. Don't make half a job of it, but give it a thorough spraying all over, and when this is completed give the house a few days to air and dry before placing the pullets in it.

If the pullets have been accustomed to sleeping on the floor of their coop they will likely not take to the roosts at first. To teach them to roost go in after they have settled for the night and quietly place them on the roosts. Some may fly down at first, but after doing this a few nights they will become accustomed to roosting, and will give no further trouble. Be sure and give them ample roosting space, as crowding will make them sweat, and this is injurious.

If you are in need of any birds for the coming breeding season now will be a good time to purchase them. You may be able to get them later on, but they will cost more and you will not have the choice from as many birds. Most breeders will sell cheaper early in

the season, as it will give them more room for the pullets. This will save you money even if you do not need the male for a few months, and the cost of keeping him is small as compared with paying two or three dollars more for him next spring.

Again, if it is yearling hens or pullets you wish to buy, you will have the choice of the flock now, whereas if you wait until later you will pay more money and get what is left. Better get busy early and get what you want, as it is the early bird that catches the worm.

The selection of your own birds is very important. Only the best of the young stock should be kept for breeding purposes, and the poorer ones fattened and sold for table purposes. As feed is high in price it will pay to keep only the best birds. Careful selection of the males will mean a better flock for another year, so go about this work very carefully.

Do the fall work on the poultry farm at the proper time and do not wait till it is too late and then be sorry you did not do this or that. Your poultry work must be done on time if success is to be yours.

Middlesex Co., Ont.

W. A. S.

### Dry Mash Feeding.

EDITOR "THE FARMER'S ADVOCATE":

I would like to pass on to your many readers a method of feeding poultry which I have adopted this season and which has not only given good results, but has saved me an enormous amount of work. I refer to the system of feeding known as "Dry mash feeding," and I question if there is any other labor-saving device which can save the attendant of poultry so much as this. I give, therefore, an outline of my own method of applying it.

First, I should say that I am what is known in England as a small-holder, that is to say, I keep a few cows, pigs and hens on twenty to thirty acres. I really started in the poultry business, and have since extended my operations; but I have a pretty fair flock of hens, do a lot of incubating, etc., and what with pig feeding, milking, churning, and so on, have my hands pretty well filled. Until twelve months ago I always fed wet mash once a day, at night, to my hens and raised my chicks also on a combination of dry grain and wet mash. I now feed everything dry, both to hens and chickens, for the work was getting too much; and this is how I do it.

In every house (I have a number, but the same thing applies when one has only one) I have a hopper hung on the wall, raised from the floor so that the hens cannot scratch dirt into it. This hopper contains a mixture of ground grains, etc., the composition of which varies according to the season of the year, but which for laying hens may be taken roughly as follows: Middlings, 3 parts; bran, 3 parts; cornmeal, 1 part; bean meal, 1 part; meat or fish meal, ½ part; and an inferior grade of oatmeal, 2 parts.

As long as plenty of water is at hand, I have found that hens fed with two ounces per head of grain once a day and left to pick whatever else they want from these hoppers will do very well and always be thrifty. I have killed off a number of my birds this last month and have found them not as fat as when fed on the wet feed, for hens will not gorge on dry feed. In addition, I have lost no birds through apoplexy or liver disease, as occasionally happened under the old system, and upon examination of the offal have found all the internal organs in a particularly healthy-looking condition.

I am sure that the adoption of a method similar to this would relieve many a harassed poultry keeper. I have very keen recollections of my experiences on many Canadian farms, and am convinced that the method as above described is absolutely sound. It has been indeed such a boon and blessing to me that I have for the past two months extended it to my young chickens, with most gratifying results, modifying the system to suit the requirements of the tiny ones.

So successful has it been that I have put on several pounds in weight through not having to worry any further about my feathered tribe, and, if you would like me to explain just how I have managed it, I will be only too pleased to do so for the benefit of others similarly placed.

Cheshire, Eng.

W. J. FLETCHER.

## THE APIARY

### Wintering Bees.

EDITOR "THE FARMER'S ADVOCATE":

Whether to winter in the cellar or outside is a question that every beekeeper has to settle. Where the winter is long and steadily cold, the cellar is usually more satisfactory, but outside wintering succeeds in some moderately cold places if proper precautions are taken. At the Central Experimental Farm, Ottawa, the two methods have been compared during the last five years. Wintering outside has been done in an apiary protected from wind by a board fence 8 feet high, the hives placed in cases made to hold four colonies each with packing material around the sides, beneath, and above the hives. The cellar was a low dry one under the Administration Building, which was heated all winter. The results have been very close, but outside wintering has brought the colonies forward slightly earlier in the spring.

In the wide belt where both cellar and outside wintering are about equally satisfactory, the deciding factor appears to be convenience. If the beekeeper has well insulated and dry cellar, by using it he will save the expense of constructing wintering cases, and also a wind-break, if this is not present. For a few colonies

in a cold region, a boarded section in part of the dwelling house basement makes a good cellar for the bees, and it is an advantage if the basement contains a furnace. Such a cellar should have a steady temperature somewhere between 42 degrees and 50 degrees F. In outside wintering, it is very important to protect the apiary from wind. Outside wintering has the advantage that the bees may be left without attention throughout the winter, whereas in many cellars in the milder parts of Canada, the ventilation has to be watched and controlled. Outside wintering has been very successful at the Experimental Farm at Kentville, N. S., but at the Experimental Farm at Brandon, Man., the winter has been found too severe for the best results.

For successful wintering, more important than the method is early and careful preparation for winter. For example, one cannot expect cellar wintering to be successful if the bees are left outside until zero weather, or if they are brought out very early in the spring. Nor can one expect good results in outside wintering if packing is delayed until cold weather. Neither method will succeed if the colonies do not contain plenty of bees, especially young bees, and, above all, abundance of wholesome stores, preferably clover honey, or syrup made from white granulated sugar, stored in the combs before cold weather. Mice, if they get into the hives during the winter, will ruin the colonies in a very short while.

C. E. F., Ottawa.

F. W. L. SLADEN, Apiarist.

## FARM BULLETIN.

### A Serious Outbreak of Corn Borer in Ontario.

The European Corn borer has come at last. For several years it has been endeavoring to obtain a foothold in the States of New York and Massachusetts, and Canadian farmers have been cautioned to be on the lookout for it. The European corn borer has come very secretly. The most serious outbreak now known on the Continent is in some of the front townships of Western Ontario. In some localities it is rarely found, while in a couple of fields in the worst infested area 95 per cent. of the stalks and ears are infested. The European corn borer has been found in all the coast townships of Welland County and in Elgin, while it has also been discovered more inland in Oxford and Middlesex. Prior to Saturday night last it had been located in the following counties and townships: Welland County—Bertie, Humberstone and Wainfleet; Haldimand—Moulton; Elgin—Bayham, Malahide, Yarmouth, Southwold, Dunwick, Aldborough and Dorchester South; Middlesex—Biddulph, London Tp., Nissouri West, Westminster, Dorchester North, Delaware, Caradoc, Lobo, Ekfrid and Adelaide; Oxford County—Oxford North, Oxford West, Dereham and Norwich South.

The Dominion Entomological Branch has had scouts in the field, and expert entomologists are working busily. It is expected that the borer will be found in the Eastern township of Kent County, but the greater part of Kent and Essex seem, so far, to be spared. Up to the present the most serious outbreaks have occurred near Crystal Beach in Welland County and near Port Stanley in Elgin. From these points the infestation spreads out like a fan, becoming less serious as the distance increases. It is altogether probable that the European corn borer will be discovered in many other townships, but the circumstantial evidence in hand would lead one to expect that the limits of the serious outbreaks have been already defined.

A representative of "The Farmer's Advocate" spent some time with entomologists in the infested areas and would describe the borer and its work, in practical language, as follows: At present the insect is in the larval stage. It is a small, hairless caterpillar about three-quarters of an inch in length, lightest grey in color with a brown head. Its presence can be detected by light dust or borings in the axils of the leaves or on or near the pedicels of the ears. It seems to enter the stalk or cob where it pleases leaving a small hole, one-eighth of an inch or less in diameter, out of which it casts the borings it has made when forcing an entrance. Sometimes the ear of corn is severed from the stalk, but more frequently only partially cut off. It also attacks the cob and the kernels. On some occasions when it has been working in a joint near the top of the stalk the portion above will break over. The larva seems to enjoy feeding on corn, while in the shock just as much as on standing corn and not until the crop is ensiled are his ravages terminated. Small, dark holes in the corn stubble are indicative of its presence, and here it finds a splendid host for the winter. The European corn borer cannot be exterminated by leaving corn out of the rotation, for it is known to live and thrive in over one hundred other weeds and plants; red-root pigweed seems to be a very acceptable host.

It is difficult to say just how serious a menace the European corn borer might become. It cannot fail to decrease the tonnage and impair the quality of the crop, for infested plants seem dry and woody.

At present farmers should be on the watch for the borer, and it would be wisdom on the part of the Provincial Department of Agriculture to have all the agricultural representatives, in corn-growing districts, visit some infested area to become acquainted with the insect and its work so they may detect it all the more easily next season.

# Toronto, Montreal, Buffalo, and Other Leading Markets

Comment on week ending September 23.  
Quotations on last Monday's Markets.

## Receipts and Market Tops.

Dominion Department of Agriculture, Live  
Stock Branch, Markets Intelligence Division

	CATTLE						CALVES					
	Receipts		Top Price		Good Steers		Receipts		Top Price		Good Calves	
	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Same Week	Week Ending	
Toronto (U. S. Y.)	5,265	6,940	7,183	\$14.00	\$12.50	\$14.00	1,005	889	1,174	\$20.00	\$22.00	\$20.00
Montreal (Pt. St. Chas.)	1,640	1,966	1,726	13.00	10.75	12.00	1,560	1,225	1,349	19.00	17.00	15.00
Montreal (East End)	1,416	2,998	1,860	13.00	10.75	12.00	1,714	1,815	1,307	19.00	17.00	15.00
Winnipeg	12,520	8,405	14,066	12.25	11.25	13.75	765	763	738	11.50	12.00	12.00
Calgary	3,691	6,535	3,663	9.75	9.75	10.00	751	—	170	10.50	9.25	10.75
Edmonton	1,539	1,316	1,191	9.50	9.50	9.50	181	81	242	10.00	10.00	10.00

	HOGS						LAMBS					
	Receipts		Top Price		Selects		Receipts		Top Price		Good Lambs	
	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Same Week	Week Ending	
Toronto (U. S. Y.)	3,158	6,831	2,492	\$21.00	\$18.25	\$20.75	16,532	12,082	12,361	\$14.85	\$14.00	\$14.25
Montreal (Pt. St. Chas.)	1,761	1,563	1,749	21.00	18.25	21.00	6,816	7,052	8,220	13.50	13.00	12.50
Montreal (East End)	2,083	1,189	2,208	22.00	18.25	21.00	3,219	5,309	5,227	13.50	13.00	12.50
Winnipeg	938	1,032	892	22.50	17.50	21.00	1,464	2,022	5,780	13.00	11.50	22.25
Calgary	227	488	311	22.25	17.25	22.00	551	983	3,511	11.50	12.00	11.35
Edmonton	177	186	177	22.50	17.25	21.25	563	322	482	12.00	12.50	12.00

### Market Comments.

(Toronto Union Stock Yards)

Receipts for the week consisted of fifty-four hundred and fifty-three cattle, nine hundred and eighty-three calves, thirty-two hundred and fifty-six hogs, and seventeen thousand and seventy-eight sheep. Most of the cattle offerings consisted of common and medium stuff, very few good cattle were on the market and there was very little change in price from the close of the previous week. A few really good butcher cattle sold from 15 to 25 cents higher. There was a really-choice load of steers averaging eleven hundred and ninety pounds sold at \$15. They were brought in by R. Frizzell, Meaford, Ontario. Cattle with quality and flesh were strong sellers. Most of the best butcher cattle sold around \$11.50 to \$12.50. Choice butcher heifers sold well, and cows and bulls were steady to strong; no choice bulls were on the market. Choice cows sold from \$11 to \$12.50, and bologna bulls from \$6 to \$7. There was a good demand for choice milkers and springers and these sold at slightly higher prices. The stocker and feeder market held about steady, but trade was a little quiet partly due to the dry spell of weather; there would be more inclination to buy on the part of the farmers if there was a good shower to freshen the grass. Choice feeding steers weighing around ten hundred to eleven hundred pounds sold from \$10.50 to \$11.50 per hundred, and good from \$9 to \$10. Stockers of good grading sold from \$8 to \$9.50. This trade will increase a little later. There was a fair run of calves on the market and the price held steady for choice veal. Choice calves sold from \$19 to \$20, medium, \$16 to \$17, and fair calves from \$13 to \$14. The demand is for choice veal. Heavy calves do not sell well.

The sheep and lamb market had to take care of a heavy run but notwithstanding this, prices held steady. Early in the week some lambs sold as high as \$14.85 per hundred, but only a few that were very choice. The market closed Thursday with choice lambs at \$14, yearlings \$10 to \$11 and heavy sheep and bucks from \$6 to \$7. Light handy sheep moved from \$7.50 to \$8.50. The big demand was for the well finished and not too heavy lambs. The prospects are that we will have heavy runs from now on.

The run of hogs on the market was not heavy and prices remained steady. The majority of hogs were bought by the smaller outside packers. The large packers were not operating to any extent. If hogs come in large numbers the price may have a tendency to go a little lower, but the prospects are that hogs will continue to be a fair price.

The total receipts from January 1 to September 16, inclusive, were 205,321 cattle, 64,340 calves, 217,504 hogs and 103,557 sheep; compared with 232,986 cattle, 51,515 calves, 265,922 hogs and 104,854 sheep, received during the corresponding period of 1919.

### Montreal.

There were thirty hundred and fifty-six cattle offered for sale during the week. Of this amount thirty-one head were shipped to country points, fifty head to other markets for sale and two hundred

CLASSIFICATION	No.	TORONTO			MONTREAL			
		Avg. Price	Price Range Bulk Sales	Top Price	No.	Avg. Price	Price Range Bulk Sales	Top Price
STEERS								
heavy finished	24							
STEERS good	304	11.93	10.50-13.00	14.00	14	12.50	12.00-13.00	12.50
1,000-1,200 common	39	8.50	8.00-9.00	9.00	5			
STEERS good	605	11.23	10.00-12.25	13.50	27	11.00	10.50-12.00	12.50
700-1,000 common	368	8.66	8.00-9.00	9.00	288	9.00	8.00-10.00	10.50
HEIFERS good	286	11.64	10.50-13.00	14.00	10	10.75	10.00-11.50	11.50
fair	482	8.24	7.50-8.75	9.00	62	9.00	8.50-10.00	10.00
common	285	6.50	6.00-7.00	7.00	282	7.00	6.00-8.00	8.00
COWS good	370	10.50	9.00-12.00	12.75	83	9.25	9.00-10.00	10.00
common	589	7.00	6.00-8.00	8.25	322	7.00	5.00-8.00	8.00
BULLS good	93	10.50	10.00-11.00	11.50	3	8.25	8.00-9.00	9.00
common	147	7.50	6.50-8.50	9.00	404	5.50	5.00-5.75	6.00
CANNERS & CUTTERS	196	4.50	4.00-5.00	5.25	106	4.00	3.00-4.50	5.00
OXEN	4				34			
CALVES veal	1,005	18.00	17.00-19.00	20.00	252	14.00	12.00-15.00	19.00
grass					1,308	7.25	7.00-7.50	8.00
STOCKERS good	1,526	9.00	8.50-9.50	10.00				
fair	274	8.00	7.50-8.50	8.50				
FEEDERS good	30	11.00	10.50-11.50	12.00				
fair								
HOGS selects	2,996	20.79	20.50-21.00	21.00	1,191	20.60	20.50-20.75	21.00
heavy	16	19.71	19.50-20.00	20.00	24			
(fed and lights	50	18.75	18.50-19.00	19.00	395			
watered) sows	95	16.89	15.50-18.00	18.00	133	16.00	15.50-16.75	16.75
stags	1				18			
LAMBS good	13,472	13.75	13.00-14.50	14.85	3,145	12.00	12.50	13.50
common	1,466	9.90	8.00-11.00	11.00	3,193	10.75	10.75	12.00
SHEEP yearlings	252	10.00	9.50-10.50	11.00				
light	859	8.00	7.50-8.50	8.50	274	7.25	7.00-7.50	7.50
common	483	4.50	4.00-5.00	6.00	204	6.25	6.00-6.50	7.00

NOTE.—Hog quotations at Montreal on basis of weighed off cars.

and seventy-four head to Toronto and American packers. On Monday the market was brisk and prices a bit stronger than those paid during the previous week. Dealing on cattle after Monday was very slow and although prices remained at about Monday's level it was difficult to find buyers; \$13 per hundred was the top figure for steers. Buyers claimed that cattle bought at prices above \$13 cost so much dressed that they could not dispose of the meat. Butchers are handling cheaper grades. Canners remained at \$3 and up. Light bulls sold at \$5, and heavier bulls up to \$6. There was a good steady demand for veal calves and on one of the markets the best veal calves brought up to \$19. Grass calves were most commonly disposed of at \$7 to \$7.50.

Receipts of lambs were fewer by about four thousand head. The quality was much poorer. A number of sales were made at \$13 to \$13.50; the bulk of the fairly good lots were sold for \$12.50. The market closed strong.

There was no change in prices for hogs. Local trade paid generally \$20.70, a few sales up to \$21. Packers offered \$20 and paid in some cases up to \$20.50.

PT. ST. CHARLES.—The total receipts from January 1, to September 16, inclusive, were: 26,867 cattle, 54,227 calves, 50,957 hogs and 47,531 sheep; compared with 32,224 cattle, 59,942 calves, 60,271

hogs and 38,019 sheep, received during the corresponding period of 1919.

EAST END.—The total receipts from January 1 to September 16, inclusive, were: 28,918 cattle, 43,021 calves, 39,821 hogs and 33,168 sheep; compared with 35,686 cattle, 43,410 calves, 41,802 hogs and 29,775 sheep, received during the corresponding period of 1919.

### Winnipeg.

During the early part of the week the market was active on all good grades of cattle, eastern buyers being the most liberal operators. Stockers and feeders sold exceptionally well at prices, a shade above those prevailing on the previous market. As the week progressed prices declined and by Thursday there was a weak undertone. Handyweight butcher steers sold from \$6.50 to \$11.50 during the week, light weights of steers of good grading from \$8.50 to \$10, and common to medium from \$5.50 to \$7.50. Good to choice cows sold from \$7 to \$9.50, and common to medium from \$4.75 to \$6.25. Veal calves sold up to \$12 and from \$5 to \$11 for the majority according to quality. Good stockers moved from \$5.75 to \$6.50, and fair from \$5. Choice feeders sold from \$8 to \$9 and fair to good from \$5.75 to \$8.50.

### Wool Market Report.

The market for fine wools still continues

active and there is no indication of a surplus of these wools being offered for sale. At the recent openings, many of the larger mills have received orders and as result wool has changed hands. Buying has been confined largely to fine medium and half-blood staple wools. In medium wools the demand has not been heavy. Recent reports from Australia estimate this year's clip at 1,650,000 bales as compared with 2,030,916 last year. Droughts have caused serious loss to sheep owners in Australia. On the whole, trading in wool is quiet the world over, sellers refusing to accept prices offered by buyers. At the Liverpool Sales held recently, wools from East India similar to America styled wools advanced five per cent., while information just to hand indicates that the London Sales suffered a decline of sixteen per cent. Trading in Canadian wools has been quiet during the week.

### Chicago.

Cattle.—Compared with a week ago, good and choice steers steady to 50c. lower; others, \$1 to \$1.50 lower; best she-stock and canners 25c. to 50c. lower; others, \$1 to \$1.50 lower; good bulls and veal calves steady.

Hogs.—Bulk, \$15.75 to \$17.50; pigs slow, 25c. to 50c. lower.

Sheep.—Compared with week ago, fat

## BULLETIN.

### Attack of Corn Borer in Ontario.

Corn borer has come at last. For some time we have been endeavoring to obtain a foot-hold in Ontario and Massachusetts, and have been cautioned to be on the watch for the European corn borer. The European corn borer has come very much more common than was expected. It is rarely found, while in a field infested area 95 per cent. of the corn is infested. The European corn borer has been discovered in the coast townships of Welland and in the Middlesex. Prior to Saturday it was located in the following townships: Welland County—Bertie, Haldimand—Moulton, York, Yarmouth, Southwold, Dorchester South; Middlesex—Nissouri West, West-Elm, Delaware, Caradoc, Lobo, Oxford County—Oxford North, and Norwich South. The Dominion Branch has had scouts and entomologists are working busily. The European corn borer will be found in the Eastern part of the province but the greater part of Kent will be spared. Up to the present time the European corn borer has occurred near Crystal and near Port Stanley in the infestation spreads out as the distance increases. At the European corn borer by other townships, but the hand would lead one to serious outbreaks have been

The Farmer's Advocate spent some time in the infested areas and in its work, in practical present the insect is in the larval stage, hairless caterpillar about 1/2 inch long, lightest grey in color. The caterpillar can be detected by the axils of the leaves or on or under the leaves. It seems to enter the leaves leaving a small hole, one-eighth of an inch in diameter, out of which it can be seen when forcing an entrance. The caterpillar is severed from the stalk, partially cut off. It also enters the soil. On some occasions it has been found in a joint near the top of the stalk. The larva of the corn borer, while in the shock just before and not until the crop is harvested. Small, dark holes indicative of its presence, and the European corn borer exterminated by leaving the stalks in the field or it is known to live and feed on other weeds and plants; the European corn borer is a very acceptable host. The European corn borer is a very serious menace to the corn crop. It cannot fail to reduce the quality of the crop, and woody.

It is on the watch for the European corn borer on the part of the Dominion Branch. The Dominion Branch has all the information in corn-growing districts, and become acquainted with the European corn borer may detect it all the more

native lambs, \$1 to \$1.50 lower; fat westerns, 50c. to 75c. lower; fat yearlings and sheep, 50c. to \$1 lower; feeding classes weak to 25c. lower.

### Toronto Produce.

#### Breadstuffs.

Manitoba Wheat (in store, Ft. William)—No. 1 northern, \$2.73½; No. 2 northern, \$2.70½; No. 3 northern, \$2.65½; No. 4 wheat, \$2.49½.

Manitoba Oats (in store, Ft. William)—No. 2, C. W., 77½; No. 3, C. W., 76½; extra No. 1 feed, 75½; No. 1 feed, 75½; No. 2 feed, 69½.

Manitoba Barley (in store, Ft. William)—No. 3 C. W., \$1.14; No. 4 C. W., \$1.07; rejected, 99c.; feed, 97c.

American Corn (track, Toronto, prompt shipment)—No. 3 yellow, \$2, nominal.

Ontario Oats (according to freights outside)—No. 3 white, 70c. to 75c.

Ontario Wheat (f. o. b. shipping points, according to freights). No. 2, winter, per car lot, \$2.30 to \$2.40.

Peas (according to freights outside)—No. 2, nominal.

Barley (according to freights outside)—Malting, \$1.30 to \$1.35.

Buckwheat (according to freights outside)—No. 2, nominal.

Rye (according to freights outside)—No. 3, \$1.75.

Manitoba Flour.—Government standard, \$13.25 new crop, Toronto.

Ontario Flour (prompt shipment)—Government standard, nominal, in jute bags, Montreal; nominal, in jute bags, Toronto, \$10.40 to \$10.50, bulk, seaboard.

Millfeed (car lots, delivered, Montreal freights bags included)—Bran, per ton, \$52; shorts, per ton, \$61; good feed flour, per bag, \$3.75.

#### Hides and Wool.

Hides f. o. b. Country Points.—Beef hides, flat cured, 9c. to 11c.; green hides, 8c. to 9c.; deacon or bob calf, 25c. to 50c.; horse hides, country take-off, \$3 to \$4; No. 1 sheep skins, \$1 to \$1.50; shearling and spring lamb, 25c. to 50c.; horse hair, farmers' stock, 38c. to 40c.

City Hides.—City butcher hides, green, flats, 12c.; calf skins, green flats, 12c.; veal kip, 10c.; horse hides, city take-off, \$4 to \$5.

Tallow.—City rendered, solids in barrels, 9c. to 10c.; country solids in barrels, No. 1, 8c. to 9c.; cakes No. 1, 13c. to 14c.

Wool.—Unwashed, coarse, 16c. to 18c.; medium, 24c. to 26c.; fine, 32c. to 34c.

#### Farm Produce.

Butter.—Trade continues to be firm, with an advancing tendency. Fresh-made creamery prints selling at 61c. to 63c. per lb.; solids at 60c. to 61c. per lb.; and choice dairy at 49c. to 50c. per lb., wholesale.

Eggs.—Eggs kept practically stationary in price at 61c. to 62c. per doz. for No. 1's and 66c. to 67c. per dozen for selects, wholesale.

Cheese.—Cheese is a steady trade at unchanged prices. New large selling at 29½c. to 30c., and old large at 33c. to 34c. per lb.

Poultry.—Receipts have been much larger, but the demand has been heavy, especially for choice crate-fed chickens and large fat hens; so prices have not varied. The following prices being quoted to the producer:

Chickens, spring, per lb., live weight, 33c. to 35c.; dressed, 40c.; ducklings, spring, per lb., live weight, 25c.; dressed, 35c.; hens under 4 lbs., per lb. live weight, 28c.; dressed, 28c.; hens, 4 to 5 lbs., per lb., live weight, 30c.; dressed, 30c.; hens over 5 lbs., per lb., live weight, 32c.; dressed, 32c.; roosters, per lb., live weight, 25c.; dressed, 28c.; turkeys, per lb., live weight, 40c.; dressed, 45c.

#### Wholesale Fruits and Vegetables.

Receipts continued to be very heavy the beginning of the week, and prices were generally lower, more especially on peaches and plums.

Apples.—Apples came in freely but prices kept practically stationary at 30c. to 50c. per 11-qt. basket, and \$3 to \$5.50 per bbl.

Blueberries have been shipped in lightly so prices have been slightly firmer at \$3 to \$3.25 per 11-qt. basket.

Cantaloupes.—Shipments have been heavy and prices lower; the salmon flesh selling at 50c. to 60c. per 11 qts., and 50c. to \$1 per 16 qts.; the green flesh bringing 25c. to 35c. per 11 qts., and 25c. to 75c. per 16 qts.

Grapes have come in in large quantities, and prices declined, ranging from 40c.

to 50c. per 6 qts., and 75c. to \$1 per 11 quarts.

Peaches.—Receipts were extremely heavy the beginning of the week, and prices were very low, but eased slightly towards the end, showing a firming tendency; the six-quart baskets ranging from 40c. to 65c., and the eleven-quart at 50c. to \$1.25.

Pears kept about stationary at 40c. to 50c. per 6 qts., and 50c. to 85c. per 11 qts.

Plums continued to be shipped in heavily, and prices kept low, ranging from 20c. to 35c. per 6 qts., and 30c. to 65c. per 11 qts. Prune plums bringing 65c. per 6 qts. and \$1.25 per 11 qts.

Tomatoes have been in slow sale at 25c. to 35c. per 11 qts.

Vegetables have generally been lower in price—with heavy receipts, selling as follows:

Beets.—35c. per 11-qt. basket; \$1.25 to \$1.50 per bag.

Carrots.—35c. per 11-qt. basket; \$1 to \$1.25 per bag.

Cabbage.—50c. per dozen.

Corn.—15c. to 20c. per dozen.

Peppers.—Green, hot, 50c. to 60c. per 11 qts.; sweets, 75c. to \$1 per 11 qts.; red, hot, 75c. per 11 qts.; sweet, 75c. to \$1 per 11 qts.

Onions.—\$2.25 to \$2.50 per cwt.

Potatoes.—\$1.60 to \$1.75 per bag.

Squash.—75c. to \$1.50 per dozen.

Clover Seeds.—Dealers quote the following prices at country points: Alsike, No. 1, fancy, \$14.50 to \$15.50; No. 1, bushel, \$13.50 to \$14.50; No. 2, bushel, \$12.50 to \$13.50; No. 3, bushel, \$11.50 to \$12.50; rejected, \$9 to \$11.50.

### Buffalo.

Cattle.—Cattle trade was considerably lower at Buffalo last week, the result of liberal runs at all markets and the fact that Jewish holidays were being observed, which cut quite a figure in the trade on shipping steers and fat females. Shipping steers were mainly Canadians, running largely to a medium to fair kind, best of which sold on a range of from \$14.50 to \$14.75. Two loads of yearlings averaging around 800 pounds, out of Michigan, sold up to \$17. While shipping steers and the bulk of the good to best handy butchering cattle sold a big half to, in some cases, as much as a dollar under the preceding week, sellers considered the price on the yearlings about steady, these choice light cattle being in good demand. Fat cows sold generally from a quarter to a half lower, canners and cutters ruling about steady. Bulls were off a quarter to half dollar. Trade on milk cows and springers ruled about steady, demand being strong for the best grades. Offerings for the week showed 4,350 head, as against 4,975 for the previous week, and as compared with 4,650 head for the corresponding week last year. Quotations:

Steers, Canadians.—Best, \$14 to \$14.75; fair to good, \$13 to \$13.50; common and plain, \$11.50 to \$12.

Butchering Steers.—Yearlings, good to prime, \$15.50 to \$17; choice heavy, \$14.50 to \$15; best handy, \$12.50 to \$13; fair to good, \$11 to \$12; light and common, \$9 to \$10.

Cows and Heifers.—Heavy heifers, \$12 to \$12.50; best butchering heifers, \$10.50 to \$11; good butchering heifers, \$9.50 to \$10; fair butchering heifers, \$8 to \$8.50; light, common, \$6 to \$6.50; very fancy fat cows, \$9.50 to \$10; best heavy fat cows, \$8.50 to \$9; medium to good, \$7.75 to \$8.25; cutters, \$4.50 to \$5; canners, good, \$3.75 to \$4.

Stockers and Feeders.—Best feeders, \$8.50 to \$9; common to fair, \$7.50 to \$8; best stockers, \$7.50 to \$8; fair to good, \$7 to \$7.50; common, \$5.50 to \$6.

Bulls.—Best heavy, \$9 to \$9.50; good butchering, \$8 to \$8.50; sausage, \$6 to \$7; light bulls, \$5.50 to \$7.

Milkers and Springers.—Best, \$100 to \$125; medium to good, \$80 to \$90; common, \$55 to \$70.

Hogs.—Prices showed a break the first four days of last week, but a reaction was had before the week was out. Monday, when values went off 25 cents from the previous week's close, heavies sold at \$18.50 and \$18.60, bulk of the light hogs moved at \$18.75, and pigs landed at \$18. Friday prices were slightly lower, heavies going at \$18.25 and \$18.35, handy grades moved mostly at \$18.50 and pigs, which were steady, sold at \$18.

Sheep and Lambs.—Last week opened with best native lambs selling at \$14.50, top for Canadians, of which there were four decks, was \$14, and sales on culls

ranged from \$10.50 down. The next three days showed prices steady, and Friday values were up 50 to 75 cents, best natives selling at \$15 and \$15.25, with culls bringing up to \$11. Sheep were little changed all week. Top wethers were quoted from \$7.50 to \$8, and while a few desirable ewes reached up to \$7, medium and heavy ewes sold mostly at \$6 and \$6.50. Cull sheep ranged from \$2 to \$4. The past week's receipts were 19,400 head, being against 17,930 head for the week previous and 11,700 head for the same week a year ago.

Calves.—Demand the fore part of last week, as a result of Jewish holidays, was light, and while the week opened with prices somewhat lower, the decline was more than regained before the week was out. The opening day showed best veals selling at \$19; Tuesday a few brought \$19.50; Wednesday's top was \$19.75; Thursday the best ranged up to \$20, and Friday the best natives sold at \$20 and \$20.50, with best Canadians, of which there were only one deck, landing at \$20. Desirable native culls sold up to \$17, Canadian throwouts moved at \$16.50, heavy fat calves on the rough order sold from \$10 to \$12, and common grassy kinds ranged as low as \$6. Receipts for the week were 2,650 head, the week before there were 2,910 head, and for the same week a year ago the run totalled 2,050 head.

### Monday's Live Stock Markets.

Toronto, September 27. Cattle.—Receipts, 5,155. With a fairly heavy run of inferior cattle the market for butcher cattle dropped from twenty-five to fifty cents, on the poorer grades about seventy-five cents of a drop. Twenty steers, averaging 1,010 lbs., sold at thirteen cents, some small lots went at thirteen and a quarter. Cows were fifty cents lower, Bologna bulls were steady, choice feeders were steady. Trade was active with not too many of the right kind of short-keep feeders offering. Quotations: Heavy beef steers, \$14 to \$15. Butcher steers, choice, \$12.50 to \$13.50; good, \$11 to \$12; medium, \$7.50 to \$9; common, \$6 to \$6.75. Butcher heifers, choice, \$12.50 to \$13.50; medium, \$7.50 to \$9; common, \$6 to \$7. Butcher cows, choice, \$10 to \$11.50; medium, \$7 to \$9. Canners and cutters, \$3 to \$5.25. Butcher bulls, good, \$8.50 to \$10; common, \$5 to \$6.50. Feeding steers, good, \$10.50 to \$11.50; fair, \$9 to \$10. Stockers, good, \$8 to \$9.50; fair, \$6.75 to \$8.

Calves.—Receipts, 499. Calf market was steady for choice veal with tops at 19 cents; medium calves were hard to sell. Quotations: Choice, \$18 to \$20; medium, \$15 to \$17; common, \$8 to \$10. Milch cows: Choice, \$100 to \$160. Springers, choice, \$125 to \$175.

Sheep.—Receipts, 8,002. With about two thousand more than last Monday, lambs were steady with weak undertone. Best lambs were fourteen cents. Sheep were about fifty to seventy-five cents weaker. Quotations: ewes, \$7.50 to \$8.50; lambs, \$13 to \$14.

Hogs.—Receipts, 1,797. With fairly light runs hogs will likely maintain their last week's prices, packers bidding 21 cents fed and watered. Quotations, fed and watered basis: Selects, \$21; lights, \$19; heavies, \$20; sows, \$16 to \$18.

Montreal, September 27. Cattle.—Receipts, 3,012. Up to 10.30 a.m. the market for butchers' cattle was at a standstill. Packer's buyers were not showing any interest. A few sales were made to local butchers at around \$7 for light heifers in fair flesh and medium-quality cows. The top for good cows was \$9. A load of heifers and steers averaging 935 lbs. were sold to be shipped out at \$9.50. Bulls were strong at \$5 to \$5.75.

Calves.—Receipts, 2,440. A few really good grass calves were sold for \$8, packers and buyers for American firms offering \$6 to \$7. Quotations: Good veal, \$13 to \$15; medium, \$10 to \$13; grass, \$6 to \$7.50.

Sheep.—Receipts, 10,077. One buyer purchased 800 lambs at \$13. A number of smaller sales were made at the same figure. Good lambs were most commonly quoted at \$12.50. Quotations: Ewes, \$5.50 to \$7. Lambs, good, \$12.50 to \$13; common, \$10.50 to \$11.50.

Hogs.—Receipts, 1,833. A few hogs on account of former contracts were weighed up to \$21; \$20.50 was paid for good lots, and \$19 to \$20 for mixed lots from the east. At time of wiring prices had not been fully established.

Buffalo, September 27. Cattle.—Re-

ceipts, 4,400. Market was mostly steady on shipping steers from 50 cents to 75 cents lower on medium and common butchering grades which made up bulk of offerings. There were no real, choice handy cattle offered.

Hogs.—Receipts, 11,000. Good grades were \$18.25, and pigs \$17.50.

Sheep.—Receipts, 9,600. Best lambs were \$14.75, and best ewes were \$6.50, with a few at \$7.

Calves.—Receipts, 1,700. Top in calves was \$19.50.

### Cheese Markets.

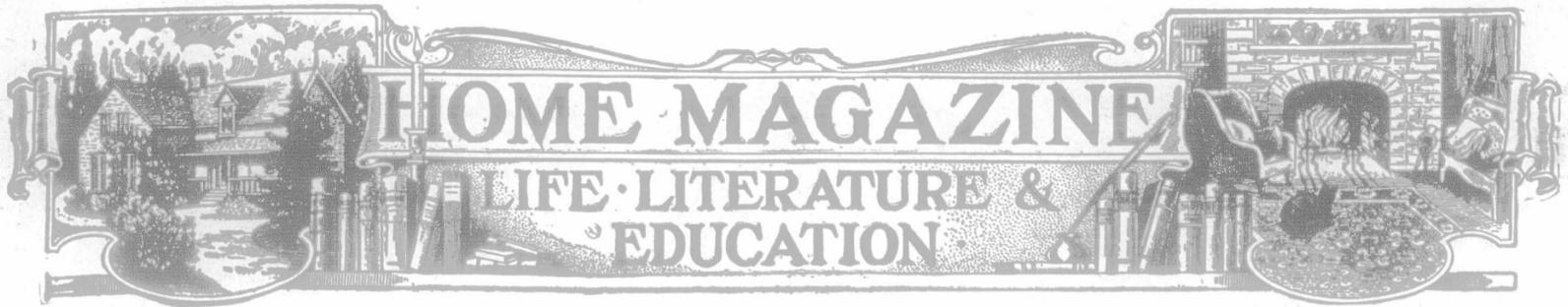
On Saturday, September 25, there were 38 white and 3,391 colored cheese sold at 25 3/16c., on the Cornwall Cheese Board. At Belleville, on the same day, 1,010 colored and 160 white sold at the same price. On the Perth Cheese Board there were 1,040 boxes sold, the colored bringing 25 3/8c. and the white 24 3/8c. At St. Hyacinthe, Que., 200 boxes cheese sold at 24 3/8c. The receipts of cheese on the New York market were 2,243. State, whole milk, flats, current make, white and colored, specials, sold at 29c. to 29 3/4c.; average run, 28c. to 28 3/4c.; State, whole milk, twins, current make, specials, 28 3/8c. to 28 3/4c.; average run, 28c. to 28 3/4c. The result of last Friday's auction by the United Dairymen Co-operative, in Montreal, was as follows: 148 boxes special colored at 25 3/8c.; 1,400 boxes No. 1 colored at 25 13/16c.; 38 boxes No. 2 colored at 25c.; 302 boxes No. 1 white at 25 3/8c.; 10 boxes No. 2 white at 24 3/8c.

### Gossip.

Messrs. Mitchell Bros., Gorrie, Ont. write us that they will sell their entire herd of Herefords, 43 head, at their farm, Gorrie, on Oct. 12. Watch for their advertisement in this paper giving full particulars. They go on to say, "Secretary Smith visited our herd lately and when asked what he thought of our Herefords said, 'They are better than I expected to see. It is too bad you are going out of business, but I suppose the cattle will go into good hands.' Our cattle have not been prepared for sale, but are in good grass condition, all cows are bred. Fourteen cows have calves at foot.

### Shorthorns at Markdale.

The Curry, Bowes & Bowes sale of Scotch and Scotch-topped Shorthorns is advertised elsewhere in this issue to sell at Markdale, Ontario, on Thursday, October 7. In all there will be 50 head catalogued for this sale, about 18 of which are consigned by Mr. Curry, and the balance by Bowes & Bowes. The families represented bringing in probably as many fashionable tribes as have sold in any sale this year, and in several instances they are only one or two crosses from imported sires and dams. The more prominent families are Marr-Missies and Marr-Floras, Stamfords, Beautys, Crimson Flowers, Miss Ramsdens, Village Girls, Rosemarys, Matchless, etc. A summary of the offering shows three year-old heifers, seven two-year-old heifers, twelve cows with calves at foot, seventeen bred cows, and four young bulls. Picking one or two here and there throughout the catalogue the following are a few of the more noticeable ones in breeding, and the footnotes state that their individuality is in every way quite equal to the quality pedigrees which they carry. There is, for instance, a choicely-bred Matchless cow selling with a heifer calf at foot, which is sired by Excelsior, that good breeding son of Gainford Marquis (imp.). She is bred again to Matchless Duke, a Matchless-bred youngster that is also a son of Gainford Marquis (imp.). There is also a two-year-old Marr-Rachael show heifer, in calf to Gainford Marquis, and should prove one of the tops of the sale. Other outstanding entries worthy of mention are a two-year-old Sultan Rosemary, a two-year-old Miss Ramsden, and a two-year-old Charming Rose, all good individuals and all in calf to the service of either Matchless Duke or Excelsior. There will be four bulls only listed but two of these in particular are thick, promising youngsters, or just the herd-sire sort. Full particulars may be had by writing Fred J. Curry, Markdale, Ontario, who will be glad to send the catalogue. The sale will be held at the Markdale Show Grounds, and there will be no reserve on any animal catalogued.



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Markets.

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Gossip.

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 J. Curry, Markdale,  
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Nasturtiums.

There's a tangle of green below  
 The window by which I wait,  
 Where the cinnamon vine sways to and fro,  
 And the lily nods to its mate.  
 Sweet buds, swing low, swing high,  
 And pour out your honeyed wine,  
 While out of the odorous depths near by  
 The clematis blossoms shine.

Nasturtiums twinkle and blow  
 In tunics of gold and red,  
 Like an Arab host, when the sun sinks low,  
 With banners and tents outspread.  
 Their tents are the pungent leaves.  
 Their banners the riant boughs,  
 Where in and about the sunlight weaves,  
 The butterflies wheel and drowse.

Ruby and bronze and rose,  
 Orange and buff and gold!  
 The rarest tints that the summer knows  
 Imprisoned in every fold.  
 Had Iris herself come down  
 On saffron wings through the air,  
 And parted among them her rainbow gown  
 They could not have been more fair.  
 —Ola Moore in *Youths' Companion*.

Topics for Consideration.

A Talk to Parents.

DR. Anna Young's talk at the Rural Leadership Summer School was essentially to parents.

Those who have to do with the up-bringing of children and young folk, she said, should remember that the efficient life requires physical, intellectual, social and spiritual nourishment at its best. *Physical development* requires that the body be properly fed, and clothed, that it have sufficient rest, correct surroundings, cleanliness, exercise, play. *Intellectual development* is dependent upon intellectual food. The reading is very important. There should be pictures that are worth while; sometimes we forget that the mental impressions at a "movie" may go through life. Since education is carried on through the ears as well as the eyes, the things we listen to should be worth hearing. Then, the mouth has its part in education; it is a scientific fact that the boy who uses tobacco early in life finds it impossible to make proper physical development, —tobacco is a poison. For our *social development* we have to make special plans, and so we think about recreation—re-creation. In a purely physical sense this is useful; every woman knows the refreshment of putting on a fresh dress and her hat and going out to meet other people. Dr. Young was strongly in favor of directed play for children, and saw in the consolidated school a better chance for this. "In a school of ten there can't be a proper game. What are the boys and girls going to do? Many take to teasing smaller boys and drift into mischief. Direct them and they will develop into better adults. We do not consider enough the intellectual training in games—estimation of distances, self-control, etc. We should not let the child have too long periods of undirected thinking. . . The *spiritual life*. Here also food is necessary. There must be the intake of spiritual things and output of spiritual effort.—For community efficiency the leaders must see to it that the physical, social, intellectual and spiritual development are all properly attended to and kept in balance.

*Healthy Children.*—To have healthy people we must have healthy babies, and to have healthy babies we must have healthy parents and grandparents. We must see to it that the child is traveling in the path of health; it is hard to bring it back if it gets off; an ounce of prevention is worth a pound of cure. Within the last decade a change has come

about, and to-day we feel that it is better to prevent than to cure disease. We need hospitals—the place to care for a sick person is in a hospital. Again, it is necessary for the caretaker of children to know a great deal. Once it was thought that a mother knew enough; now we know she should read books, attend lectures, and study this important work. A mother needs to know the best foods; if the Lord had meant babies to be bottle babies He would have sent a glass bottle along. Also the mother must know to give water, when to add fruit juice, cereals, cow's milk. Children need a quart of milk a day, and adults a pint of milk a day to be efficient. Children should not go without milk so that it can be sent to the factory; we should set our faces like flint rock against any such practice.

The mother must understand that the baby must have fresh air, and proper clothing, not too much in summer nor too little in winter. The baby should gain a certain number of ounces each week; if it loses the mother should find out what is the matter. Also she should know that the child does not have to have certain diseases. If a child has a sore throat the mother should know enough to call in a doctor at once; it may be diphtheria. We want to see that every child in the community gets proper attention, and that the authorities see to it that every

child in the schools is properly looked after.

During the first few days of its life the child is learning wonderful lessons. e. g. in breathing. If it cries lustily it opens up the air chambers. By weighing and measurements we can tell if it is getting enough oxygen. It should breathe through its nose so the air will be warmed and dustless. Many children are mouth breathers. What happens? They do not get enough air, and cannot be as physically or mentally perfect as they could be otherwise. It is the duty of parents to make nose-breathers; if necessary they should take the children to a specialist in nose and throat diseases. Every child who needs such care should have it, whether the parents can pay or not; if they are poor it should be a community matter. If the people write for medical and dental inspection of schools they can have it.

Parents often say, "It's our own business about having children examined." They feel something is being put over them." They must be educated to see that examination is necessary and helpful to the children.

At this point one member of the audience remarked that in England and Germany people can be arrested for refusing to have their children examined and attended to. Another member referred to the credit due to the Women's

Institute here, in having clinics established.

Continuing, Dr. Young threw a stone at "comforts." Giving them to babies, she said, tends to grow adenoids and makes the upper jaw protrude, spoiling the shape of the child's mouth.

Not only should school children be examined, but everybody should be examined every year by physicians qualified to do it. The general practitioner sometimes is not qualified. The biggest problem in Canada to-day is control of disease. Many people go dragging about not up to par, and it may be that they have only "rheumatism" due to an abscess at the root of a tooth.

Here someone remarked that in Alberta there is now a movement afoot for state control of health, and subsequent discussion brought out that the Ontario Department of Education is now taking up the work of medical and dental inspection, but that there should be more despatch in regard to it. Examination, is now compulsory, but not operation—that is "recommended."

Dr. Young then took up the question of sex education. Human beings, she said, have glands all over the surface of the body, also others that have no ducts, but produce a secretion that is returned to the general circulation of the body and produce certain effects. There are glands at the base of the brain, neck (thyroid), that have much to do with the nervous system; others in the upper abdomen above the kidneys (suprarenal) help to control the blood supply; then there are others in the lower abdomen for procreation.

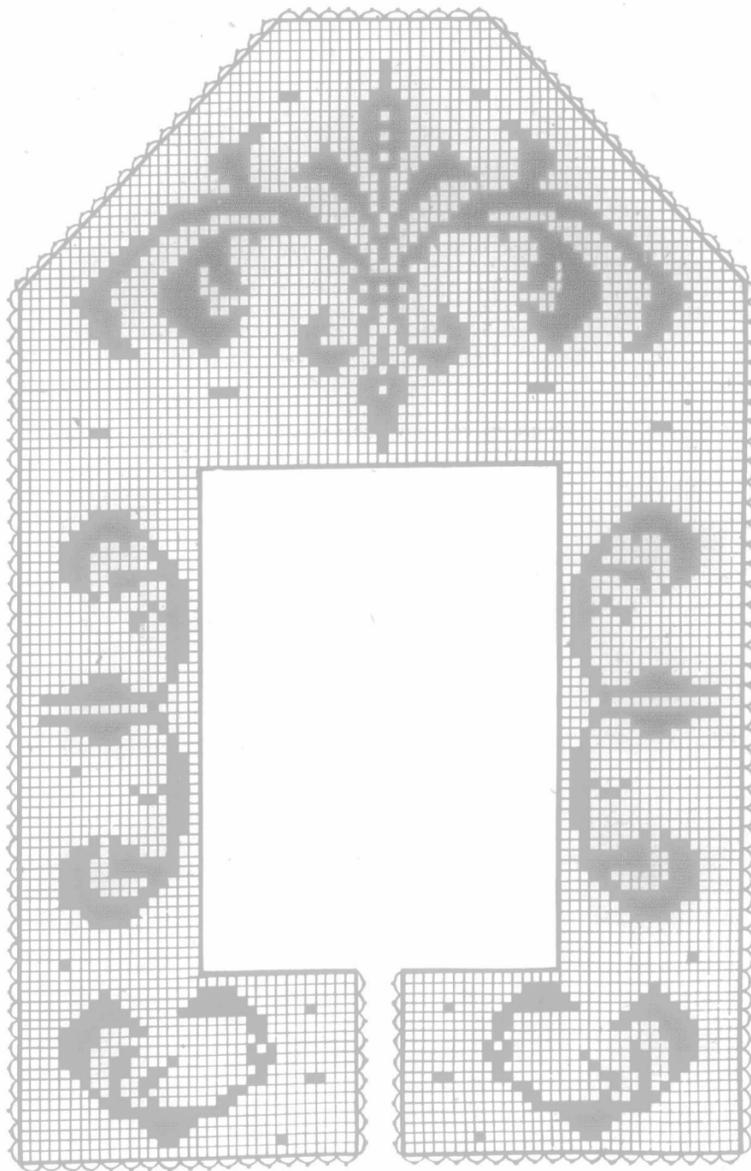
In regard to the sex glands—the internal secretion has much to do with the efficiency of the individual. Young men and women who waste it never excel, are never leaders. Improper habits, lack of cleanliness and improper clothing all contribute to this. Mothers should know how to bathe the child and to clean the genital organs with absorbent cotton; otherwise the secretion dries, is irritating and the child's hand is used. The child should be prevented from forming this habit, which may be carried into life, wasting the efficiency of these glands.

The child may do bad work because of adenoids, incipient tuberculosis, or bad teeth or eyes. If he is falling back at school the reason should be investigated. His failure may be due to bad air, insufficient food, masturbation. We want our communities to be educated to know that any child can form such a habit as the latter, and to know no man or woman can get to the top of the ladder who wastes these secretions.

Dr. Young emphasized that the development of the girl should not be hampered by unhealthful clothing or lack of exercise. Also she scored the habit some people have of holding up early love affairs to criticism and ridicule. "This is a normal phase, and mothers should make it possible for boys and girls to meet in a wholesome, clean, normal way." In the early years the meeting should be in groups. If a girl weeps or laughs easily it should be understood that these emotions are largely under control of the sex glands, another reason why it should be seen to that there is no waste from them.

We say that animals are controlled by instinct and humans by judgment. In every part of the day we have to exercise choice. There is something in the human being other than choice, which is operating. We talk of the "conscious" mind, which is at work in the waking mind; we have also the "unconscious" mind, that is working all the time. Impressions are made on this unconscious mind. We put materials there that are going to color the conduct of life.

Human beings have instincts, among them these for self-preservation and



No. 1—Bib-collar Design in Filet Crochet.

race-preservation. These are down in the unconscious mind. We often see a boy or girl doing things we wish they wouldn't do. "What in the world does she see in that boy?" we say. "She pushes herself where she knows he will go." We forget that the instinct of race-preservation is at work—an instinct God-given, for a purpose. But it has to be guided, educated. We guide the physical food—we can't let children indulge in sauerkraut and coffee—but we do not guide in other ways because we have thought it immodest. And so today young people face problems because they don't understand themselves. Dr. Young thought "Sex Instruction Through English Literature" a good book for young people to read.

Coming to the question of venereal disease: Fire is a wonderful thing when controlled, a destructive thing when uncontrolled. The procreative instinct in men and women is normal, but it should be guided. In the mentally deficient the instinct is a menace. It is the duty of the community to see that these cannot bring forth others of their kind.

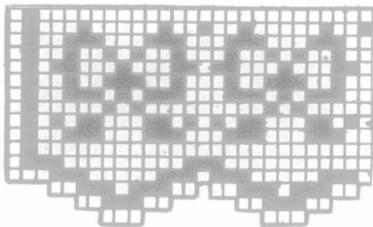
Anything in the unconscious mind is capable of being brought out into the conscious mind. It is possible certain things may never come out; or they may come out once or often. Let us tell people about themselves, and what to do if an impulse does come. Suppose we are dealing with young men and women, and suppose an impulse or temptation comes into the conscious mind. In some the temptation is tremendous, and occasionally they lose all self-control. Children should be taught self-control by directed play. Physical exercise should be used to the limit at the time of stress, but should stop short of fatigue. The mind should not concentrate on self or sex, but on something outside of self—usually one's occupation in life. Unfortunate is the person who has no occupation! If there is none cultivate a fad. Dr. Osler says that blacksmiths, as a class, are the cleanest lived of men. Always it should be impressed that yielding makes a weaker character, and a temptation overcome a stronger character.

Certain things stimulate these instincts. As a rule women are not influenced by the dress they wear, by their own imaginations or the books they read; men are influenced by these things, hence the great need of guarding what they see or read.

Dr. Young thought parents should be truthful with children and teach them something about the facts of life. We should cease giving false answers to children; the normal child asks questions, it is the abnormal child that does not. Tactfully telling them the truth may

mean much to their future development; it is important that they get their information from the right sources, and not with unclean marks that will never be effaced. It is true that the facts of life can be given in a disastrous way, but they can also be given tactfully.

Alcohol has the power to stimulate, and at the same time takes away self-control. It is the "just a little" that is most dangerous, hence strong drinks should be left absolutely alone. Also improper dancing. Dancing is a perfectly normal



No. 2—Towel Edging.

and graceful expression, and "don't think you can do away with it"—there are times when even the gray-haired can dance from pure joy—but beware of the dances that permit the bodies of the dancers to come in contact, also such dances as the Oriental one called "shimmying". Many girls from the country who go to the city are lonely and drift into the public dance-halls. They should be warned.

Boys and girls should be educated in regard to the sex instinct, and warned of its dangers. They should know about venereal diseases. Forewarned is forearmed.

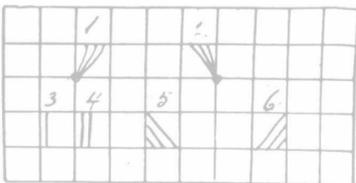


Illustration of part meshes in "Thru & Thru."

No. 3—Introducing Half Meshes.

In the discussion following Dr. Young's address, she was asked the name of a good book for parents, and recommended a little book "What Shall I Tell My Child?", also Dr. Winfield Scott Hall's books. She would rule out Dr. Stahl's books, which have already been ruled out by the Y. M. C. A. in the United

States. The taste for suggestive pictures might be destroyed by cultivating a taste for really good pictures. The Perry prints might be used for this. Good pictures should be on every school wall. In reply to a question as to how to get young people to dance safe dances, Dr. Young said to get them at old-fashioned square dances, and Dr. Daudeno added "Folk dances."

Dr. Young added that too much familiarity between young people—"spooning and kissing"—should be controlled. The boy or girl who indulges in this too much before marriage cannot give the great big love afterwards. Children grow up better in a home where there is this great love and confidence. Imitating love makes people incapable of a worth while love. Those who trifle with human affection have to suffer for it; They are not capable of the great, worthwhile love which is the greatest thing one human being can give to another. It is the duty of parents to instruct boys and girls so they will not go on spooning and kissing as they are to-day. The whole matter should be raised above a physical basis. Power to overcome is in the hands of God.

A Trip About "The Farm."

An interesting incident of the Summer School was a trip about the College Farm with one of the College lecturers, Mr. Mason. Everybody trooped after the lecturer, and those hearest to him got the most benefit from his talk.

At the potato patch he remarked that it has been found that the best potatoes for seed come from the North; in investigating to see why this should be so, various experiments were made and it was found that seed planted about the first of July and dug after frost were better for seed than those planted earlier. The conclusion reached was that immature tubers make the best seed. "Irish Cobbler" appeared to be a favorite at the College, and Mr. Mason remarked that to ward off disease the potato tops were practically covered with Bordeaux all the time; it is applied with a fine spray and care is taken to coat the under side of the leaves as well as the top. One plot of potatoes shown to the visitors would, he said, yield a rate of 275 bushels to the acre. For bugs the formula employed is 12 oz. Paris green and 3 lbs. lead arsenate to the barrel.

A plot of Yellow Leviathan mangels brought the remark that it is easy to grow one's own seed—and to be sure of having it fresh—by planting a good firm root held over from the preceding season; and a question regarding potato seed brought the reply, "Don't take the small potatoes for seed." The proper distance apart for potato rows is 27 inches, with the sets placed one in a place and 12

inches apart in the row. In trying to get uniformity for a carload the College is specializing on "Irish Cobbler" and "Green Mountain," both white potatoes. About Ottawa the pink varieties are favored.

The next plots were corn. Mr. Mason remarked that an experimenter in Minnesota had claimed that corn that will not produce ears has the same feeding value as the kinds that have ears; these plots were being cultivated as an experiment to test the truth of that conclusion. Other plots were devoted to testing the varieties of corn. One kind had been grown by King, Nipissing, for 20 years, and was considered hardy. Another big one from Texas grew very tall, but has not yet reproduced itself here.

"What's the matter with this soil up here? Isn't it any good?"

The question was prompted by a number of patches of quite bare soil, interspersed with a few plots of emerald green alfalfa, and Mr. Mason replied that here experiments to ascertain the longevity of various kinds of alfalfa have been carried on for 20 years. One after another the species have died out, with the solitary exception of "Grimm's," which still holds the fort, hale and lusty. It is thought that "Ontario variegated" will prove long-lived. Experiments are now being carried on to determine the best times for cutting, also to develop a species with roots that spread instead of growing straight down. Alfalfa is a very rich fodder crop. The average yield of the dried plant at Guelph is about 4½ tons. Sweet clover, of late, has come to the fore as a profitable pasture crop as well as for selling the seed. The white is more vigorous than the yellow. It may be cured for hay, but should be cut before the middle of June, as after that it becomes woody. It is valuable also as a cover crop, and some farmers are running a 2-year rotation with it. As many as 44 cattle have been pastured on 20 acres of it, the crop has then been let re-seed. It is then plowed down and sown the next year in some other crop. Of course, it must not be pastured too close or it cannot re-seed. An excellent pasture mixture is made up in the proportion of 2 bushels oats and 12 lbs. sweet clover. Tramping does not hurt the germination of red clover—you get a better stand.

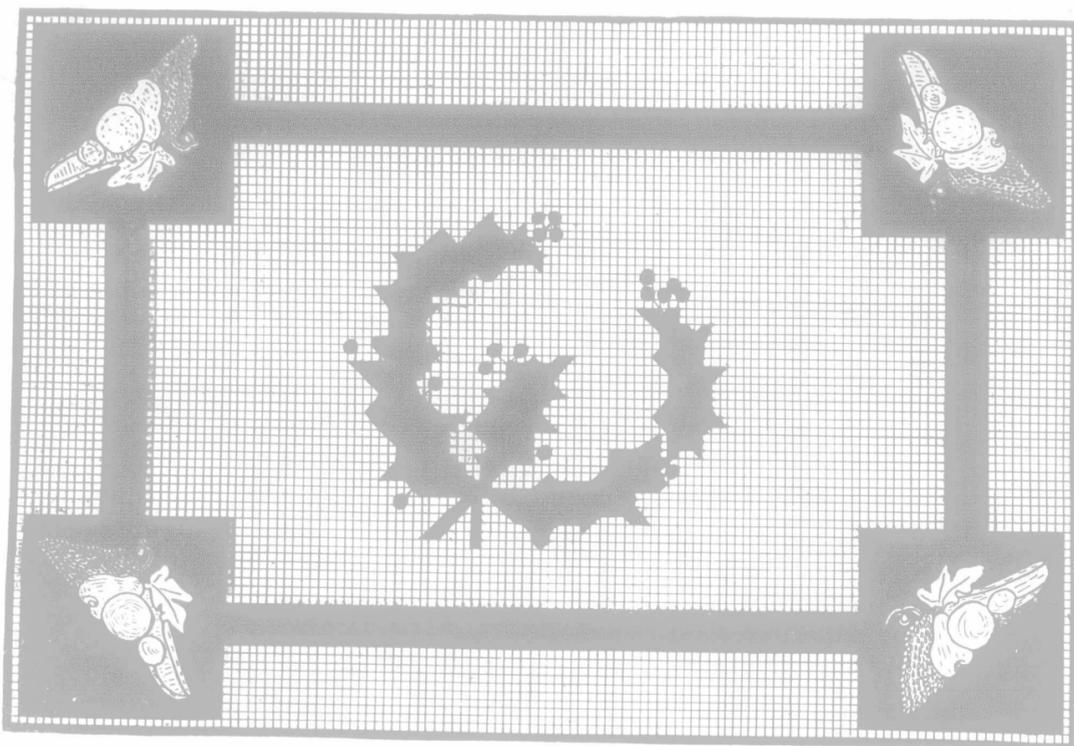
Experiments have been made at the O. A. C. with 350 kinds of winter wheat. Dawson Golden Chaff and Bulgarian were crossed to produce "O. A. C. No. 104". Also "O. A. C. No. 21" barley has been evolved and found to have stronger straw than "Manchurian." A mixture of barley and oats was found to give a greater yield to the acre than either alone, 1 bushel barley and 1 of oats to the acre. "No. 3," or "Daubeney," or "Alaska" oats will mature the same time as the barley. "O. A. C. No. 72" usually takes more prizes than "O. A. C. No. 3," said Mr. Mason in reply to a question, "but no variety of any crop is universal; different soils give different results." The best kinds of grain have been distributed over Ontario through the Experimental Farms and experiments are being made with them in various localities. As many as 100,000 farmers have experimented in connection with the O. A. C., and one man who in 1911 got 2 lbs. "No. 72" oats found that in the third generation from those 2 lbs. he had 35,000 bushels.

Democracy and Its Duties.

AMONG Rev. Dr. Tucker's devotional addresses, with which the days began at the Summer School, was one on that most pertinent of modern subjects, Democracy.

There is no secular and no profane in the Bible, said Dr. Tucker. We are apt to think of the Ministry as sacred and of Government as secular. Not so—All should be to the glory of God.

It is to be hoped that autocracy has received its death-blow in the War. In the future we have to look to the reign of democracy. Even Japan is fast becoming a democracy; China is nominally a republic. Lincoln defined democracy as "the rule of the people, for the people and by the people." But this does not necessarily mean that whatever the people want they must have. It is possible to rule ourselves badly, and the people have no more right to do wrong than a monarch. Sometimes politicians forget this and do certain things for the sake of popularity.



No. 4—Filet Crochet Design for Bottom of Tray. Butterflies Made by "Blind Man's Chain."

the row. In trying to get a carload the College is in "Irish Cobbler" and "ain," both white potatoes and the pink varieties are...  
...were corn. Mr. Mason an experimenter in Minn. med that corn that will not as the same feeding value that have ears; these plots tivated as an experiment h of that conclusion.  
...were devoted to testing of corn. One kind had y King, Nipissing, for 20 considered hardy. Another Texas grew very tall, reproduced itself here.

matter with this soil up any good?"  
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This appeal to the selfishness and greed of any section of the people must be given up. Yet Governments are not exactly to blame; it is the electorate that makes Governments. The widest work we of to-day have to do is to train for that which is right in public life; "Vox populi vox Dei" only when the people want what is Right.

There are many things to be done, e. g., care of the feeble-minded. These unfortunates largely fill our jails and charitable institutions; they become our vicious and criminals, to a large extent. Segregation, or making it impossible for them to reproduce their species, is the remedy. . . . Again, there is the elimination of venereal disease. These diseases are sapping the very life of our people, hence we should teach purity of body and soul. . . . Race-track gambling is a very great evil. We arrest Chinamen for playing a comparatively innocent game, and at the same time allow leaders of society to make enormous profits betting on horse-races. He had been told that it is possible to make 10,000 per cent. on "investments" of this kind. We want our electors to issue a ukase to our governors to see that no such racial discrimination is allowed.

Then—patronage and graft, giving a minnow to the people to catch a whale. Liberals and Conservatives pay taxes equally; why should there be patronage for the one side or the other? Why should Conservative or Liberal papers be given advertising? Why should appointments be reserved for "party"? Such things should be impossible in a democratic country. Why should we who are the victims of such systems stand for such things? Not the party system, but the party spirit, is one of our greatest national evils. Too much partyism is the perversion of intellect; we look too much from the angle of party interests.

In passing the speaker took a crack at the political papers for traducing our public men. (Why should not public issues, rather than public men, be paramount?—Ed.) This is one of the evils of party Government. Few people judge a question on its own merits. We need an independent as well as an intelligent electorate.

**For the Women Who Love Fancy Work.**

YES, there are always women who love to do fancywork; the craving to make pretty things with their own fingers seems to be a part of them.—Then there are others who "like to have something to pick up" at odd moments, before the men come in for dinner, or when making an afternoon's visit.

Every now and again we get a letter from one of these women begging for a pattern for this or that, and usually it is a physical impossibility to accede to the demand at least immediately. "The Farmer's Advocate" does not make a speciality of fancywork, and not a soul on its staff has time, not to mention the ability, to sit down and work out "something new" in crochet or embroidery.

Nevertheless, since we always like to help our readers if at all possible, we have been on the lookout for some time, to find someone who really did make a speciality of inventing new designs.

Chance blew her our way—Lila McEvoy Robson—a pink cheeked little lady with blue, blue eyes, who just loves doing crochet, and who, moreover, is anxious to pass on the things she has learned to other women. Some time ago she got out a little book giving the "methods" she has discovered. She then thought, she says, that knowing those methods would enable any woman to invent new designs for herself. But not everyone is inventive. Request upon request came to Mrs. Robson for more "patterns." So now she is getting out another book with plenty of patterns. In the meantime she has favored us of this paper with the accompanying illustrations, with a few hints on directions for making. We are giving them now, as they may give suggestions for Christmas gifts and leave plenty of time for dainty things before the twenty-fifth of December. Here are the hints.

**No. 1.**

"Bib Collar, use thread No. 150. (Three and three mesh) three chain stitches between the bars instead of two, thread over twice, and three sets of stitches between each two bars, instead

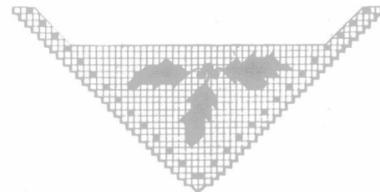
of the usual two sets of stitches between each two bars, to make solid meshes. Start collar at lower front by "building" twenty-one whole, and one-half meshes at each end.

**No. 2.**

"Bow Knot Towel Edging and Insertion." Thread No. 40 to 100 according to weight of toweling used. Start by "building" thirteen open meshes, working up and down, using the different methods of "building" to make the points on the edge. Use upper part of pattern for insertion, leaving one or two rows of open meshes, each side of the pattern.

**No. 3.**

Introducing Half Meshes. Diagram showing six different ways of using "Part Meshes."



**No. 4 "a"—Design for Corners of Serviettes, etc., in Filet Crochet.**

**No. 4.**

A Christmas Tray and Serviette in Holly and the Christmas fruits. Thread No. 100. "Three and Three Mesh." Embroider with "Blind Man's Chain" holly leaves, berries and fruit, each in the natural colors. Start at right-hand end, by building 85 open meshes. Work outer solid meshes last.

First do the work in the usual way only using "Three and Three Mesh" instead of the old way of "Two and Two". Next, go over the leaves with "Blind man's Chain" in green thread, the berries in red.

The "Blind Man's Chain," is a chain stitch done through the work, by holding the thread underneath and bringing through somewhat similar to rag-mat making, only instead of stopping when you have drawn through once keep on drawing stitches through until you have the desired space covered. The piece of work is held in the left hand, as if you were about to sew the pattern on with a needle, in the meantime the thread is held on the left hand just the same as in ordinary crotchet.

and taking them off from corner to corner. (See No. 3, 5 and 6). The method to use depends on which corner you wish to fill in, and where you want to go when you have finished "filling in" that part mesh. It is most simple, something like the shell stitch, but can be understood best by trying with the thread and hook, not just thinking about it.

**No. 4 "a".**

The serviette to match the Christmas tray should be started at the upper corner by building two half meshes, continuing to build out each end until the narrow part is reached, when the edge should be continued making the square the desired size and joining at the other corner with one of the invisible joining methods. Some serviettes are 12 inches square, some 14 inches and some 16 inches. The 14-inch ones seem rather a convenient size. A beautiful table cover could be made with the same pattern by making four corners using the little edging to join and the centre from the tray if something quite elaborate is desired.

**No. 5.**

The well known and beautiful picture of "Whistler's Mother," will require very little directions. The above directions of part meshes will be necessary, also a few little lines in "Blind Man's Chain," will be necessary to bring out the little picture hanging on the wall. Most people will like to use this as an insert of some kind, perhaps for a cushion, possibly a centre for bedspread or cloth for library table. In any case there would probably be some open meshes used first, otherwise the work would require to be started on a chain a plan I do not like. It should be worked from the right-hand side, and it may be necessary for some to keep a small ruler on hand to locate ujst where those diagonal half meshes come in the figure.

**Your Health.**

BY "MEDICUS."

**Don'ts for Your Baby.**

1. Don't let anyone kiss your baby on the mouth. Why? Your baby may get one of the "catching diseases," e. g., scarlet fever, diphtheria, pneumonia, tuberculosis, syphilis, etc. Professor Warthen of the University of Michigan, in a lecture given in London a few years ago told

can be readily transmitted in this way. It is common knowledge that colds go through a whole family. The first victim inoculates the second and so on. Tuberculosis can be spread also by kissing. (It may be a source of consolation to those who are not opposed to kissing, on hygienic grounds, to know that Dr. Lawrason Brown of the Saranac Lake Sanatorium has found that the danger of kissing was least in the evening—the time when such habits are most promiscuously practised by the growing youths).

Don't kiss your own baby, or anybody else's baby on the lips, and let your friends know that you do not consider it a complement to you or your baby when they declare "Isn't she a darling, such lovely eyes!" and then up and kiss her. The first part is all right, but object strenuously to the latter part of the performance.

2. Don't consult all your neighbors when your baby gets sick, no, nor the family almanac. Consult your own family doctor. He should and does know more about your baby than anyone else in the neighborhood. The day when a grandmother knew more about babies than the doctor has gone never to return. Better yet, start a well-baby clinic in your neighborhood and learn how to keep your baby well.

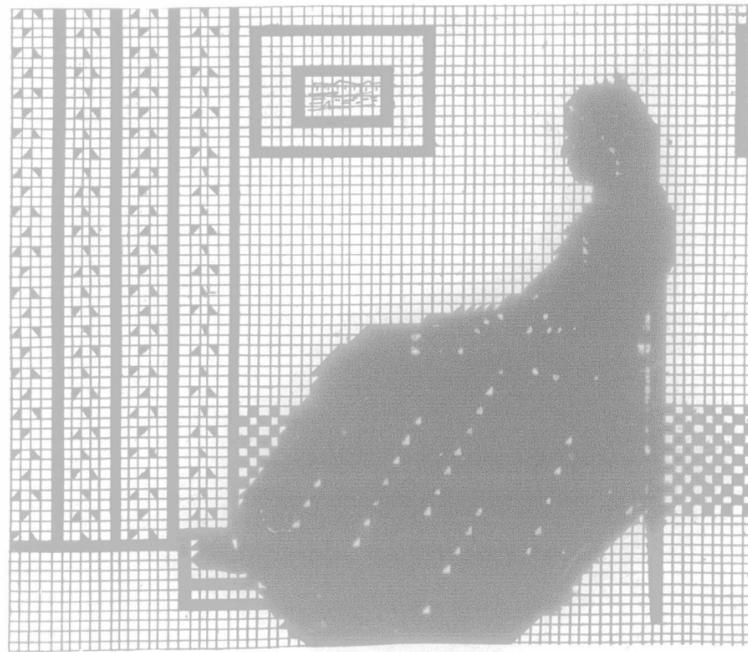
3. Don't under any circumstances take your baby visiting when it is young. It interferes with its regular habits and these are absolutely essential for its proper development. Then, too, you increase the risk of catching measles, whooping cough, etc. It is not always most pleasing to your hostess to have a cross colicky baby as a guest. Finally, there is the inconvenience of getting clean pasteurized milk, etc.

4. Don't allow your baby to play with other children's toys, and don't let other children play with your children's toys. Remember, sooner or later these toys get access to the baby's mouth, and if contaminated with germs of influenza, measles, diphtheria, scarlet fever, tonsillitis, etc., you can readily understand how your baby may get any of these diseases. Train your child to keep its fingers out of its mouth. Dr. Cumming, in a recent article in the "American Journal of Public Health, expresses the belief "that the major part of the transmission of respiratory diseases is due to hand infection." Have you any idea of the number of germs that are on your hands?—And they look perfectly clean! Dr. Norton of Chicago, found as many as 7,000,000 germs in the water after washing the hands. Some crowd—eh? So, once more, let me repeat: Wash your hands before you eat, and keep your hands out of your mouth.

5. Don't try to force your baby to eat if it is not hungry. I have often told my patients that the baby has more sense than its mother and grandmother put together. When it shouldn't eat it just stops. If it refuses food give it water, if it is feverish. You cannot do harm by giving too much water. One investigator, Dr. Woodyatt, believes that if you give enough water you can always reduce the fever. In the majority of cases your baby will be the better for a 24-hour fast, giving it nothing but water. The fact that the baby refuses its food should act as a warning that its food is disagreeing with it. It may be Nature's storm-signal that a green diarrhoea is brewing.

6. Don't give "Soothing Syrup" or worm medicine to your baby. Babies are too precious to experiment on with such "dope." A soothing syrup that soothes very quickly is likely to contain opium or morphine, because these are practically the only drugs that relieve pain or colic quickly. You are not removing the cause by giving these medicines (the cause is usually improper food) and unless you remove the cause you will not cure your patient.

If your baby picks its nose and grinds its teeth, almost every grandmother in the neighborhood will be convinced that your baby has worms, and it takes some considerable courage on the part of the doctor to refute such a charge. These are not necessarily signs of worms. If the child has worms he will soon pass them in the stool, and that alone is proof positive that he has worms. In my experience it is the exception to find worms in children that grind their teeth or pick their noses. Most worm powders or syrup contain santonin or worm seed. This is fairly poisonous and many deaths have been reported



**No. 5—Design in Filet Crochet Copied from the Famous Picture, Whistler's "Mother."**

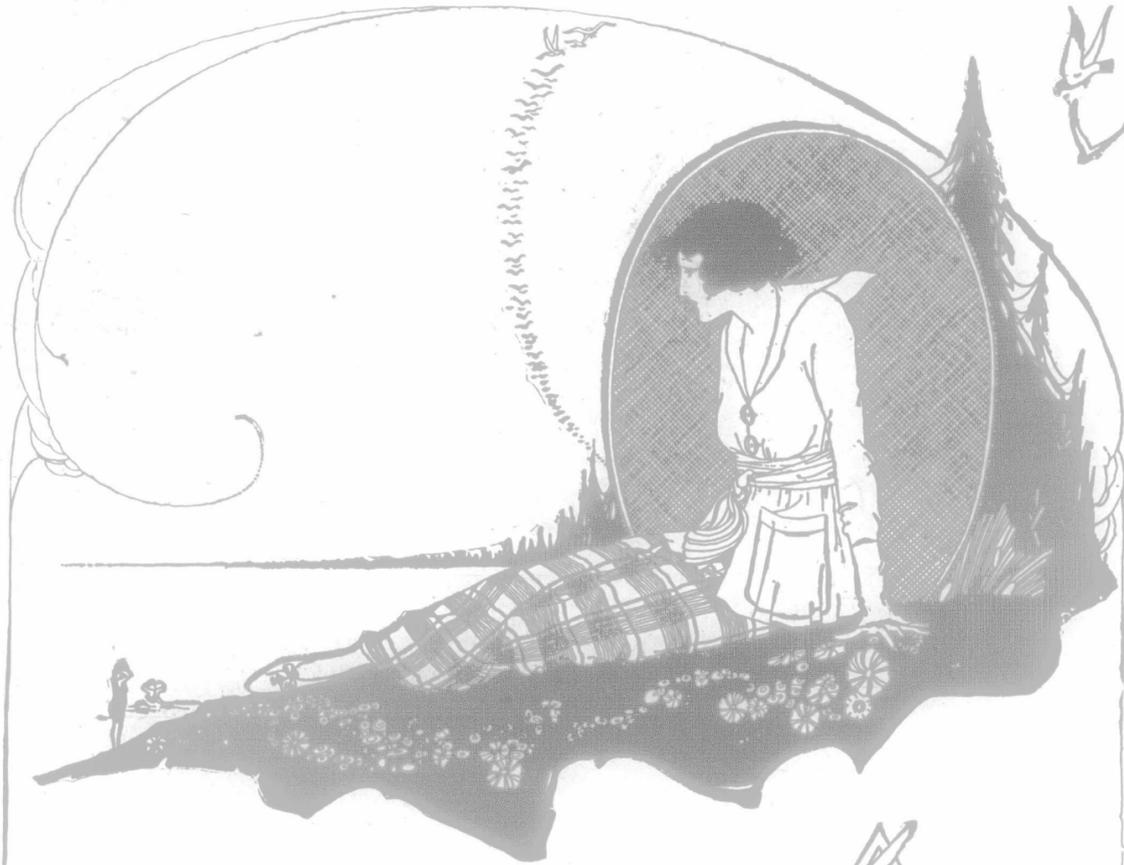
Something entirely new, "Half or part meshes."

This is going to give a much wider scope in the choice of patterns, besides making the old patterns much more natural looking. One way to make diagonal half meshes is to put your three "filling in" meshes in the same hole, (corner hole, see illustration No. 3, 1 and 2), while you take the upper part of the stitch along in the usual way. Another way is to keep all the last "filling in" stitches on the needle until last,

of a case where a babe had been kissed by a bachelor uncle and the babe developed syphilis (something a little less than murder). The uncle had "mucous patches" in his mouth, one of the first symptoms of syphilis, and the discharge from these patches or sore spots contained the germs of syphilis. The uncle undoubtedly was ignorant of the harm he had done, but you would not want that to occur to your baby would you?

Colds, sore throats, scarlet fever, etc.,

Not a Milk Chocolate



THOSE flashes of color, on the Promenade or the Bathing Beach are an attraction, aren't they? No summer wardrobe is complete without a distinctive Sweater Coat.

If you want original and pleasing designs in either bright or subdued colors, if you want distinctiveness of trimming and style that adds an air of free and easy charm to the wearer, always insist on getting Penmans.

**Penmans**  
Sweater Coats

"THE STANDARD OF EXCELLENCE"

Penmans Limited, Paris.  
Also Makers of Underwear and Hosiery.

from its use. It is interesting to read the literature the patent medicine men sometimes put out. "The worm medicine digests the worms so that you may not see any worms in the stools." That's real clever to say the least.  
So, once again—all together—Don't use patent medicines.

**The Fashions.**

**How to Order Patterns.**

Order by number, giving age or measurement as required, and allowing at least ten days to receive pattern. Also state in which issue pattern appeared. Address Fashion Department, The Farmer's Advocate and Home Magazine, London, Ont. Be sure to sign your name when ordering patterns. Many forget to do this.

**POSITIVELY NO PATTERNS WILL BE SUPPLIED EXCEPT THOSE ILLUSTRATED.**

When ordering, please use this form—Send the following pattern to:

Name.....  
 Post Office.....  
 County.....  
 Province.....  
 Number of Pattern.....  
 Age (child or misses' pattern).....  
 Measurement—Waist..... Bust.....  
 Date of issue in which pattern appeared.....



It is interesting to read the patent medicine men out. "The worm medicine firms so that you may not be in the stools." That's the least. "Don't use them all together—Don't use them."

### Fashions.

**Order Patterns.** Number, giving age or size required, and allowing days to receive pattern. Which issue pattern appears Fashion Department, The Farmer's Advocate and Home Magazine, Ont. Be sure to mention when ordering patterns. Do this.

**NO PATTERNS WILL BE SENT EXCEPT THOSE IL-**

lustrated, please use this form—

Number of pattern to be sent.....  
Name.....  
Address.....  
City.....  
State.....  
Country.....  
Waist..... Bust.....  
In which pattern appear.....



3310. Girl's Dress. Cut in 4 sizes: 6, 8, 10 and 12 years. A 12-year size will require 3 3/4 yards of 24-inch material. Price, 15 cents.

3134. Ladies' Dress. Cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It will require 7 1/2 yards of 38-inch material for a medium size. The width of skirt at lower edge is about 1 1/8 yard. Price, 15 cents.

3299. Junior Dress. Cut in 3 sizes: 12, 14 and 16 years. A 14-year size will require 6 3/4 yards of 27-inch material for the dress with tunic, and 4 3/4 yards without tunic. Price, 15 cents.

2750. Ladies' Cover-All Apron. Cut in 4 sizes: small, 32-34; medium, 36-38; large, 40-42, and extra large, 44-46 inches bust measure. Size medium will require 4 1/2 yards of 36-inch material. Price, 15 cents.

3301. Girl's Dress. Cut in 4 sizes: 4, 6, 8 and 10 years. An 8-year size will require 3 3/4 yards of 30-inch material. Price, 15 cents.

3302-3288. A Neat Costume. Waist 3302 cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. Skirt 3288 cut in 7 sizes: 22, 24, 26, 28, 30, 32 and 34 inches waist measure. A medium size will require 7 1/2 yards of 27-inch material. The width of skirt at lower edge is about 1 1/2 yard. TWO separate patterns, 15 cents FOR EACH pattern.

3308. Girl's Blouse Suit. Cut in 4 sizes: 8, 10, 12 and 14 years. A 12-year size will require 4 3/8 yards of 36-inch material. Price, 15 cents.

3133. Ladies' House Dress. Cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A medium size will require 5 3/4 yards of 36-inch material. The width of the dress at its lower edge is about 1 1/8 yard. Price, 15 cents.

## Hope's Quiet Hour.

### The Shining of His Face.

It is God, that said, Light shall shine out of darkness, who shined in our hearts, to give the illumination of the knowledge of the glory of God in the face of Jesus Christ.—2 Cor. 4, 6. (R. V. margin).

Is there a hope thou canst point today, To one who is blindly groping his way, Seeking for light in the cold and gloom, Longing for life and dreading the tomb? Tell him of Christ and Him crucified, Of His love as wide

As eternity's boundless and soundless tide. —IDA R. FINLAY.

When the Rev. G. A. Studdert Kennedy had been in France about two months, he was asked a tremendous question by a wounded officer in a base hospital. "What I want to know, Padre, is, what is God like? . . . When I am transferred into a new battalion I want to know what the Colonel is like. He bosses the show and it makes a lot of difference to them what sort he is. Now I realise that I am in the battalion of humanity, and I want to know what the Colonel of the world is like. That is your real business, Padre; you ought to know."

In his book, "The Hardest Part," Mr. Kennedy does his best to answer that question which, as he says, is there in the heart of the army and of the nation: "What is God like?" He pointed to Christ on the Cross, as the satisfying answer to the officer's appeal; but it did not satisfy his questioner. He (the officer) was full of reverent admiration when he thought of the undaunted endurance of Jesus; but he said that God could not be nailed to a cross and helpless, because God is the Almighty Ruler of the universe. So the people who watched Christ die were puzzled and doubtful. They knew that He was beautiful in spirit and in outward life. If He were the Son of God, why did the Father allow Him to suffer and die? It is the same question that many have asked—asked tremblingly or scoffingly—during these years of suffering. Those who prayed were maimed or killed beside men who openly scoffed at Christianity. The women who prayed at home, like the Mother of Christ, did not always find that their prayers shielded their

hearts from the piercing sword of terrible news from overseas. "What is God like?" was the question asked by St. Philip. He declared that if he could only see the Father he would be satisfied. There was gentle reproach in our Lord's reply: "Have I been so long time with you, and yet hast thou not known me, Philip? he that hath seen me hath seen the Father."

More than two thousand years ago the prophet Haggai encouraged the people to be strong and fearless. He did not tell them there would be outward peace, but rather the contrary. God had declared that He would shake the heavens, and the earth, and the sea, and the dry land. This great shaking should affect all the nations; and the Lord's messenger undauntedly faced the coming storm. The Lord's message to His people was: "I am with you. . . fear ye not. . . the Desire of all nations shall come."

Outward things have changed marvelously since the Bible was written. Man has harnessed the mighty powers of nature; and the lightning and wind, and other forces, are his servants. But the human spirit still reaches out after God and refuses to be satisfied with any earthly good. Those who find themselves in darkness ask the vital question: "What is God like?" But it is God who has said: "Light shall shine out of darkness, who shined in our hearts, to give the illumination of the knowledge of the glory of God in the face of Jesus Christ."

Jesus is the Desire of all nations, the flawless mirror in which we behold the glory of the Lord. Our ambition should be to grow more and more like Him, because no one can even imagine a higher ideal that He has set before us. St. Paul told the Corinthian Christians that if they kept their eyes on Christ they should be "transformed into the same image from glory to glory."

In Jesus we see what God is like and what man should be like. He is the revelation of the glory of God and the glory of man's heritage.

The War made us see clearly that earthly pomp and grandeur (like that of the "War-Lord" who desired to climb, regardless of the rights of the weak) were only gilt tinsel. If the Kaiser had succeeded in his attempt to rule over the nations, the success would have been unsatisfying and worthless.

I will quote again from "The Hardest Part."

"All men are learning to worship patient, suffering love, and the muddy, bloody hero of the trenches is showing us Who is the real King. The darkness is being cleared away, and men at last are growing proud of the Cross. Beside the wounded, tattered soldier who totters down to this dressing station with one arm hanging loose, an earthly king in all his glory looks paltry and absorbed. . . I only see God in Christ and these men have shown me—Him."

That chaplain was writing in the midst of the Great War. He went to the front to point men to the glory of God, as it shines in the face of Jesus Christ. And he saw that glory reflected in the men he was trying to teach. They had turned their backs on safety and comfort. They were suffering and dying to save the world from injustice and cruelty. Bending over those battered bodies he was reminded of the Body broken on the Cross. Seeing the glory of their patient courage, he felt that love was far grander than power. The glory of the Most High is not that He holds the stars and the earth in the hollow of His hand but that He is the Comrade of the weak and suffering. God is not far off, in the showy splendour of earthly royalty, but as close as possible to each child He loves. The attraction of Christ crucified still draws hearts after Him. We need a God who cares!

"Only in Him can I find Home to hide me, Who on the Cross was slain to rise again, Only with Him my Comrade-God beside me, Can I go forth to war with sin and pain."

An infidel lecturer once asked his audience if they wished to ask him any questions. A poor old widow got up and said she had paid threepence to hear his lecture and, as he had told her nothing of any value, she felt she had been cheated. All through the hard struggle to make both ends meet, and bring up her children, she had gained strength and courage from trusting in Christ. Had the lecturer

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Women in the city as well as in the rural districts find it impossible to get laundresses. The Liberty Washer will do all a washerwoman can do, will do it quickly, smoothly, without the slightest injury to the clothes, and do it better and faster. The mechanism is simple; the wringer swings to four positions. The tub is extra large. Made of white cedar, eliminating the objections to metal lining. Cover is steam tight. Mechanism started or stopped by moving a lever. The Liberty Washer may be operated by electric motor or by belt from engine. It will not only wash heavy goods, but will wash laces, lingerie and delicate fabrics without injury. It seems as if woman-kind has been waiting for the Liberty Washer to come and save them from the unbearable burdens of wash day. Here it is, ready for service. No one can any longer claim that the washing machine is not effective. Just think, all the washing in the steam laundries is done by machines.



## LIBERTY WASHER

We cannot very well illustrate this washer, but we will gladly send you Folder and descriptive literature. Write for full particulars, or send the price and we will ship one immediately on approval. Satisfaction guaranteed or money refunded.

Write for Folders describing this Washer  
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2 and 5-lb cartons  
10, 20 and 100-lb. Bags

**PRESERVING LABELS FREE.** Send us a red ball trade-mark, cut from a bag or carton, and we will send you a book of ready-gummed labels containing six labels for each of the following fruits: Strawberries, Raspberries, Blackberries, Currants, Grapes, Cherries, Plums, Peaches and Pears. Also ask for the LANTIC LIBRARY, the most complete collection of recipes for sweets ever published. Three separate books on Preserves, Cakes, Candies and Desserts.

Address ATLANTIC SUGAR REFINERIES, Ltd.  
MONTREAL

## Worthy of Your Home Because--

of its handsome finish—its clear tone—its production from best materials by experts of the greatest skill.



Made in Canada

**SHERLOCK-MANNING**  
20th Century Piano  
*The Piano worthy of your home*

See that you get "Canada's Biggest Piano Value". There is a Sherlock-Manning dealer in nearly every community. Write us direct for the name of the one nearest to you.

**Sherlock-Manning Piano Company**  
LONDON :: CANADA



**Cotswolds**—A choice lot of purebred Cotswold rams, 15 shearings and 30 well-forwarded lambs fit for service. Prices moderate.

Donald Sutherland, R.R. No. 2, Ingersoll, Ont.

When writing please mention Advocate

## 65% SAVING ON TIRES Guaranteed 3500 miles

Economy Tires are reconstructed with three plies of additional fabric, which gives you the assurance of 3500 miles and more. Our adjustment guarantee of 3500 miles goes with every tire.

Size	Tires	Tubes									
30x3 1/2	\$ 8.50	\$2.25	32x3 1/2	\$ 9.00	\$2.35	31x4	\$10.50	\$2.75	32x4	\$10.75	\$2.85
33x4	11.00	2.85	31x4	11.40	2.95	32x4 1/2	12.00	3.05	33x4 1/2	12.50	3.10
34x4 1/2	12.75	3.20	35x4 1/2	13.10	3.40	36x4 1/2	13.40	3.50	33x5	15.25	4.10
35x5	15.50	4.25	37x5	16.00	4.50						

Send \$2.00 deposit on each tire and \$1.00 on each tube—balance C.O.D. Subject to your examination of goods. When ordering state whether straight-side or clincher. Non-skid or plain tires same price. A 5% discount is allowed when full amount accompanies order—you save collection charges. Reliner free with every tire.

ECONOMY TIRE CO. Dept. F1 11-13 Jarvis St., TORONTO

any right to try and destroy her faith, unless he could give her something better in exchange.

Could all the infidels in the world supply to a soul in trouble the peace which passeth understanding? Christ can do this—I myself have seen many faces shining with the light which He supplies in thick darkness. I have seen people joyful in tribulation, who frankly declare that Christ gives them joy,—but I have yet to find a person without faith in God who meets pain with a shining face.

There are many hearts able to echo the words of Lewis Carroll:

"I could not see, for blinding tears,  
The glories of the west;  
A heavenly music filled my ears,  
A heavenly peace my breast.  
'Come unto Me, Come unto Me—  
Ye heavy-laden, come to me—  
And I will give you rest'."

Those words of wonderful promise would sound like a miserable mockery from any other lips than those of Jesus. He says them, and they are like a pearl of golden bells.

Several years ago an educated Mahomedan—who knew the Koran, but not the Bible—started out to challenge Christianity. Someone gave him a Bible and he began to read it. It made very little impression on him until he got to the Gospels. As he read of the matchless life of Jesus and compared his own life with it, his heart was won. Like Saul of Tarsus he began to preach the faith he had tried to destroy.

Your best answer to those who question the authority of Christ is the one given by St. Philip to his friend: "Come and see." The root of much of the modern unbelief is indifference. The visible things—which will soon pass away—take up all the time people can spare; and the invisible realities—love, righteousness, God—are crowded out and forgotten.

"If we would build anew, and build to stay,  
We must find God again, and go His way."  
DORA FARNCOMB.

## The Ingle Nook

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

### Re Women's Exchange.

I find that I was misinformed in regard to the closing of the Women's Exchange in London, Ont. The management was changed, but the Exchange still exists at 116 Dundas St.

### Seasonable Cookery.

**Grape and Apple Dessert.**—One cup grape juice 1/2 cup sugar, 4 apples, 4 slices stale cake or toast. Boil the grape juice and sugar for 5 minutes; pare, core and slice the apples and cook in grape juice until tender. Pour over the cake or toast, and when cool serve with rich cream. 2 cups of grapes cooked with 1/2 cup water and put through a ricer may be used in place of the juice.

**Grape and Apple Jelly.**—Take 1/2 peck grapes, 3 tart apples, sugar. Pick the grapes off, stew and mash them, and put in a kettle with the apples, which have been coarsely chopped but not pared or cored. Heat to boiling point, mash, and boil 30 minutes. Strain through a jelly bag. Measure the juice, return to kettle, let come to boil and boil 5 minutes. Add an equal amount of heated sugar and boil 3 minutes. skim and pour into glasses.

**Sweet Pickled Watermelon Rind.**—Rind of 1/2 melon, 3 lbs. brown sugar, 1 quart vinegar, 1 1/2 tablespoons cinnamon, 1 tablespoon cloves, 1 tablespoon allspice. Pare the melon rind, cut in inch-squares, wash and drain. Put the sugar and vinegar in a granite preserving kettle, add the spices tied in a bag, and boil 1 hour. Add the melon rind and cook slowly for about 1 hour, or until tender. Put the melon rind into a stone crock or into warm sealers; boil the syrup hard for 15 minutes and pour over.

**Squash Patties.**—Two cups cooked and

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give her something better  
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trouble the peace which  
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DORA FARNCOMB.

**gle Nook**

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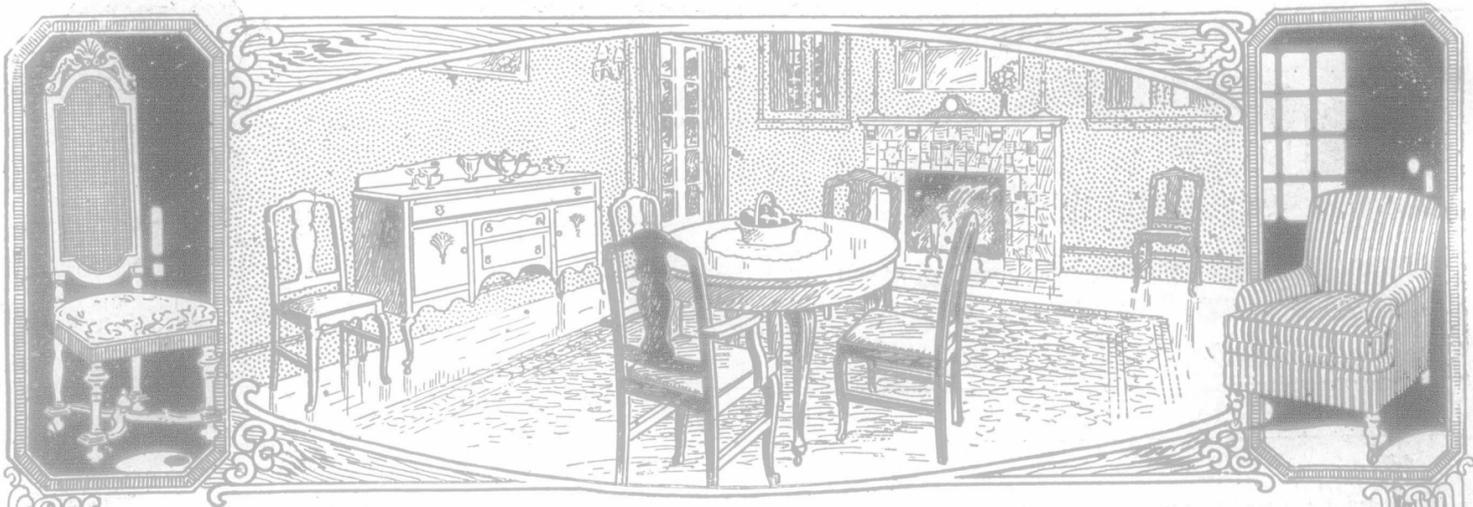
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# Let the Homes of Canada Reflect the Nation's Prosperity

**CANADIANS** have every reason to feel optimistic and courageous today, to live happily and to enjoy the refinements and comforts of a progressive and prosperous nation.

As a Toronto "Globe" editorial so truly stated:—

*"In the topsy-turvy world of to-day, few nations have a better outlook than Canada, the well-being of which is based firmly upon the fertility of her boundless fields."*

### Improvement of Homes

One of the most impressive evidences of the progressive and prosperous condition of the Canadian nation is the great interest that is developing in the beautifying and improving of our homes. More care and more thought are being given to the furnishings. Greater consideration is shown for beauty and harmony. An atmosphere of cheerfulness, brightness and attractiveness is carried throughout the home.

### The Influence of Furniture

It is really surprising how readily an ordinary, uninteresting house can be transformed into a real home, in which it is a pleasure to live, by the magic of beautiful, yet not necessarily expensive, furniture.

Nothing that you can buy will give you and your family so many years of happiness, comfort and solid satisfaction as beautiful furniture.

Beautiful furniture brings an atmosphere of cheerfulness and brightness into every room. It delights the eye. It gives comfort and rest to the body. It brings contentment to the mind and has a refining influence on character. It gladdens the heart. It is the pride of the owner.

### The Designs of To-Day

During the last decade there has been a wonderful improvement in the appearance of furniture.

Modern furniture designers have received their inspirations from the "Period Designs" of the old masters, but have not copied their work, because some of the old masterpieces were either too frail or too cumbersome for utility.

While the average family might not care to furnish their homes with the original work of the old masters, the modern adaptations of them, as produced by Canadian furniture craftsmen, ideally meet the present-day demands for furniture that combines beauty with comfort and utility.

### Moderately Priced Suites

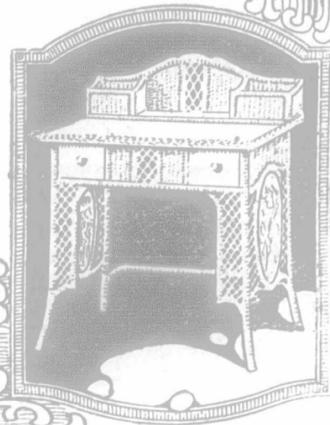
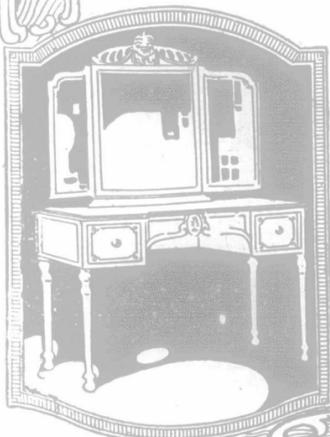
This beautiful, modern, well-made Canadian furniture is obtainable in moderately priced sets and individual pieces, as well as in the more elaborate and expensive suites.

The individual earnings of Canadians are greater than those of almost any other race. The new era commencing with the close of the war is proving to be the most progressive and prosperous in the history of the Dominion, and Canadians can well afford to brighten up their homes with better furniture.

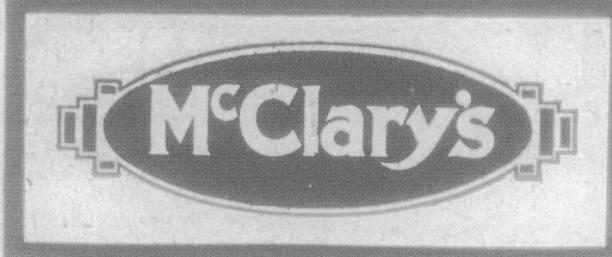
This announcement is inserted by

**THE HOME FURNISHINGS BUREAU**  
Bank of Hamilton Building Toronto, Canada

NOTE—The Home Furnishings Bureau does not sell furniture or goods of any kind. Its object is to promote a greater interest in the furnishing of Canadian homes. Your local dealer will be pleased to give you any information you desire about suitable furniture for your home.



**Better Furnished Homes  
Mean Greater Happiness**



**McClary's**

*Make good stoves and  
Cooking utensils.*

## Interprovincial Pressed Brick

COMBINES QUALITY AND DURABILITY  
RED, BUFF AND FIRE-FLASHED COLORS

Increased Production Guarantees Prompt Shipment.  
Write for Free Samples.

**INTERPROVINCIAL BRICK CO., OF CANADA, LIMITED**  
Office: 30 Toronto St., Toronto.    ::    Plant: Cheltenham, Ontario

It pleases  
the cow




## The DE LAVAL MILKER

### The Milker Pail

The De Laval Milker pail embodies several important and distinctive features, making it unusually substantial and serviceable, as well as easy to keep clean.

The pail is made of sanitary white metal, with nickel-plated brass fittings. It is of sanitary design with no crevices or sharp corners where bacteria might congregate, and is heavily reinforced and protected where the wear comes—made to give long and satisfactory service as other De Laval products.

The De Laval Milker is positive and uniform in action from day to day, and it is faster, more reliable and more sanitary than any other method of milking. Wherever cows are milked the world over; the name "De Laval" stands for quality and highest value to the user.

Write to nearest De Laval office for Milker Catalogue, mentioning number of cows milked

**THE DE LAVAL COMPANY, Ltd.**  
MONTREAL    PETERBORO    WINNIPEG    EDMONTON    VANCOUVER

mashed squash,  $\frac{1}{2}$  cup sugar,  $\frac{3}{4}$  teaspoon salt, 1 tablespoon dried and sifted crumbs,  $\frac{1}{2}$  teaspoon lemon extract. Mix in order given. Line patty pans with paste, fill with squash, and bake in a hot oven about 25 minutes.

**Pumpkin Pie.**—One and one-half cups baked pumpkin, 1 beaten egg,  $\frac{3}{4}$  cup brown sugar,  $\frac{1}{2}$  teaspoon salt,  $\frac{1}{2}$  teaspoon ginger, 1 teaspoon cinnamon,  $\frac{1}{2}$  teaspoon corn starch,  $1\frac{1}{2}$  cups milk. Cut the pumpkin in pieces and bake in a hot oven; mash and strain, and to  $1\frac{1}{2}$  cups add the other ingredients in the order given. Fill pastry lined pan and bake about 40 minutes. For the first 10 minutes the oven should be hot, then the heat should be reduced.

### Baking Quality of the Lower Grades of Flour.

(Experimental Farms Note.)

With the ever increasing cost of living, it has become necessary to find corresponding means of saving. The housewife is the person on whom most of the responsibility of economizing rests. The use of some of the cheaper grades of flour instead of the highly expensive first patent is another means of saving that may be added to the already long list. During the war, all members of the community were forced to use government standard flour which was of a lower grade than most people had been accustomed to. Nevertheless, most of the bakers succeeded in furnishing bread so good that few people would have considered it distinctly inferior had it not been for the difference in color. Too much attention has, however, always been paid to color in flour and bread. Bread that is really very pale is not so healthful as bread made of somewhat lower grade of flour and the war-time bread was really superior as a food to the extremely white product in use previously. Lower grades of flour somewhat similar to the government standard flour can always be purchased but are not usually in much demand on account of their inferior color. These second and third grade flours, however, contain a higher percentage of protein and assimilable phosphates. These features are distinctly advantageous.

While the lower grades of flour may require some slight modifications in the baking method in order to produce the best possible bread, these changes are not serious and, as a rule, no difficulty whatever will be experienced in handling such flours. When we consider the lower price of the cheaper grades of flour and their high nutritive value, we see two distinct advantages in using them. The claims made for the whitest flours are nearly always much exaggerated and are sometimes quite absurd, and the public would do well to insist on obtaining the really superior materials which are sold as inferior.

P. Russell Cowan, Cerealist.



Crash Cushion Cover Embroidered  
with Silk or Wool.

Anyone can copy a cushion pattern such as this, or invent a design for herself. Holland linen, blue denim or any other strong washable material is suitable.

The League of Nations settled its first dispute at Paris, Sept. 20th, when Poland and Lithuania, warring nations, agreed to suspend hostilities pending inquiry and settlement by a Council of the League. Ignace Paderewski spoke for Poland. The delegates shook hands amidst the cheers and hand-clappings of those present.



FREE

Hallam's

1921 BOOK OF  
Fur Fashions

It contains 48 pages, over 200 illustrations from actual photographs of beautiful furs, showing the furs as they really appear. It is full of real bargains from cover to cover, showing the latest models in fashionable fur coats and sets—every garment fully guaranteed, and the prices are the same to everybody—everywhere in Canada. Send for your copy to-day. We will gladly mail it to you free of charge.

**Scarf** as illustrated above is extra large and of finest Silky Black Wolf, about 33 inches long and 9 inches wide. Silk lined and silk fringe around edge, trimmed with head and tail.  
**M349.** Price, delivered to you... \$28.75  
**Muff** to match, measuring about 13 inches in width and about 30 inches in circumference, trimmed with heads, tails and paws, lined with velvet and soft bed, complete with wrist cord and ring.  
**M350.** Price, delivered to you... \$28.75  
*The above scarf or muff will be promptly mailed to you on receipt of money.*  
Address in full as below.

John Hallam  
Limited

Department No 451, Toronto  
The largest in our line in Canada



### Cuticura Is All You Need For Your Skin

Bathe with Cuticura Soap to cleanse and purify the pores. If signs of pimples, redness or roughness are present smear gently with Cuticura Ointment before bathing to soothe and heal. For every purpose of the toilet, bath and nursery Cuticura Soap and Ointment are ideal.  
**Soap 25c, Ointment 25 and 50c.** Sold throughout the Dominion. Canadian Depot: Lyman, Limited, St. Paul St., Montreal.  
**Free**—Cuticura Soap shaves without soap.

### "Remember!" THE HOAG OIL ENGINE

will save two-thirds of the running  
cost of all other types of engines.

THE HOAG OIL ENGINE CO., LTD.  
Brantford, Ont.

You can earn a lot of money by  
securing New Subscribers to the  
**Farmer's Advocate and Home  
Magazine.** Write for instructions.



## Reminded Him of Home

Just to-day we received a letter from a farmer in British Columbia, in which he said: "I saw your advertisement of SYDNEY BASIC SLAG, and it reminded me of home in the Old Country, when we used to go over all our pasture fields with a light coat every year. But we cannot get it out here in B. C."

Another farmer in Ontario writes, saying: "I got one ton for trial last Fall, and this season have taken orders from my neighbors for 125 tons."

Most of our largest buyers in this country started with a trial lot of one or two tons. After seeing results they were satisfied they could ill-afford to do without it.

TOP DRESS YOUR PASTURES THIS FALL WITH

## SYDNEY BASIC SLAG

If you hesitate to do this on any extensive scale till you have seen results to satisfy, then why not let us send you a trial lot? You should write us at once, as it takes time to deliver goods to Ontario, and we want you to have it in season. May we send you some very interesting literature?

**The Cross Fertilizer Co., Limited**  
Sydney, Nova Scotia

Address to our General Sales Agent:

A. L. SMITH, Dept. A, 220 Alfred St., KINGSTON, ONT.

## Do Your Banking by R. F. D.

Make the mail your messenger; and save yourself the long rides to town.

Deposits may be made—butter and cheese cheques cashed—money withdrawn—just as easily and safely by mail as in person.

Write the manager to tell you all about this convenient plan of *Banking By Mail*—or call in and have it explained, the next time you are town.



14

## THE MERCHANTS BANK

Head Office: Montreal OF CANADA Established 1864.

With its 149 branches in Ontario, 47 branches in Quebec, 1 branch in New Brunswick, 3 branches in Nova Scotia, 44 branches in Manitoba, 44 branches in Saskatchewan, 87 branches in Alberta and 14 branches in British Columbia, serves rural Canada most effectively.

WRITE OR CALL AT NEAREST BRANCH.

## THE VALUE OF MONEY

Money—ready money is an essential in every line of business—mercantile or farming. Wise farmers build up Savings Accounts, which enable them to purchase for cash.

A Savings Bank Account with this Bank assures ready money when needed. Interest paid at current rate.

210

## IMPERIAL BANK

OF CANADA

180 Branches in Dominion of Canada.

## Spare Time Work—Easy and Pleasant

Nothing to buy, and you keep all you earn. Write for instructions on securing subscriptions to THE FARMER'S ADVOCATE AND HOME MAGAZINE.

fabric that had several times been cast aside as hopeless.

"Of course you're going to Mrs. Dixon's," declared Susan, when she discovered Linda weeping over Mrs. Dixon's note. "It was nice of her to ask you to play Rose's accompaniments, and nice of her, too, to ask you to sing."

"I'll look fine," sobbed Linda, "singing in a cotton shirt-waist and a last year's skirt!"

"It's heavenly," she added, in a fresh burst of grief, "to be cut in two in the middle, with the rest of the world in one-piece gowns!"

"Well," mused Susan, "what is there in this house big enough for a long, one-piece gown? Fortunately, skirts aren't very wide these days."

"If it wasn't Mrs. Dixon—"

"Oh, we all know about Mrs. Dixon. I quite adore her myself. What I can't understand about your dealings with her is this: Why can't you be honest about yourself? Why can't you let her see you as you actually are—a poverty-stricken Rossiter, with no clothes worth mentioning, no funds for the concerts and thing that Mrs. Dixon is always thoughtlessly advising you to attend? That's the dear lady's one fault. She doesn't realize that you're poor. And you—"

"She's absolutely perfect!" protested Linda. "I want to appear at my very best for her always. If she knew that my stockings were a mass of darns, that I was wearing gloves that her cook would be ashamed to own, she couldn't help despising me."

"Mrs. Dixon would be more likely to despise you, not for being poor, but for not being quite honest," said Susan.

After three days of rummaging, washing, pressing, contriving, Susan hooked herself into the gown that she had made for Linda, whose measurements were the same as her own, and appeared in the living-room in what looked like a brand-new dress. It was ecru net, over figured silk, and although simply made, it possessed to a surprising degree the quality of style.

"What do you think of Linda's gown?" asked Susan, turning slowly about, while the assembled family admired.

"Susan!" cried Linda, accusingly. "You spent your own shoe-money!"

"Never! The total cost of this scrumptious gown was ten cents for a spool of sewing-silk."

"But," Linda protested, "it isn't mother's wedding-dress, or the old dining-room curtains, or Aunt Mary's crape shawl—"

"Those went long ago. No, it's only the furbelowed top of the parasol that came with the family baby-carriage—"

"We used that parasol only a short time," said Mrs. Rossiter. "It was always too big and clumsy."

"And the rest," continued Susan, "is fire-screen. You remember that tall screen with the terribly gaudy, Persian-patterned silk, gathered on full?"

"But the net on that parasol was white—before it was black with age. And that screen—why, Susan! The pattern wasn't possible for clothes; it was positively pictorial. Parrots, palm-trees—"

"Not after it was boiled. It ran gloriously. There's just a ghost of a pattern left, a soft tapestry effect that is lovely under this ecru net. You see, I dipped the net in coffee—I've read hundreds of receipts for dipping things in coffee, but this is the first time I've tried it."

At the concert, not one of Mrs. Dixon's guests was more becomingly attired than Linda.

The rules of the musical club forbade refreshments. Notwithstanding this fact, before the evening was half-over Mrs. Dixon's drawing-room was faintly but unmistakably pervaded with the odor of very good coffee. As the room grew warmer, the odor became more and more pronounced. Soon the guests were quite visibly sniffing the coffee-scented air.

"Why," murmured the young woman who sat next to Linda, "is it possible that Mrs. Dixon is going to break the rules and serve coffee? For my part, I hope she is—awfully foolish rule!"

Presently a plump matron, who had breathlessly "rendered" a song, subsided into the vacant chair at Linda's left. In a few moments she, too, was sniffing audibly.

"Coffee!" said she. "I'm sure I smell coffee. Surely Mrs. Dixon—"

Then Linda knew. Her coffee-dipped gown was sending forth a strong, coffee-

## The Royal Bank of Canada



Protect your Victory Bonds by  
Renting a Safety Deposit Box.

Deposit the coupons every six months in a Savings Account and earn interest upon the bond interest at 3% per annum, compounded half-yearly.

If this is done regularly with (say) a 15 year bond, you will accumulate more interest than principal.

CAPITAL AND RESERVES \$35,000,000  
TOTAL RESOURCES - \$535,000,000  
825 BRANCHES

## Farmers' Accounts

This bank began its career in 1832 when Canada was largely an agricultural country, and during the eighty-eight years of its life it has always given special attention to the care of farmers' accounts.

We pay interest on savings accounts, cash your cheques, take care of your notes and make collections when due.

Business conducted by mail if necessary.

Paid-up Capital \$ 9,700,000  
Reserve - - - 18,000,000  
Resources - - 230,000,000

## THE BANK OF NOVA SCOTIA

We invite your account. Special facilities for Banking by Mail. 326 Branches. General Office, Toronto, Ont.



laden odor, not displeasing in itself, but oh, how humiliating!

Susan, in the same situation, would have laughed light-heartedly, and said, "Why, it's just my coffee-dipped gown!"

But Linda writhed in torture. Mrs. Dixon had said, "How very nice you look, my dear!" Several of the girls, too, had exclaimed over the softly-tinted gown, and Linda had had the satisfaction of knowing that she looked her very best. Now it was all spoiled. Some sharp-nosed person would surely discover the true source of that smell, and all the world would laugh

Royal Bank  
Canada



our Victory Bonds by  
Safety Deposit Box.

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and earn interest  
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done regularly with  
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25 BRANCHES

farmers'  
accounts

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BANK OF  
A SCOTIA

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**WANTED FOR SALE**

Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted and Pet Stock. TERMS - Five cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 75 cents.

**COLLIE PUP FOUR MONTHS OLD, BLACK and tan; bred from good heifers. Eight dollars. L. W. Russell, Coldwater P.O., R.R. 3.**  
**PURE-BRED SCOTCH COLLIE PUPPIES** - Intelligent and good workers; females only. Apply Urias Cressman, New Hamburg, Ont., Co. Waterloo.

**WANTED - A MARRIED MAN FAMILIAR** with general farming, capable of handling pure-bred stock and making milk records; also fitting and showing both cattle and hogs. He will be expected to board the other help. State experience and wages expected. Box 60, Farmer's Advocate, London, Ont.

**WANT TO HEAR FROM PARTY HAVING** farm for sale, give particulars and lowest price. John J. Black, Advocate St., Chippewa Falls, Wisconsin.

**Farm for Sale**

On Vancouver Island, British Columbia. Near to thriving village. Has comfortable four-roomed cottage. Reasonable terms. Apply with references to:

**W. CUMMINS** Vancouver, B.C.  
332 Gore Ave.  
**H. C. HABKIRK** Winnipeg, Man.  
317 Carleton St.  
**T. R. TUDGE** Montreal-Que.  
341 University St.

**\$2,000 Cash  
Secures 150-Acre Farm  
Near Toronto**

Great potato farm; last year's income \$4,800, estimated timber and wood when marketed will pay for place; 100 acres loam fields clay subsoil, 2 tons hay per acre; 18-cow spring-watered pasture, big woodlot; also apples, pears, cherries; 2-story, 8-room brick house, furnace, good water; 60-ft. basement barn, silo, water at barn, other good buildings; owner unable to care for it, makes low price only \$8,350, \$2,000 cash, balance easy terms. Details this and other good farms Ontario, Nova Scotia, Alberta and many states, page 92 Strout's Big New Illustrated Catalog Farm Bargains 33 States. Just out. Copy free.

**STROUT FARM AGENCY,**  
306 S Manning Chambers, Toronto, Ontario

**500 Acres, \$5,000,  
With Horses,  
11 Cattle, Crops, And**

Poultry, mowing machine, horse rake, hay rack, plows, cultivators, harrows, wagons, sleighs, harness, 10 tons hay, 10 cords stove wood, 20 bu. potatoes, 50 bu. oats, 10 bu. wheat, 2 bu. beans; machine-worked fields, spring-watered pasture, 300 apple trees, also pears, plums; large quantities wood and pulp wood; 10-room house, big barn, other buildings; owner made money, retiring, for quick sale makes price for all \$5,000 only one-half cash, easy terms. Details this and other farms in Ontario, Nova Scotia, Alberta, and 33 States, page 94 Strout's Big New Illustrated Catalog Farm Bargains. Just out. Copy free.

**STROUT FARM AGENCY,**  
306 S Manning Chambers, Toronto, Ontario

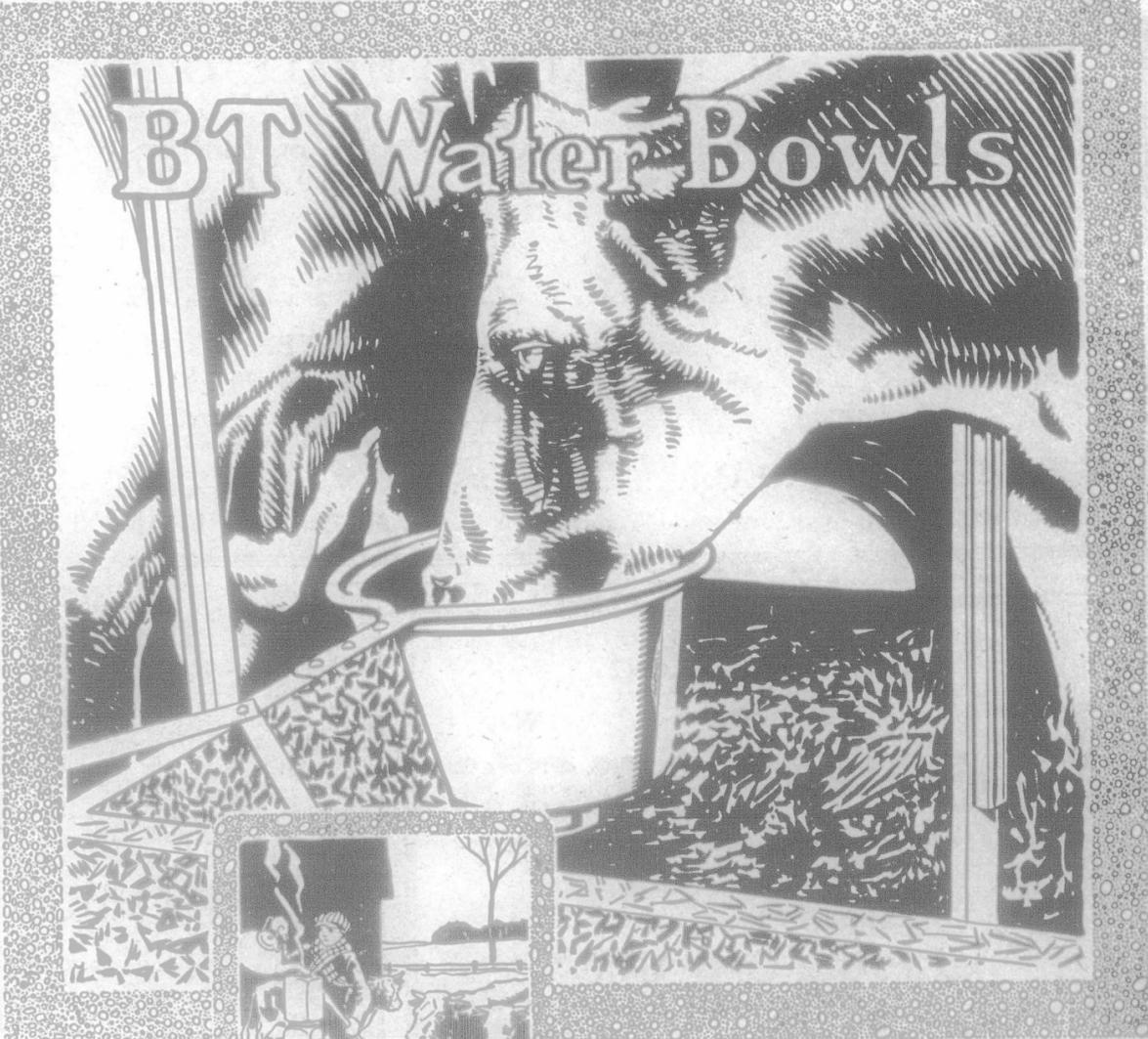
her to scorn. Mrs. Dixon would despise her. And she could not escape; she was practically a prisoner, for her song was next to the very last on the long program.

"Oh," she thought, "I'll have to pretend that I'm ill, and ask to be excused from singing. But if I go close enough to Mrs. Dixon to say all that, she'll surely notice the coffee. What shall I do?"

But Mrs. Dixon had already noticed the coffee,—or the odor thereof,—and had left the room to investigate. When she returned, Linda heard her say:

"It's the strangest thing, but my house—particularly this room—is redolent of coffee! And there isn't any anywhere. What can it be?"

Here was Linda's opportunity for confession; but she did not dare to accept it. How she managed to sing that night she never knew. But somehow, assisted by Rose Dixon's firm touch on the piano



The Old  
Disagreeable,  
Tedious Way



Mr. Henry Beamish, of Norval, Ont., is a great believer in a BT Water Bowl Outfit.

A short time ago he wrote us:

"I milk fifteen cows on an average. I have tested the water bowls and I know that I get at least one can of milk a day extra."

After all, this is only logical. Milk is 87% water. Cows never drink enough when they are driven out to an ice-cold trough or creek.

**Plenty of Water  
Means More Milk**

Put a Water Bowl system in your stable this year. It pays for itself in 60 days and earns money for you all the rest of your life.

Send in the coupon for full details.

Please send your circular on BT Water Bowls.

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Nearest Station \_\_\_\_\_ Lot and Concession \_\_\_\_\_  
(In Western Provinces give township and Range).

**BEATTY BROS., LIMITED**  
Dept. K 524 FERGUS, ONT.

keys, her voice sounded quite natural, and she got through with no mistakes.

The applause that followed was too much for her nerves, and she burst into tears and hurried from the room. Mrs. Dixon followed her into the hall.

"Why, my dear!" she exclaimed. "Not crying! Come, I'll take you up-stairs. There, there, it's just nerves, you know. Does it always upset you to sing? My dear, I'm so sorry you had to sit in suspense all this long evening. If I'd only known, you shouldn't have had that long, trying wait for your turn. Why! There's that queer smell of coffee again! It's most mysterious."

"That's—that's why I'm crying!" sobbed Linda. "It's—it's my dress."

Then she poured forth the entire story—her poverty, her foolish pride, Susan's kindness and ingenuity, her own desire to stand well in Mrs. Dixon's opinion.

"Why, you little goose," said the

hostess, "why didn't you speak right out in meeting? And I wish I'd known sooner that you had a sister with a real gift for clothes! My dear, do you think she'd be willing to make things over for Rose, for money? It's a perfect shame for a girl with a talent like that to waste it all on a few small sisters. I'd love to give her a start—there's money in designing beautiful gowns. As for your pride—my dear, it's all misplaced. That gown is a thing to be proud of, even if it is a bit strong of coffee. Hang it outdoors for half a day."

"Susan was right," thought Linda, as she walked home. "It's wiser not to pretend. The people that like you, like you anyway, even if you are coffee-dipped and patched and made over and just plain poor. And it's a lot easier to be just what you are, even if you aren't very much."—Youth's Companion.

**Divided by the Red Sea.**

Immediately following the close of the American Civil War, J. G. Butler, then a young man living in Youngstown, Ohio, and destined to become notable as a steel magnate, left home to go South on a visit to his brother, who had been a Union soldier and who, after the close of hostilities, had settled among the mountains, in a remote section of East Tennessee.

Part of the journey, as the Saturday Evening Post tells the story, was made upon horseback. One night the traveller secured accommodations at the only dwelling in sight—the log cabin of an old negro.

"When bedtime came," said Mr. Butler, "the old darky asked me to join in the family prayers. So I knelt down with the members of his household upon the hard puncheon floor, and he closed

50  
Females

AUCTION SALE OF

# Scotch Shorthorns

50  
Females

Property of J. J. Merner, M.P., of Seaforth, to be held on

**Tuesday, October 12th, at Clinton**

Offering of popular Scotch sorts as Matchless, Crimson Flower, Beauty's, Mina, Claret, Fanny B, Roan Lady and Mayflowers. These cattle are in good breeding shape, some 20 have calves at side and mostly re-bred.

APPLY FOR CATALOGUE

**J. J. MERNER, M.P.**

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**SEAFORTH, ONT.**

T. E. ROBSON, Auctioneer - Assisted by C. W. ROBINSON, FRANK TAYLOR and MR. ELLIOTT

20 Imported

# Herefords

and 23 of their produce—yearlings and calves

SALE AT OUR FARM

**GORRIE, ONTARIO**

**Oct. 12th, 2 p.m.**

Owing to our returning unexpectedly to the States, we offer our entire herd for sale at short notice. Our Herefords have not been fitted for this sale, but are in extra good grass condition. Our herd bull, "Baily" (imp.) 497638, by the noted "St. Julian," weighs over 2,000 lbs. on grass.

Our herd is rich in Anxiety blood, good Hereford type, plenty of size, and are just what many Ontario breeders are looking for.

Do not miss this opportunity to secure choice imported Herefords.

For Catalogue, etc., write:

**MITCHELL BROS., Gorrie, Ont.**

Farm 1 mile south of Gorrie.



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let this Vacuum Washer do the Work**

You need never dread wash day or suffer with tired limbs and aching back again. With this scientific Compress and Vacuum Clothes Washer all scrubbing and rubbing and hard work is eliminated, and washing clothes becomes a pleasure instead of a task.

**This Vacuum Washer is Woman's Greatest Friend**

Many women have discarded expensive washing machines for it. It is the best, strongest and most complete washer. It will wash anything from the finest laces to the heaviest blankets without injury. Every washer is guaranteed to give satisfaction or money is refunded.—Worth \$5.00 (this advertisement worth \$2.00 if you send it with order at once.)

Send \$3.06 '6 cts. is Govt. Tax' by Postal Note or Money Order or if Cheque, add 15c for exchange and we will send a washer post paid, complete with long handle and exhaust protectors. Order to day. This offer is good for a short time only. **AGENTS WANTED.**

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his eyes and threw his head back and opened his mouth and began.

"He began with Genesis and worked gradually downward. When he had prayed for twenty minutes without a pause, and my knees were hurting me like the toothache, I got desperate. I nudged the person nearest to me—a twelve-year-old boy, who had his head on a chair seat and was peacefully dozing through the ordeal.

"What is it, Boss?" whispered the pickaninny, waking with a start.

"How long is this prayer goin' to last?" I whispered back.

"Has Daddy done tuck de Chillen of Israel 'cros de Red Sea yit? he asked me under his breath.

"Not yet," I said.

"Well, den, w'en he git to de Red Sea he's jest half done'."

### Questions and Answers.

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

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

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

4th—When a reply by mail is required to urgent veterinary or legal enquiries, \$1.00 must be enclosed.

### Miscellaneous.

#### Lumps on Teats.

I have a heifer that is milking fairly well but is in poor condition. There are small lumps in one or two of her teats, although they do not hurt her when she is milked. One quarter has given bloody milk occasionally. Could this be a stage of tuberculosis? Should we dry her up?

S. S.

Ans.—Sometimes these lumps form without any appreciable cause, and again they may be due to tuberculosis. It is advisable to have your veterinarian test the cow, and if she reacts we would be inclined to think that the infection was located in the udder, and, therefore, would not care to use the milk either for human consumption or to feed to animals. The giving of bloody milk is sometimes due to a weakness of the walls of the blood vessels. Bathing with cold water long and frequently, sometimes effects a cure, but very often a cow which gives bloody milk on frequent occasions had better be disposed of.

### Sale Dates.

Oct. 7.—Curry-Bowes & Bowes, Markdale, Ont.; Scotch Shorthorns.

Oct. 7, 20.—E. Templeman, R. R. 1, Staffa, Ont.; Shorthorns.

Oct. 12, 1920.—J. J. Merner, M. P., Scotch Shorthorns; (sale at Clinton).

Oct. 12, 1920.—Mitchell Bros., Gorrie, Ont.; Herefords.

Oct. 20.—Ontario Aberdeen-Angus Association, Western Fair Grounds, London, Ont.; Jas. Bowman, Guelph, Sec'y.

October 20, 1920.—B. R. Barr, R. R. 1, Mossley, Ont.; Holsteins, Horses, etc.

Nov. 9, 1920.—Western Ont. Consignment Sale Co., London, Ont.; Shorthorns.

November 10, 1920.—Elgin Shorthorns Breeders' Sale, St. Thomas, Ont.

Dec. 15, 1920.—Oxford Holstein Breeders' Club, Woodstock, Ont.; Holsteins.

Extensive Clearing Auction Sale of

32 Head of Scotch and Scotch-Topped Registered

# Shorthorns

Horses, Sheep and Hogs

William Nairn, auctioneer, has received instructions to sell by public auction for Ernest Templeman, on

Lot 9, Con. 8, Township of Hibbert, 1½ miles east of Staffa, and 8 miles south of Dublin Station

—on—

**Thursday, Oct. 7th, 1920**

Commencing at one o'clock sharp, the following:

CATTLE—"Jealous Lad," (134634), born March 10th, 1919; his dam is the good cow "Jessica," 10th, (imp.), (131029); sire, "Ringleader," 10 cows with heifer calves by their side and bred again to "Jealous Lad" and well along in calf. 4 cows with bull calves by their side and also bred again to above sire. 4 heifers rising two years old bred to the same sire. "Total Eclipse," (138360); male, red; born Sept. 28th, 1919; dam, "Fanny R.," (125177); tracing to "Fanny," (imp.). These cattle are in good condition, tracing to some of the best-known families, and the most of these cattle are good dual-purpose, the cows being good milkers. Also horses, sheep and hogs. Positively no reserve as every animal offered in the ring will be sold without reserve to the highest bidder, as the proprietor having no help is going out of the pure-bred business. Terms—Six months' credit will be given on furnishing approved joint notes, or a discount of 4 per cent. straight off for cash in lieu of notes.

W. E. NAIRN, Auctioneer. E. TEMPLEMAN, Proprietor.

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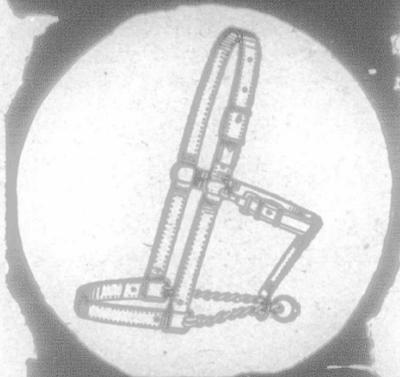
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Farmers needing money while waiting to market crops or stock are invited to consult with the Manager at any of The Molsons Bank Branches.

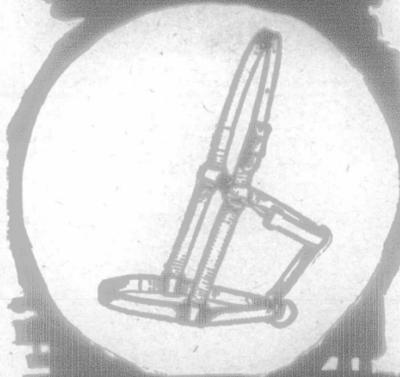
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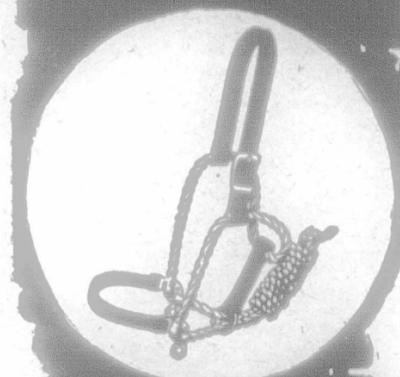
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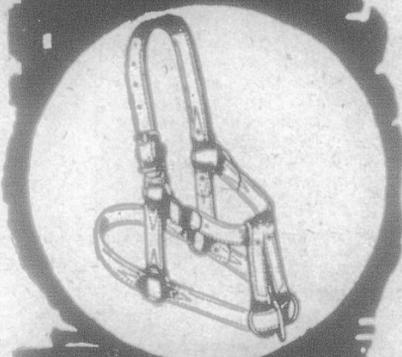
are made for the steady work team, the driver, the colt and the hardened halter-breaker. They are reasonably priced—\$1.25 to \$3.50 and sold by better dealers everywhere throughout Canada. If your dealer does not have GRIFFITH Halters, send direct to us giving dealer's name. Our illustrated Halter Booklet will interest you. We mail it free on request.

This steel chain, chin draw as used on our "Sampson" halter may be purchased separately and used on any old halters you may have to lengthen their usefulness. It is easily attached.

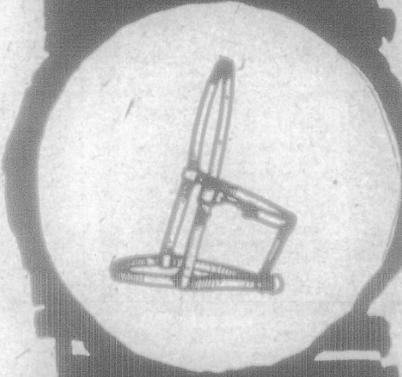


Steel Chain, Chin Draw

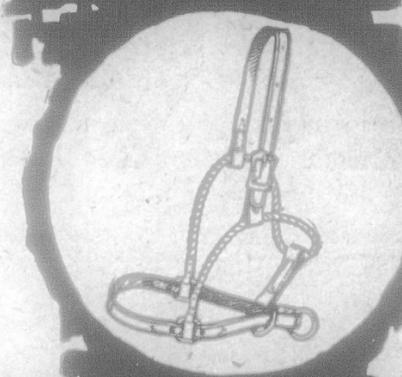
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Forest, Ontario

Alonzo Mathews  
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### For Sale—Fine Hackney Mare

Sired by Polonius, out of Sonata. She is full sister to District Belle, dam of two champion stallions, Madison Square Garden Show. Is registered in Canada as "District Charm." Should make a good brood mare; has won sixteen prizes in very strong competition, Eastern States. Is now in Nova Scotia. Address: A. N. FAULKNER, 1,167 1st Ave., New York Or B. P. HILL, Great Village, Nova Scotia

## Milk Goat Breeders of Ontario Organize.

The breeders of milk goats in the Province convened in the Carls-Rite Hotel, Toronto, on the afternoon of September 2nd, and organized the Milk Goat Breeders' Association of Ontario; the officers elected are as follows: President, L. H. Baldwin, Toronto; Vice-President, C. R. May, London; Sec-Treas., J. A. Telfer, Paris; Directors: C. N. Chadwick, Kenora; Henry R. Duke, Walkers Point, Muskoka; T. S. McGillivray, Hamilton. The opinion of all present was that in order to encourage the breeding of milk goats in the province greater publicity of the advantages to be

derived from same should be given the public. In Canada the goat has been an animal of more or less ridicule, the majority of people not realizing the possibilities of certain types that have been bred along definite lines for many years.

In Europe milk goats are largely used by families unable to keep a cow, and the goat is often spoken of as the "poor man's cow." The fact that the goat will supply sufficient milk for the average family, and be kept where it is impossible to keep a cow, is beginning to appeal to many people, especially those living in small towns and suburbs of large cities. The milk goat industry in Canada is in its infancy and should become of greater importance every year.

**HOW TO BREAK and TRAIN HORSES FREE!**

Write for this amazing book NOW! A postcard will do! Learn how you can master the most vicious and ferocious horse in a few hours time. See how big money is being made in training and teaching wild-tempered and "crazy" horses. Book tells all about the famous Berry System of breaking and training horses—the system that is guaranteed to break any horse of its bad habits forever. Learn right in your own home—in your own time. Book is fully illustrated and printed on finest quality paper. Post absolutely free to any address. Mail postcard NOW!

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Roan Lady and  
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of Scotch and  
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rthorns

Sheep and Hogs

rn, auctioneer, has re-  
ions to sell by public  
est Templeman, on

Township of Hibbert,  
ast of Staffa, and 6  
h of Dublin Station

—on—  
y, Oct. 7th, 1920

one o'clock sharp, the  
following:

alous Lad," (134634),  
1919; his dam is 'be  
essica," 10th, (imp.),  
"Ringleader."  
er calves by their side  
to "Jealous Lad" and  
calf. 4 cows with bull  
side and also bred again  
4 heifers rising two years  
the same sire. "Total  
0); male, red; born Sept.  
," "Fanny R.," (125177);  
y," (imp.). These cattle  
dition, tracing to some of  
families, and the most  
re good dual-purpose, the  
d milkers. Also horses,  
t. Positively no reserve  
ffered in the ring will be  
rve to the highest bidder,  
r having no help is going  
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it will be given on furnish-  
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**RD FARM**

come and meet any time. **ADHEAD, Milton, Ontario** several mares that have been Toronto, Guelph, London and something choice. We also have

**UFF & SON, Myrtle, Ont.**

**3rd, 1919**

815 = (Imp.). Good enough in females.

**GIBSON, Denfield, Ont.**

**BEST DUAL-PURPOSE HERD ESTABLISHED 1859**

st English breeding. Commodore 12112 lbs. Seven young bulls L.E. R. R. 3, Caledonia, Ont.

Shorthorns, Yorkshires. Herd sorted Golden Challenger 122884, by L. De Rothchild. Special fer calves. Yorkshires either sex G.T.R. and P.O., Ont.

Three nice bulls, 11 to 13 months old, and several yearling heifers. Several Tamworth sows due to up to six months old. All from R.R. No. 2, Newcastle.

Imported-in-dam Miss Ramsden 12 months, imp. sire and dam; battery, 12 months, imp. sire. A son, A1; two Hackney stallions weaning time. **HERBERT J. C.P.R., Peterborough County.**

**OFFERING**

price within the next few weeks sire, Sunnyside Model. This is are Kilbbean Beauty, Misses, select from.

**FONTHILL, ONTARIO**

**ORNS**

is of breeding age for sale; also particulars.

**DUNDALK, ONTARIO**

we are all sold out of bulls of but we have the largest and r had on the farm. Call and let

**Watt & Son, Elora, Ont.**

**ropshires**

We offer Five Ram Lambs, one Imp., Buttler ram. Also three quality and priced to sell.

**PICTON, ONT.**

Sea Gem's Pride 96365. We of good bulls for sale, including Ivanhoe 122760, and his full particulars.

**E. BROS., Drumbo, Ont.**

ree imported bulls, one yearling, old and our three-year-old herd and three well-bred bull calves notch females.

**R. No. 1, Freeman, Ont.**

met = 134979 = red; born Oct. sden = 123067 = Dam, Roan ; born Dec. 15th, 1919. Sire, Price \$200.

**LD, R. 2, Guelph, Ont.**

eral six and seven-month bulls, scott, that are extra individuals, or bred heifers or young cows, landies, also sows.

**C.P.R., Morriston, Ont.**

**THIRTY-SEVENTH ANNUAL ONTARIO PROVINCIAL**

**Winter Fair**

**GUELPH**

**Dec. 3-9, 1920**

**\$30,000 in prizes for Horses, Cattle, Sheep, Swine, Seeds, Poultry and Judging Competition**

Prize lists and entry forms may be secured from the secretary.

**PRESIDENT:**

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**SUNNY SIDE HEREFORDS**

Young cows and heifers due this fall; choice heifer and bull calves. Can please you in quality and prices. Special prices on Shropshires, both sexes.

**ARTHUR F. O'NEIL & SONS, Denfield, Ont., R. No. 2 Phone 27-12 Granton**

**English Dual-Purpose Shorthorns**

We offer a grand choice of young bulls and bull calves from imported dams and sire, bred on the English system for milk and beef. They will add value to any herd. The dual characteristics have been impressed by scientific treatment for continuous years. Prices moderate.

Always on hand, sows and boars of the most satisfactory breed of pigs, English Large Blacks.

**F. W. COCKSHUTT**

Lynnore Stock Farm, Brantford, Ont.

**Mardella Dual-Purpose SHORTHORNS**

Eight choice young bulls, 30 females, cows and heifers. All of good size, type and breeding. Herd headed by The Duke; dam gave 13,599 lbs. milk, 474 lbs. butterfat. He is one of the greatest living combinations of beef, milk and Shorthorn character. All priced to sell. Write, call or phone.

**THOMAS GRAHAM, Port Perry, R.R. 3, Ont.**

**Shorthorns**

Present offering: Six young bulls, Reds and Roans; also a number of females. They have size, quality and breeding, from good milking dams. Prices moderate. Satisfaction guaranteed.

**CHAS. GRAHAM - Port Perry, Ont.**

**Shorthorns - Leicesters**

Herd Sire: Bowling Duke Imp. Dual-purpose females, cows and heifers for sale; also ewes, one yearling ram and ram lambs from the Champion ram of 1917.

**E. R. WOOD, R.R. 2, Freeman, Ont.**

**DUAL-PURPOSE SHORTHORNS**

A number of females, some with heifer calves by their side. Also Dorset Horned sheep.

**VALMER BARTLETT - Canfield, Ontario**

**Maple Leaf Shorthorns - Herd headers:**

Gloster Benedict 112498, by Master Ruby, and Ury of Myreton (imp.) 135503. One for sale. Also cows with calf heifers and young bulls. Shropshire sheep. **J. BAKER, Hampton, Ont., Bowmanville Station.**

**Shorthorns and Leicesters - Present offerings:**

A number of 1 and 2-year-old heifers; also 1 and 2-shear rams and ewes and ram ewe lambs, which have been fitted for showing; all from imported stock.

**W. A. DOUGLAS, Caledonia, Ont.**

405 lbs. fat; J. A. Campbell, Brantford. Sarah Echo Beets, 47623, 2 yrs., 11,247 lbs. milk and 345 lbs. fat; J. N. Hall, Lindsay.

**Preliminary Estimate of Grain Yields.**

BY DOMINION BUREAU OF STATISTICS. The first reports made by crop correspondents on the average yields per acre of wheat, oats, barley, rye and flaxseed show that for the whole of Canada, the yields per acre are for spring wheat 16½ bushels, as compared with 9½ bushels last year, and with 16½ bushels, the decennial average for the period 1910-19; for oats 35½ bushels, compared with 26½ bushels last year and 33¼ bushels, the ten-year average; for barley 25½ bushels, compared with 21¼ bushels last year for rye 17¾ bushels, compared with 13½ and 25¾ bushels, the ten-year average; and for flaxseed 9¼ bushels, compared with 5 bushels last year, and 9.40 bushels the ten-year average. These figures indicate, therefore, that for wheat the yield is just equal to the decennial average, that for oats the yield is 2¼ bushels above average, that for barley and rye it is ¼ bushel below average and that for flax it is practically equal to the average. Applying the averages for 1920 to the latest estimates of areas sown (these areas being shortly subject to final revision) we get as the preliminary estimate for the whole of Canada total yields as follows: Wheat 289,498,000 bushels, as against 193,260,400 bushels last year; oats 556,719,000 bushels, as against 394,387,000 bushels; barley 64,257,000 bushels, as against 56,389,400 bushels; rye 12,915,000 bushels, as against 10,207,400 bushels, and flaxseed 11,090,000 bushels, as against 5,472,800 bushels.

**GRAIN YIELDS OF THE PRAIRIE PROVINCES**

The following is the preliminary estimate of total production in the three Prairie Provinces (Manitoba, Saskatchewan and Alberta), the corresponding totals for 1919 being given within brackets: Wheat 260,157,000 bushels (165,544,300), oats 359,289,000 bushels (235,580,000), barley 43,762,000 bushels (36,682,400), rye 9,820,000 bushels (7,262,400), and flaxseed 10,817,000 bushels (5,232,300). By provinces the estimated yields are: Manitoba, wheat, 40,305,000 bushels (40,975,300); oats 61,328,000 bushels (57,698,000); barley 19,895,000 bushels (17,149,400); rye 4,349,000 bushels (4,089,400); flaxseed 605,000 bushels (520,300). Saskatchewan, wheat 136,880,000 bushels (89,994,000); oats 173,003,000 bushels (112,157,000); barley 11,640,000 bushels (8,971,000); rye 3,535,000 bushels (2,000,000); flaxseed 9,288,000 bushels (4,490,000). Alberta, wheat 82,972,000 bushels (34,575,000); oats 124,958,000 bushels (65,725,000); barley 12,227,000 bushels (10,562,000); rye 1,936,000 bushels (1,173,000); flaxseed 924,000 bushels (222,000).

**CONDITIONS OF LATE-SOWN FIELD AND FODDER CROPS.**

The average condition on August 31 of late-sown and field fodder crops, expressed numerically in percentages of the average yield per acre for the ten years 1910-19, was reported as follows, the figures within brackets representing in the order given the condition on July 31, 1920, and on August 31, 1919: Peas 96 (102; 87) beans 99 (103; 93); buckwheat 99 (101; 95); mixed grains 104 (105; 87); corn for husking 98 (95; 89); potatoes 102 (104; 91); turnips, mangolds, etc., 97 (95; 99); fodder corn 100 (98; 97); sugar beets 96 (99; 83); pasture 92 (89 August 31, 1919).

In the report of the Leicesters at the Toronto Exhibition, reference was made to J. E. Featherstone's entry in the aged-ram class being rather open in the fleece and upstanding. It was the entry in the shearling ram class that we particularly noticed as being open fleeced. The aged ram has size and substance, but was of a slightly different type to his competitors.

**For Dependable Breeding Cattle**

ATTEND THE **FIFTY HEAD** **CURRY, BOWES & BOWES SALE** **FORTY-FIVE FEMALES**

**Scotch and Scotch-Topped SHORTHORNS**

At the Markdale House Stables **Markdale, Ontario, Thursday, October 7th**

We have catalogued for this sale 45 head of breeding females, all of breeding age and all dependable breeding cattle. They are just the sort that will make money for their purchasers as none are in high fit and all are bred and guaranteed in calf to great sires. If these breeding cows, which all carry pedigrees equal to the best and in calf to the Country's best sires, do not make money for their purchasers there is certainly very little use of carrying on with good cattle. The families are Crimson Flowers, Marr Floras, Village Girls, Marr Stamford, Miss Ramsden, Matchless, etc. The bulls to which they are bred include Excelsior, that great son of Gainford Marquis; Brown-dale Reward, one of the best breeding sons of the famous Browndale; a Nonpariel bull by Ben Wyvies and others. The young bulls catalogued are also youngsters that will grade well up above the average.

If you want breeding cattle attend this sale.

**CURRY, BOWES & BOWES** For Catalogues Address **FRED J. CURRY** **MARKDALE, ONT.** Auctioneers: **ROBSON, PATTERSON, CARRUTHERS, WALDEN.**

**TREGENNA STOCK FARM SHORTHORNS FOR SALE**



The entire herd, including the herd sire **ROSEWOOD BARON - 124448** - bred by Wm. Waldie and purchased by me at the London Consignment Sale November 6, 1918 - the highest priced bull at that sale. He is a roan, just turned three years - a grand sire, very active, stands straight on his feet with lots of size and A 1 quality - a Rosewood of the highest type and a guaranteed breeder. He is sired by Hillhead Chief (Imp.) - 101812 - (131478), and out of Trout Creek Rosewood - 70847 - imported.

Having sold my farms, am offering by private treaty our entire herd, consisting of cows, heifers and calves (both sexes), sired by my herd sire, "Rosewood Baron." All will be sold without reserve. Address: **DANIEL T. TRESTAIN** Phone 6 r 29 **Glencoe, Ont.**

**Braeburn Scotch Shorthorns** 150 Head 100 Breeding Females

Herd Headed by Nero of Cluny (Imp.) I have at present twelve young bulls that are now nearing serviceable age. The majority are sired by my present imported herd sire, and we guarantee them as good individually as the get of any other one sire in Canada. They are nearly all roans, and are priced to sell. Can also spare some breeding cows in calf to Nero of Cluny (Imp.). **CHARLES McINTYRE, Scotland, Ontario** Brantford 7 miles. Oakland 1 mile. L.E.N. Electric R.R. Cars every hour.

**Glenburn Farms Shorthorns**

Over fifty head of Imported Scotch bred and Canadian bred Shorthorns. Herd headed by Rex Augustus - 128232 - Breeding cows, heifers and young bulls for sale. One fine Canadian bred 14-months-old bull, Sittyton Chief - 138011 - Dam, Emeline - 83239 - Sire, Sittyton Sultan Dale - 108651 - Prices reasonable.

**GLENBURN FARMS** 45 minutes from Toronto by H. H. POWERS, Manager rail or motor. **UNIONVILLE, ONT.** Col. F. H. DEACON, Proprietor

**SCOTCH SHORTHORNS**

My herd is stronger than ever, and I have cows with calves at foot, heifers in calf, younger heifers, young bulls fit for service soon, for sale in any number at reasonable prices. Augusta Sultan - 93092 - one of the greatest living sires, at head of herd. Write me, and, if possible, come and see me, it is worth while. Post Office, Telephone, Telegraph and Station is Stouffville, Ont. I pay the freight.

**ROBERT MILLER - STOUFFVILLE, ONTARIO**

**Reyburn Milking Shorthorns**

Herd headed by Victor 3rd, Imp., Grand Champion at Erie Show and Congress. Herd average over 9,500 lbs. milk per cow. Choice cows, heifers and herd-heading sires for sale.

**R. R. WHEATON** **THORNDALE, ONTARIO** Long-distance phone and telegraph.

**Dual-Purpose Shorthorns**

Bulls from 3 to 7 months old for sale, also several cows. Inspection of herd solicited. **WELDWOOD FARM, Farmer's Advocate** **LONDON, ONTARIO**

**MILKING SHORTHORNS**

Young stock for sale, from Record of Performance cows, by imported sires. **G. L. SMITH, Credit Grange Farm** **MEADOWVALE, ONTARIO**

SHIP TO CLAY  
FOR HIGH PAY

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FREE For Your Name  
A Dollar Skinning Knife Sharpener

We want the name of every trapper in America so we can prove to them that their furs are worth more money than they have been getting. Just send your name and address and we'll mail you with our compliments one of the famous "Dollar" Skinning Knife Sharpeners. Works like lightning.

Big FUR Money

There's a million dollars capital back of this house, and we sell fur all over the globe. That's why we pay big cash for fur. We pay more because we know how to get more. No commissions—no grading charges—just more money for your fur.

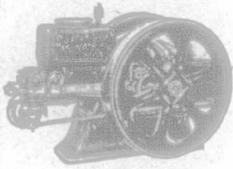
Send Your Name Today

for the "Dollar" Knife Sharpener and inside Micro-Cash price lists. We'll pay more and do more for you than you've ever had before.

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GALLOWAY 12 H.P.  
with friction pulley



Burns  
Gasoline  
or  
Kerosene

A wonder for power and efficiency. Large bore and long stroke. Economy carburetor. Perfect oiling. Very economical in fuel consumption. Write for full particulars. Prompt delivery.

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WINNIPEG

45 YEARS ON THE LINE  
Come to Headquarters for

Cotton Seed Meal

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Brand Brand Brand Brand

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Established 1875 Incorporated 1915  
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Branches: Dallas, Atlanta, Chicago  
Our Brand on the Tag  
Means Quality in the Bag

Cream Wanted

Ship your cream to us. We pay all express charges. We supply cans. We remit daily. We guarantee highest market price.

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Limited

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Messrs. A. J. Hickman & Co.  
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Exporters of all Breeds  
of Pedigree Live Stock.

Send for an illustrated catalogue and see what we can do for you. Whether you want show or breeding stock, buy direct from England and save money.

24,687 lbs. Milk—Butter 1,016 lbs.  
Record of sire's dam. Write for extended pedigree and particulars of 1020 Holstein Bulls from him and R. O. P. cows.

R. HONEY & SONS Dartford, Ontario

"Advocate" Advs. Pay.

**Necessity is the Mother of Invention.**

BY DONALD STEWART.

As automobiles increase in numbers, the price of the fuel on which they live soars. The people demand automobiles, and automobiles demand gasoline and cylinder oil. It costs a great deal to run an automobile to-day (I know men who pay more to keep their autos running for a month than they used to earn in a month not so very long ago), and the supply of gasoline and cylinder oil will not be so plentiful in a year or two's time. It will increase steadily in price as it becomes scarcer. It is now worth considerably more than a dollar a gallon in England. I don't know much about oil wells, but I suppose they dry up sometimes. I do know that oil is found only in certain parts of the world. I am confident that the greatest oil wells in the world will be discovered near Wetaskiwin, Alberta. I own shares in an oil-field there, and I was told when I bought them that the only reason the subterranean sea of oil was not tapped was because the drillers engaged by my company were afraid that they did not possess strong enough machinery to hold the released oil in control. (The oil, it appears, is better able to rise than my shares.) If the oil-field adjacent to Wetaskiwin is not developed, however, we will soon face a real shortage of gasoline, for Europeans, Australians, South Americans, South Africans, and Orientals are just beginning to develop a real appetite for automobiles. When they begin to buy cars as readily as we do—and they will—it won't be long before we are face to face with the fact that there is not enough gasoline in the world to run the automobiles in use. In any case, it is reasonable to suppose that it will then be very expensive. I know that many people will ridicule this prediction, but that does not prove its absurdity. Ten years ago we never thought that we would work all the humus out of our rich prairie soil and so bring ourselves face to face with the soil-drifting problem. Ten years ago we never imagined that hardwood would be almost impossible to buy in the year 1920. Fifty years ago the so-called sportsmen who killed buffaloes by the hundred for the fun of killing the great animals never dreamed that the Canadian Government would have to import a small number of the animals from the United States in order to preserve the species from total extinction. Fifty years ago flights of beautiful carrier pigeons used to darken the sky. If you can find a carrier pigeon to-day, the Government will reward you for information as to its whereabouts. We only need to look backwards for a few minutes to multiply these examples of our wanton improvidence and destructiveness. It is characteristic of the American people that they never miss the water till the well runs dry, and when they do miss it, there is weeping and wailing and gnashing of teeth. So do not scoff at any prediction regarding the future supply of gasoline. Wait a year or two. But I am digressing. I don't pretend to be a mechanic, but I am convinced that necessity will force us to develop a steam engine that will prove as satisfactory in the automobile and tractor as the gas engine. A steam engine would take up no more room than a gas engine in a tractor or automobile, it would not alter the appearance of either, it would need fewer repairs, and it would last longer. There would be no intricate ignition system to handle and keep in repair, no self-starter would be required, no intricate system of gears would confound the feet, the speed of the automobile or tractor could be controlled to a nicety by a lever that would take the place of the spark lever, and the engine would make far less noise.

Yes, I know what you are thinking right now! You are wondering what fuel such an engine would use, how the steam could be generated, and how the water could be carried. Well, I reiterate quite frankly that I am not a mechanic. I see by to-night's paper, however, that a steam engine has been produced for use in an automobile that can be started in 40 seconds. I have seen some gas engines that refused to start as quickly on chilly or wet mornings, and I am satisfied that

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ONE DOSE OF  
**Continental Germ Free Blackleg Filtrate**  
GIVES LIFE LONG IMMUNITY

Write to-day for Booklet "A." It contains full information on Blackleg and other animal diseases, Breeding, Dehorning, Castrating, Stock Marking and Branding, Horn Training, etc. It is free for the asking.

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72 Dundas St., East, Toronto, Ont.  
Eastern-Distributors for  
CONTINENTAL SERUM LABORATORIES CO., Muscatine, Iowa

MANOR FARM HOLSTEINS

A Producing Herd Where Quality Excels

I have at present just the bull calf you need for your next herd sire. Visit Manor Farm yourself and select him from the choice lot of youngsters now in the pens—all are sired by our great son of Lulu Keyes, King Korndyke Sadie Keyes. The records of the dams of these calves we would like to show you run from 20-lb. two-year-olds to almost 35 lbs. for matured cows—quality and production considered, they are priced exceptionally low.

GORDON S. GOODERHAM, Manor Farm, CLARKSON, ONT.

RAYMONDALE HOLSTEIN SPECIAL

Prince Alcartra Segis, the 35.32 lb. bull we advertised in August, has been sold. With this issue we offer the 16 months' youngster Abberkirk Echo Raymondale. We guarantee him perfect in every respect. He is sired by Avondale Pontiac Echo and his dam is a 24-lb. junior 4-year-old and a full sister to Het Loo Pietertje, the 31-lb. \$12,750 junior two-year-old. The dam of this youngster is at present safe in calf and we are positive she will make thirty pounds at this freshening. If you are interested in this breeding you will appreciate this calf and the price. Write quick.

RAYMONDALE FARMS, VAUDREUIL, QUE. D. RAYMOND, Owner, QUEEN'S HOTEL, MONTREAL

Hamilton House Holstein Sires

Our young bulls of serviceable age have all been sold, but we have a number of the best young calves we have ever bred. All are from dams with good combination records for both milk and butter. Several are up to 700 lbs. of milk and 31 lbs. of butter for 7 days. If you are interested in a good calf, write or see them now—they can be purchased at considerably less than we will be pricing them next winter.

D. B. TRACY - All Railways Bell 'Phone - COBOURG, ONT.

Special--Young Holstein Bull

Bulls No. 1 and 2, advertised last month, have been sold—the grandson of Avondale Pontiac Echo going to John Jamieson, Cooksville, and the grandson of Rag Apple Sylvius going to Wm. Learn, Wilton Grove. Have just one bull left—a Feb. calf got by a 32-lb. son of Avondale Pontiac Echo. Price \$100.

CEDAR BROOK FARM :: INGLEWOOD, ONT.

Hospital for the Insane, Hamilton, Ont.

HOLSTEIN BULLS ONLY FOR SALE

Senior sire is from one of the best sons of King Segis Alcartra Spofford. Junior is grandson of the noted May Echo Sylvia, by Champion Echo Sylvia Pontiac.

Write to the Superintendent for prices, etc.

HIGHLAND LAKE HOLSTEINS

I have at present thirty-five young bulls, all under 13 months, and nearly all sired by May Echo Champion—full brother to May Echo Sylvia. Also have a few young calves by my junior herd sire whose two nearest dams 7 day milk records average higher than those of any other bull of the breed.

R. W. E. BURNABY (Take Electric Cars from North Toronto) Jefferson, Ontario

Sylvius Walker Raymondale is the sire of the majority of our young bulls now listed. If you see these calves you will appreciate them. Their dams are mostly daughters of King Segis Pontiac Duplicate. Don't delay if you want a good bull at a right price. We are also offering females.

R. W. WALKER & SONS, Port Perry, Ont.

WALNUT GROVE HOLSTEINS

I am offering a choice lot of bull calves sired by May Echo Champion, who is a full brother of world's champion, May Echo Sylvia; also a few cows just fresh.

(Take Radial Car from Toronto to Thornhill). C. R. JAMES, Richmond Hill, R.R. No. 1, Ont.

Summer Hill Holstein Females

—We are at present crowded for room and are pricing twenty-five head of one and two-year-old heifers of our own breeding at prices which any good breeder should be pleased to pay for this sort of quality. See these if you appreciate the best. We have one young bull left—a show calf.

D. C. FLATT & SON, R.R. No. 2, Hamilton, Ont.

HOLSTEIN BULLS FROM 30-lb. DAMS

If you want 30-lb. bulls—good individuals—and priced right—you should see my present offering. I also have lower priced bulls, and am offering females bred to Ormsby Jane Burke. Correspondence solicited.

R. M. HOLBY, Manchester G.T.R., Myrtle C.P.R., PORT PERRY, ONT.

"Premier" Holstein Bulls Ready for Service

I have several young bulls from dams with 7-day records up to 32.66 lbs. of butter, 755.9 lbs. milk, with 110 lbs. of milk in one day—over 3,000 lbs. in 30 days. All are sired by present herd sire, which is a brother to May Echo Sylvia. Step lively if you want these calves.

H. H. BAILEY - Oak Park Farm - PARIS, ONT.

Quality HALEY & LEE, Springford, Ont. Production

HOLSTEINS—If in need of a better herd sire, speak early for a son of one of our great show cows and by our 35-lb. bull, a son of Susie Abbekerk Colantha, with world's record for 5 months' milk and butter. Our cows were foremost in winnings at Toronto and London.

Holstein Herd Sire, \$150

Pontiac Hermes Cornucopia, a choice, well-grown youngster, just ready for heavy service—good individual and guaranteed right. Sire, Gipsy Pontiac Cornucopia, a 30-lb. son of May Sylvia, Pontiac Cornucopia. Dam—a 21.10-lb. 5-year-old daughter of King Segis Pontiac Duplicate. We are also listing five younger calves, all sired by Gipsy Pontiac Cornucopia.

JOS. PEEL, Elmsdale Farm, Port Perry, Ont.

**BLACKLEG**

**Blackleg Filtrate**

For all information on Blackleg Filtrate, Castrating, Stock Raising, etc.

**W. S. RAYMOND, LTD.**

CO., Muscatine, Iowa

**HOLSTEINS**

**Quality Excels**

Next herd sire. Visit Manor Farmsters now in the pens—all records. The records run from 20-lb. two-year-olds production considered, they are

CLARKSON, ONT.

**IN SPECIAL**

August, has been sold. Kirk Echo Raymondale, Avondale Pontiac Echo, Het Loo Pietertje, the youngster is at present safe this freshening. If you find the price. Write quick.

**D. RAYMOND, Owner,**

**QUEEN'S HOTEL, MONTREAL.**

**stein Sires**

We have a number of the with good combination lbs. of milk and 31 lbs. of or see them now—they are them next winter.

COBourg, ONT.

**stein Bull**

en sold—the grandson of ayville, and the grandson of ove. Have just one bull Pontiac Echo. Price \$100.

GLEWOOD, ONT.

**Hamilton, Ont.**

**OR SALE**

Spofford. Junior is grandson to Sylvia Pontiac. ces, etc.

**HOLSTEINS**

nder 13 months, and orther to May Echo orior herd sire whose er than those of any

Jefferson, Ontario

**TEINS**

a, who is a full brother of world's just fresh. m-and Hill, R.R. No. 1, Ont.

re at present crowded for room e pricing twenty-five head of on wo-year-old heifers of our own or this sort of quality. See these R.R. No. 2, Hamilton, Ont.

**b. DAMS**

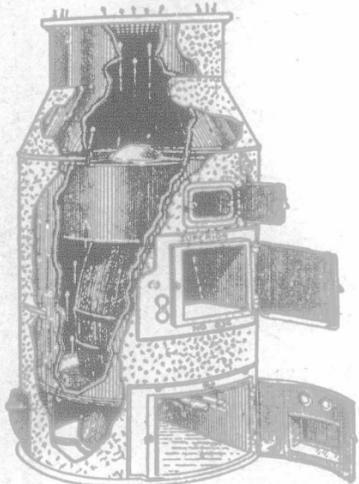
ould see my present offering. I oy Jane Burke. Correspondence R., PORT PERRY, ONT.

**Paris, Ont. Production**

of one of our great show cows 's record for 5 months' milk and ice, well-grown youngster, just ul and guaranteed right. Sire, ornucopia. Dam—a 21.19-lb. 2- ing five younger calves, all sired

e Farm, Port Perry, Ont.

**The Pilot Superior Heat for Farm Homes**



There are many reasons why the Pilot Superior is the choice of so many Canadian farmers. It is particularly well adapted to the requirements of the average farm home, and because of its unique construction has placed the convenience of a safe, sanitary, and healthful furnace heat within the reach of these folks, who fully appreciate its remarkable qualities. The farm home must have a cool cellar, so that the perishable products stored there will not be spoiled. Furthermore, the average farm homes are not constructed along lines that permit the installation of furnace requiring a lot of network of pipes and registers. The Pilot Superior, with only one register and no pipes, its insulated casings, large feed door, properly placed to be the best warm-air furnace for the farm home. A Pilot Superior Pipeless Furnace is installed in six hours. Write for particulars.

Manufactured by  
**The Hall Zryd Foundry Company, Ltd.**  
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**Remarkable Growth of the Mutual**

For a life insurance Company there is no such thing as old age. The older the company the more strength and energy it acquires, providing it has experienced normal and healthy development such as characterized the first half century in the life of Canada's only Mutual.

This Company was incorporated in 1868, organized in 1869 and began writing business in 1870. Its steady and consistent progress has been phenomenal. The figures from the successive reports suggest almost limitless possibilities of expansion in the coming years.

**The Mutual Life of Canada**  
Waterloo-Ontario

**Adds much to the flavor**

**Windsor Dairy Salt**

Made in Canada  
THE CANADIAN SALT CO., LIMITED

When writing please mention Advocate

when mechanical geniuses give as much study to the development of a steam engine as they have paid to developing the gas engine, they will produce a steam engine that will start almost instantaneously. When we stop to consider the wonderful mechanical inventions of the past ten years, it requires no stretch of the imagination to visualize a steam engine that will be as sympathetic to the human touch as a gas engine. Such an engine would not need to carry a great deal of fuel and water. The steam could be condensed and used over again, making a large supply of water unnecessary. In fact, I understand that the steam engine already designed for automobiles uses very little water because of this condensing feature. As to the fuel, kerosene could be used, or oil, or alcohol, or some light cheap chemical solid or liquid, that would generate the heat required to keep the steam up. The engine would be a simple affair, as all steam engines are. It would have no carburetor, no ignition system, and fewer bearings than a gas engine. Its size would be steadily reduced, and its power steadily increased, as designers endeavored to increase its efficiency.

I suppose that not a few of my readers will pick flaws in my arguments. With the utmost frankness I again reiterate that I am not a mechanical expert. It may be that there are sound reasons why steam cannot take the place of gasoline in driving tractors and automobiles. I have a presentiment that a real scarcity of gasoline will confront us before many years have gone by, and I am convinced that when we begin to search for a substitute for gasoline some mechanical genius will produce a steam engine that will admirably suit the requirements of tractors and automobiles. I would like to hear what men who know more than I do about mechanics think of my prediction. It is a subject, I think, well worth discussing at the present time.

**Questions and Answers. Miscellaneous.**

- Infection on Harness.**
1. I have a good set of single harness that I used on a horse affected with mange. I disposed of the horse and have not used the harness since. Would there be danger of a horse getting the disease from the pad on the back-band?
  2. I have a driving mare in good condition, but she is idle a good deal of the time. When she is tied she keeps chewing at something. Is this a habit?
  3. Is clover hay, with a small quantity of timothy in it, harmful to driving and working horses? W. A. M.
- Ans.—1. It would be advisable to wash the harness with a solution containing some disinfectant, and then give it a good oiling or greasing. If such were done there should be no danger of the disease being carried.
2. We are under the impression that this is a bad habit which the mare has contracted, for which little can be done.
3. We do not think so; in fact, many horsemen prefer good clover hay to timothy.

**Growing Alfalfa.**

I am anxious to try alfalfa on our farm, which is in a high state of cultivation. Where is the best place to obtain good, reliable seed? What is the price of same? Where can I obtain the necessary bacteria for inoculating the seed? When is the best time to sow? G. T.

Ans.—Alfalfa requires a soil in which the water level does not come near the surface. Ontario-grown seed should be secured if possible, and it can be purchased from some of the seed firms, or from growers in districts where alfalfa is sold for seed. Grimm's and Ontario Variegated are two recognized varieties. We cannot say what the price will be for next spring's seeding. It will depend largely on the demand and on how this year's crop threshes out. Bacteria for inoculating the seed may be secured from the Bacteriological Department, O. A. C., Guelph. Splendid catches are obtained from sowing in the spring with a light nurse crop of barley, or the land may be summer-fallowed until on in July and the seed then sown without a nurse crop.

**Clearing Sale of Registered Holsteins Farm, Horses, Feed and Implements**

**Wednesday, Oct. 20th, 1920**  
Sale at 10 a.m. Stock sale 2 p.m.

**The entire herd of Homestead Holstein Stock Farm. 45 head of choicely-bred females.**

Among them four daughters of Aaggie Prince Pietertje C, sire of Laura Aaggie Netherland, with 30.66 lbs. butter in 7 days, the cow that topped the Toronto sale in Dec., 1918, at \$2,300. Four are daughters of Judge Hengerveld De Kol VIII, an imported sire, a grandson of Hengerveld De Kol, with 116 A.R.O. daughters. His dam, Pomona Aaggie Queen, has 5-year-old record of 32.92. The young cows and heifers are sired by Hengerveld Pontiac Butter Boy, whose two granddams averaged 31.28 lbs. butter in 7 days, and they are bred to Segis De Kol Netherland, a choice young herd sire that will also be sold. He is a show bull from a 31.72-lb. 5-year-old that has given 103 lbs. milk per day.

Byron E. Brooks will consign six head of good individuals. Among them Teake Ormsby Korndyke, a 3-year-old, with record of 20.22 lbs. butter, and Ralph Ormsby, 11 mos. old, a choice young bull ready for service, from a dam with record of 24.40 lbs. butter.

Farm is two miles from Harrietsville Stn., C. P. R. Write for catalogue.

**T. MERRIT MOORE, Auctioneer**  
**B. R. BARR, Prop., R. 1, Mossley, Ontario**

**Northern Ontario**

The Great Clay Belt of Northern Ontario lies one degree south of Winnipeg, and contains millions of acres of virgin soil fit for mixed farming, which may be had by return soldiers and sailors free; to others, 18 years and over, 50 cents an acre. Here, right at the door of Old Ontario, a home awaits you.

For free information write:  
**HON. MANNING DOHERTY** Minister of Agriculture  
**H. A. MACDONELL** Director of Colonization  
Parliament Buildings, TORONTO

**BRAMPTON JERSEYS**

THE LARGEST JERSEY HERD IN THE BRITISH EMPIRE

At Toronto Exhibition, 1919, we won twenty-five of twenty-seven first prizes. We now have for sale first-prize young bulls from R. O. P. dams, as well as females of all ages.

**B. H. BULL & SONS :: Brampton, Ontario**

**All Bulls of Serviceable Age Sold**

A few young bulls sired by Financial Raleigh King, son of the \$6,000.00 Financial Beauty King, for sale, from R.O.P. dams.

**JAS. BAGG & SONS (Woodbridge, C.P.R.; Concord, G.T.R.) EDGELEY, ONTARIO**

**The Woodview Farm** Herd headed by Imported Champion Rower, winner of first prize with five of his daughters on the Island of Jersey, 1914, second in 1916, and again first in 1917. We are now offering for sale some very choice bull calves, ready for service, sired by imported bulls and from Record of Performance imported prize-winning cows. Also some cows and heifers. Prices right. We work our show cows and show our work cows.

**Laurentian Producing Jerseys**—The oldest bull we have at present is a year-old youngster, sired by our herd sire, Broadview Bright Villa, No. 5630, and from Brampton Astoria, one of the best imported cows in the herd. We also have others younger of similar breeding, as well as a few bred heifers for sale. **FREDERICK C. TODD, Owner, 801 New Birks Bldg. Montreal, P.Q. Farm at Morin Heights. F. J. WATSON, Manager.**

**DON HERD OF PRODUCING JERSEYS**

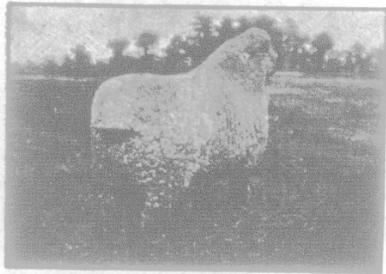
We have three young bulls of serviceable age—good individuals and priced right. Could also spare a few choice bred heifers. Visitors welcome.

**D. DUNCAN & SON, TODMORDEN, ONT.**

**Earn and Save**—You can do it by securing NEW SUBSCRIBERS to THE FARMER'S ADVOCATE AND HOME MAGAZINE. You can work in you spare time or give all your time to the work. Write for instructions.

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SUMMER HILL  
**OXFORDS**  
They Hold an Unbeaten Record  
for America



We are now offering a number of ram and ewe lambs sired by Lord Milton at very reasonable prices, quality considered. This ram went to the Western Stock Ranches, Ltd., at \$500 immediately after the Chicago show. We also have shearing ewes and rams as well as a few two-shear rams. Can supply ram and ewes not related. We guarantee satisfaction. Follow our exhibit at the shows and get our prices.

Peter Arkell & Sons, Teeswater, Ont.  
H. C. Arkell W. J. Arkell F. S. Arkell

**FOR SALE**  
**Shropshires**  
AT  
**Maple Shade**  
Ram Lambs, Ewe Lambs and  
Fifty Imported Ewes.  
**WILL A. DRYDEN**  
Brooklin :: Ontario

**Shropshire and  
Cotswold Rams**

Your choice of 50 large, well-wooled ram lambs for \$30. Recorded in your name and express paid to your station. Also a few good yearling and two-shear rams at a low price.

JOHN MILLER, Claremont, Ont.

**HIGH - CLASS OXFORDS  
FOR SALE**

Including shearing rams, ewes and ram lambs. Sired by "Heythrop 42" (imp.), an extra choice ram imported by the McKerron Farms, Wis. These sheep are the low-down, blocky kind, and have ideal skins, fleeces, color and covering. Write for prices and descriptions.

W. T. TILT, R.R. No. 6, Brampton, Ont.

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Shropshires and Cotswolds**

I have at present a real choice lot of ram and ewe lambs, as well as a few shearing rams and ewes of both breeds. Will price these sheep reasonable, and guarantee the best of both breeds.

JOHN MILLER, JR., Ashburn, Ontario

Having sold my largest farm, I am offering for sale SEVENTY-FIVE PURE SHROPSHIREs at the following very low prices. Ram and Ewe Lambs and Yearling Rams from twelve to thirty dollars each. Yearling Ewes from twenty-five to thirty dollars. Ewes from five to seven years from ten to fifteen dollars, including Pedigrees.  
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FRANK WEEKES, (Huron Co.) VARNA, ONT.

**FOR SALE**  
Registered Oxford Down Shearlings and Lambs, Both sexes.  
R. G. BOURNE, R. 3, Perth, Ontario

**Questions and Answers.**  
Miscellaneous.

**Matriculation.**

I understand that a person must have his Matriculation before he can take a four-year course at the O. A. C. Can a person get his matriculation by a correspondence course? To whom should I write about this course? E. D. S.

Ans.—We believe it is possible to get the matriculation certificate through a correspondence school. Write the Canadian Correspondence School, Toronto.

**Holidays on the Farm.**

What holidays is a man, hired by the year, entitled to? My man goes away every other Sunday, and sometimes on Saturday nights, and I never see him till Monday. Is he supposed to be home at chore time? C. F.

Ans.—A man is entitled to Christmas, New Year's Day, Good Friday, Victoria Day, Dominion Day, Labor Day, Thanksgiving Day, and any other day or days proclaimed a public holiday by the Lieutenant-Governor or Governor-General. A man is supposed, even on these days, to assist with the chores, unless otherwise arranged for. A man is entitled to Sunday, except for the doing of the necessary chores night and morning.

**Lime for Soil.**

What kind of lime is used on soil? How much should be applied per acre? How is it put on the soil? Where can it be secured, and what is the price? E. B.

Ans.—Ground limestone is the form in which lime is usually applied to the soil. The amount varies from 500 or 600 lbs. to the acre up to a ton or more, depending on the acidity of the soil. Some put the lime in piles in the field and spread it with a shovel; others spread off the wagon, but the most convenient way is to use a fertilizer drill or lime spreader. Agricultural lime is being sold by a number of firms, among which are one at Beachville, Caledonia and Elora. We have not this fall's quotation on lime.

**Itchy Legs.**

We have a pair of mares that have contracted an itch in the hind heels. The surface becomes raw, and they pound the floor with their feet. We have used creolin several times. What treatment would you suggest? A. M.

Ans.—Purge with 10 drams aloes and 2 drams ginger if the mares are not in foal. After the bowels have regained their normal condition, give 2 ounces Fowler's solution of arsenic sprinkled on the feed, twice daily, for a week. Make a solution of corrosive sublimate, 30 grains to a pint of water; heat to 105 degrees Fahrenheit and rub well into the skin twice daily until the itching has ceased.

**Forgery.**

A and B had a dispute which was settled by A by a private apology on paper. B goes and alters the apology and adds more to it than A had written and hands it over to the local newspaper to be published, using A's name. But editor refused to publish it.

1. Can A sue B for attempting to publish same? A having three witnesses.  
2. What steps can A take against B for using A's name? J. J. W.

Ans.—1 and 2. B has committed forgery and has rendered himself liable to prosecution, under The Criminal Code, accordingly. A's regular course would be to lay an information against B before a justice of the peace, charging B with the offence.

**Descent of Property.**

A married woman owns property deeded in her own name and dies without heir or will.

1. Who can give title to said property?  
2. Can husband alone do it?  
3. If relatives have to sign off, how far back would it be required to go? Ontario. Z. Y. X.

Ans.—1. The administrator of her estate.  
2. Yes, as administrator, after taking out letters of administration from the Surrogate Court.

3. The circumstances of the estate may be such that certain relatives would have to join in the conveyance of the property to a purchaser. The husband's interest would be one-half of the net estate, and the other half would go to the father, mother, brothers and sisters, equally, and they might all be required to execute the deed of conveyance.

**Every Branch of Farming needs C X L Stumping Powder**

—every man who owns a farm, whether it is new land or old, needs C X L Stumping Powder,—a means to increased production and profits. Its uses are many—its results a success, discovered by thousands of farmers all over Canada.

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**Oxford Rams Registered Shropshires**  
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We offer choice ram lambs, shearing rams; also ewes any age. All bred on the farm.  
John M. Ross, Embro, Ont.

Fifty shearing ewes, thirty shearing rams and some choice ram and ewe lambs. Satisfaction assured.  
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**Oxford Down Sheep, Pioneer Flock**—We are offering this season an up-to-date lot of shear ram and a number of yearling and two-shear ewes; also imported two-yearling and two-shear rams; also ram and ewe lambs.  
H. ARKELL, 207 Sherman South, Hamilton, Ont. Phone Garfield 3172 W  
Shipping Station—Corwhin.

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Special offering: Ram lambs and ewes, all ages  
Write:  
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**Oxfords**—I have some choice eye and ram lambs, sired by Taston Haigh 4 (Imp.) 11950; also some shearing and aged ewes.  
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We ship on approval to any station where there is an agent. We save you 50c to \$1.00 a roll on Ready Roofings of guaranteed quality. **ASK FOR FREE SAMPLES** yourself to be the judge after inspecting the Roofing at our risk. Samples free by mail, also free catalogue with prices and full information. Send letter or post card, "Send me free samples and price of Ready Roofing and particulars of Free Delivery Offer."

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Factory Distributors,  
HAMILTON, CANADA.

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Three large litters of young pigs at price of ordinary pigs—all registerable. Also magnificent sire, "MacDonald George."

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Cleaned up at Toronto and London, 1919. See our 1,000-lb. boar and 800-lb. sows.

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**Berkshires**—Boars ready for service and boar pigs, rich in the blood of Lord Premier's Successor 161500, Grand Champion, 1914, Champion sire of 1915, 1916, 1917. His descendants have won Grand Champion honors at the largest and strongest shows of 1919. The Champion Berkshire barrows of 1918 International were double grandsons of Lord Premier's Successor. We have shipped many Berkshires to Canada with satisfaction to customers. Prices on request.  
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Pigs of different ages, both sexes, from large litters.

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Young sows, bred for September and October farrow. Choice boars of all ages.

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Boars and Sows of different ages for sale. Write or phone.  
JOHN W. TODD :: CORINTH, ONT.

**Meadow Brook** Registered Yorkshires—Ten choice young boars fit for service, from prizewinning stock. Prices reasonable for quick sale.  
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**Chester Whites**—Choice young pigs, both sexes, sired by Qauwa Colaway Edd, (imported) No. 19831. Also a few gilts bred to same boar.  
GEO. E. NORRY, R.R. 1, Tilbury, Ont.

## SPRINGBANK YORKSHIRES

Young boars fit for service; both sexes, all ages, with good breeding.

Wm. Stevenson & Son, Science Hill, Ontario

Please mention Advocate

## Stock Judging Competition at the Western Fair.

A Live Stock Judging Competition was conducted for the first time at the Western Fair this year. It was conducted by the Ontario Department of Agriculture, but the prize money, together with a pass to the fair, was given by the Western Fair Association. Only three classes of stock were judged—heavy horses, sheep and beef cattle. This competition was open to farmers or farmers' sons under twenty-six years of age. The contestants were permitted to enter in only two classes of stock, and were allowed twenty minutes for the placing of each class and writing reasons. They were also called on to give oral reasons. There were eighty-one contestants in all, many of which made good placings and gave intelligent reasons. The following is a list of the prize-winners in the different classes:

**Sheep.**—Possible score, 200. 1, S. A. Brown, Shedden, Elgin, 189; 2, Oscar E. Lerch, Preston, Waterloo, 181; 3, Ivan Pettapiece, Cottam, Essex, 175; 4, W. R. Cable, Forest, Lambton, 167; 5, Russell Parker, Watford, Lambton, 163; 6, Emerson B. Werden, Alvinston, Lambton, 162.

**Heavy Horses.**—Possible score, 200. 1, D. J. Lerch, Preston, Waterloo, 180; 2, Leslie W. Turnbull, Galt, Waterloo, 177; 3, C. R. Bradford, Oshawa, Ontario, 172; 4, W. A. Hume, Campbellford, Northumberland, 159; 5, W. A. Fowler, R. R. 1 Hyde Park, Middlesex, 151; 6, E. W. Rowcliffe, Hensall, Huron, 150.

**Beef Cattle.**—Possible score, 200. 1, W. S. O'Neil, Denfield, Middlesex, 189; 2, D. J. Lerch, Preston, Waterloo, 188; 3, Oscar E. Lerch, Preston, Waterloo, 187; 4, S. A. Brown, Shedden, Elgin, 186; 5, C. R. Bradford, Oshawa, Ontario, 183; 6, D. A. Brown, Shedden, Elgin, 181.

## Questions and Answers. Miscellaneous.

### Feeding Treated Grain.

Is it safe to feed grain to hogs after it has been treated for smut? T. J. C.

Ans.—If the grain has been left some time after treatment, it should do the hogs no harm. There is not enough of the formaldehyde on it to cause serious injury.

### Diseased Sheep.

What is the matter with sheep when the wool comes off, as per the enclosed sample? It does not seem to bother them very much. E. A.

Ans.—So far as we could ascertain, it is a skin disease something like eczema which the sheep are suffering from. Dipping with some of the proprietary dips should effect a cure. It is possible that you have not been applying the material long enough to give it an opportunity to soak through the wool.

### Alsike.

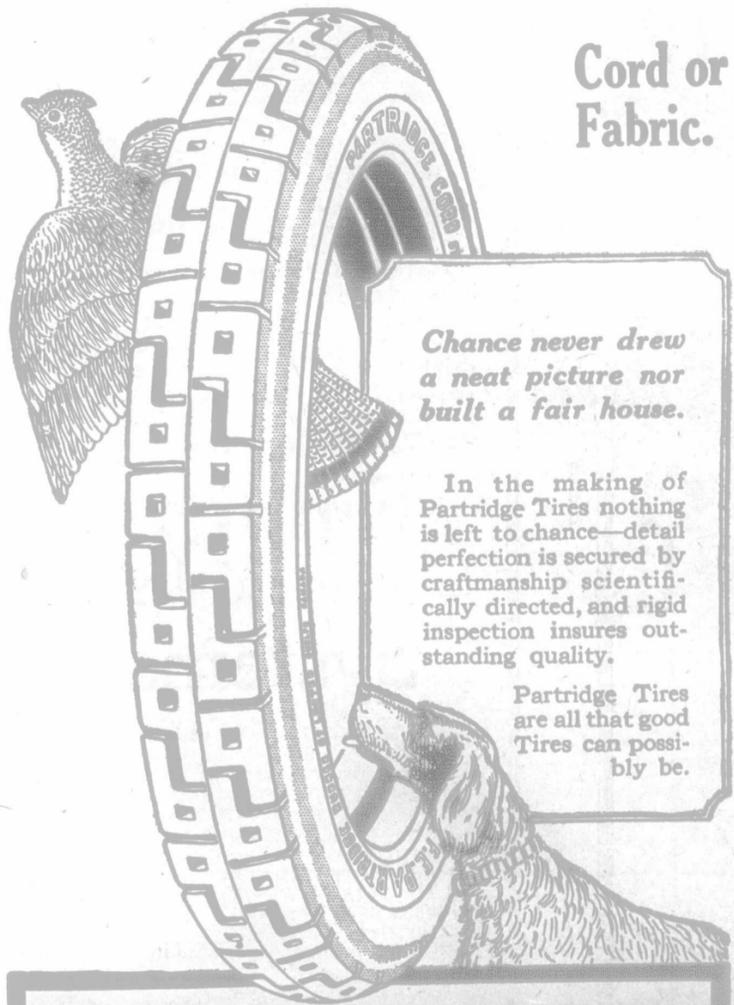
If I cut a crop of hay from a newly-seeded alsike field would it spoil the roots for coming up next spring? I intend cutting the field for seed next season. The clover has seed in the heads now. Would this be all right to save? A. D.

Ans.—If there is an abundant growth this fall, it would be preferable to either pasture or cut it, but it should not be cut so short as to impair it for standing the winter. If you cut it for seed this fall, we doubt if the plants would get a sufficient stand to give them a chance for maximum production next year.

### Setting Out Strawberries.

I purpose setting out some strawberry plants. What varieties are the best? When is the best time to put them out? How far apart should the plants be set? What kind of ground is best? G. A. R.

Ans.—There are quite a large number of varieties, some of which are suited to one locality and some to another. We believe that Professor Macoun, of the Experimental Farms, Ottawa, has been selecting in an endeavor to secure varieties particularly adapted to Eastern Ontario. It would be advisable to write Professor Macoun for the varieties which he would recommend for your locality. The spring is generally considered to be the best time for setting out the plants. They may be planted in rows about five or six feet apart, with plants about eighteen inches apart in the rows. A good, sandy-loam soil is generally preferred.



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bly be.

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Game as Their Name

## O.A.C. Bargains in Breeding Stock

The Ontario Agricultural College is offering for immediate sale, at reasonable prices, the following choicely bred stock:

- Shorthorns**—1 extra good red lavender bull, ten months old.
- Holsteins**—10 bull calves from ten months old down. (These calves show breed type and have production backing).
- Yorkshires**—30 young sows and a number of young boars.
- Berkshires**—5 young sows.
- Leicesters**—12 choice ram lambs.

There will be no auction sale at the College this fall.

Write for prices. Come and see the stock.

WADE TOOLE, Professor of Animal Husbandry, O.A.C., GUELPH, ONT.

## ELMHURST LARGE ENGLISH BERKSHIRES

From our recent importation of sows, together with the stock boar, Sudden Torredor, we can supply select breeding stock, all ages. Satisfaction and safe delivery guaranteed.  
H. M. VANDERLIP, Breeder and Importer, R. R. 1, BRANTFORD, ONTARIO  
Langford Station on Brantford and Hamilton Radial.

## BERKSHIRES

Choice young stock for sale, all ages. English, Canadian and American strains. Can supply pairs not akin.

G. L. SMITH, Credit Grange Farm MEADOWVALE, ONTARIO

## Berkshires and Shorthorns

—Have now for sale one boar fit for service several sows ready to breed—also sows and boars farrowed on May 16th and May 20th. In Shorthorns, a few choice young bulls and females of the best Scotch breeding. Herd headed by the Miss Ramsden sire, Royal Ramsden, by Golden Edward. Dam by Royalist. Write or call.  
JOSEPH BREWSTER, Seaforth, Ont.

## BERKSHIRES

—My Berkshires for many years have won the leading prizes at Toronto, London and Guelph. Highcleres and Sallys the best strain of the breed, both sexes, any age.

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Shakespeare Station, G.T.R.

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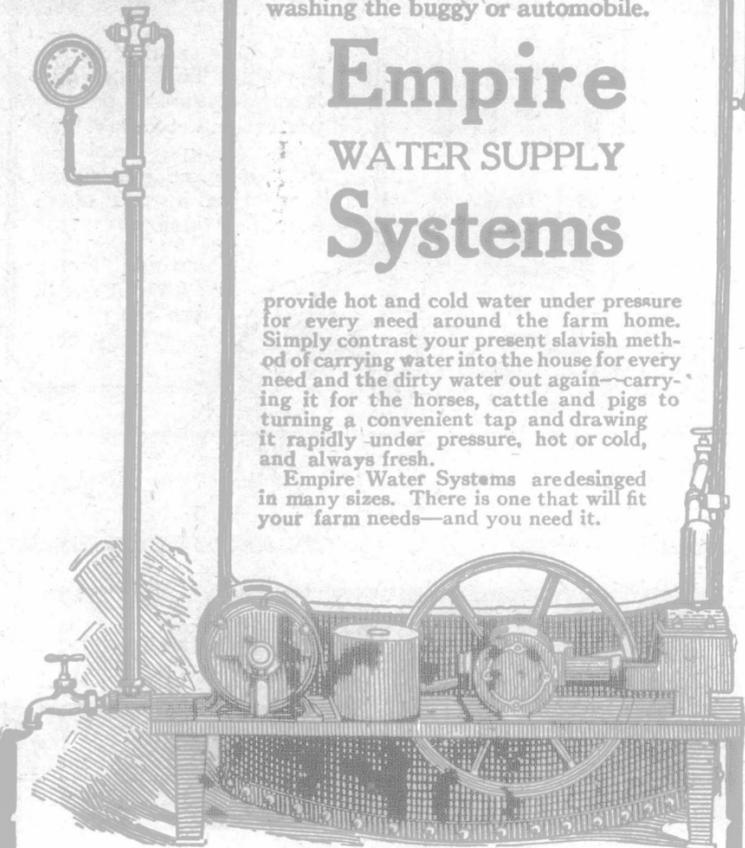
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provide hot and cold water under pressure for every need around the farm home. Simply contrast your present slavish method of carrying water into the house for every need and the dirty water out again—carrying it for the horses, cattle and pigs to turning a convenient tap and drawing it rapidly under pressure, hot or cold, and always fresh.

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Our School Department.

"Educators Personally."

BY "PUBLICUS."

AN American educational periodical which is doing excellent work—the "Journal of Education" (Boston) to be explicit—has fallen into the habit of running almost continuously, a series of articles entitled "Educators Personally."

One of these articles, for instance, told about a man "who came out of the West with a vision," a man who believed in the soil and what could be done with it. His name was Perry Greeley Holden, one-time director of the Extension Department of the Iowa State Agricultural College of Ames, and he saw, with his mind's eye, the picture of waving corn-fields in Iowa, every one of them growing two stalks of corn—and twice as high—where only one stalk had grown before. Iowa is in the corn belt, but all of its farmers did not know how to grow corn. Holden preached and demonstrated, demonstrated and preached. "Test, don't guess," he said. "Know before hand that every kernel of seed you plant shall grow."—Makes one think of that Ottawa Valley farmer called Meldrum who, long ago, proved the doctrine of better seed by setting his big family of boys and girls at selecting the grain.—But to return: Holden preached good seed, good soil and constant cultivation, and, we are told, had before long doubled the annual corn crop of the State. . . . He was an educator, agriculturally.

In another issue the Journal told the story of Neil C. Macdonald, who retired recently from the State Superintendency of North Dakota with a record for country school progress that will make him long remembered. Here it is, in brief: More consolidated schools in the open country than in any other state in the union; more teachers' cottages in proportion to the population than in any other state; more country school nurses than in all the rest of the union; a larger per cent. of increase in state appropriations for rural schools than has ever been given in in any other state; a greater per cent. of increase in music in rural schools than was ever known in any other state; a greater per cent. of increase in service of hot school luncheons in winter; a greater increase in standardized schools." Just pause over those items long enough to realize what they mean.

And other issues bring acquaintance with those wonderful women Josephine Corliss Preston, Ella Flagg Young, and Emily Griffith, each of whom deserves a whole chapter to herself. . . . So many more there have been, also,—educators, not just school teachers.

For a difference is implied, even though it may not always exist *de facto*.

One sometimes wishes that word "school-teacher" were banished to the forgotten realms where the dodo, and the great auk, and the mammoth, and the vehmoth, and the ichthyosaurus and the pterodactyl be! . . . "School-teacher!"—but one remove, in the association of ideas, from the "schoolma'am" or "school-master," the long suffering, half-educated, tortured, insignificant individual who once "kept" school.

There is some dignity about the idea of being an "educator!"—something powerful enough to make the school-teacher throw up his shoulders (or "hers"—drat our pronouns!) and realize his importance in the scheme of things. And yet, and yet, not every school-teacher is entitled to be called "educator."

Speaking very seriously, may we repeat again our conviction that there is no man or woman in any country more important as the real Educator. We fail to realize the importance of his or her work because we cannot, as a rule, see the results immediately. Of necessity the work is slow. It is akin to the way of evolution. And yet the Educator is working not only with the human material in hand but also with unborn generations. Even, also, in the day of the

children now sitting on the benches how far may not the influence of the Educator run? To use the old simile of the pebble thrown into the pool, his words and his example, the inspiration kindled by him, may spread out and out, like the widening circles on the pool, touching men and women farther and yet farther afield, moulding their lives, extending their influence. There is not a great man in the world to-day who did not one time sit at the feet of the teacher in a classroom.

It is a matter for regret that the examples of individuals given above, by name, include not one Canadian. There have been, and there are, real Educators in Canada, but the information regarding them is not at present in the hands of the writer.

But, after all, what matter? In all things good or beautiful—true education, high character, helpful science, music, literature, art, brotherhood—there can be no dividing line. Humanity is, and ever will be, greater than nationality.

In closing: Might we not make more of "Educators, Personally" in Canada? Might we not give more public appreciation to the man who is really trying to educate along high and right lines? Should we not accord to him the position of importance which will guarantee him support and a hearing? In short—should we not demonstrate that we ourselves are able to see the value to the children, the state, the world, of "Educators, Personally"?

For such recognition must inspire any Educator, man or woman, to greater effort and so greater results,—there is nothing that helps like encouragement.

A year or so ago, in a small American town, a teacher who had taught most of the men and women living there, celebrated an advanced birthday.—Rather the town celebrated it for her, for a public holiday was proclaimed and there were great doings, centering about the smiling old lady who had meant so much to the lives of the celebrators and the prosperity of the town. . . . Some day, in Canada, we may begin such recognition of our "Educator Personally," not always, perhaps, waiting for the "advanced" birthday. Then, and possibly not until then will the teachers themselves, as a class, recognize the full scope and dignity of their work, and a definite goal as the objective of capable teaching and an enthusiastic recognition of a great responsibility.



Quigley Cheese Factory:



School in S. S. No. 5 Lochiel.

The school is the most important institution in any country, and the cheese factory is a forerunner of prosperity. The above school and factory are found in Glengarry County, Ontario.

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ment.

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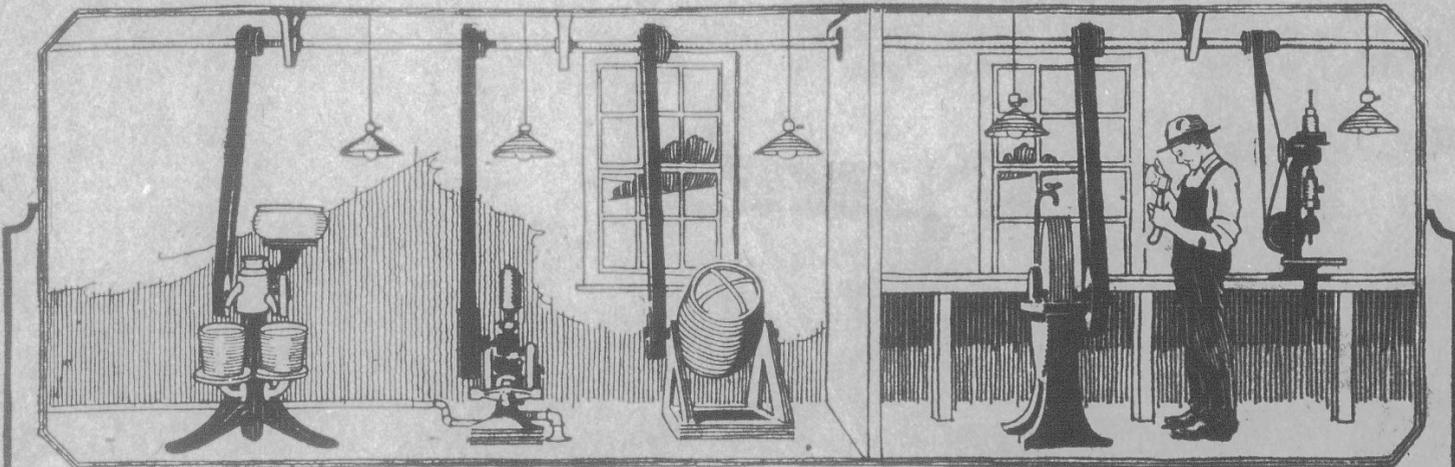
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Cheese Factory:



S. S. No. 5 Lochiel. Most important institution in the cheese factory is a fore- The above school and fac- Glengarry County, Ontario.



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No matter where you live or what kind of farming you do, you will find in the utility of this plant the greatest source of comfort and satisfaction on your farm. The "F" Power and Light Plant is constructed as a separate unit plant, so that the full power of the 1½ h.p. "Z" engine can be utilized to run the separator, churn, grindstone, pump, washing machine, and any other light machinery.

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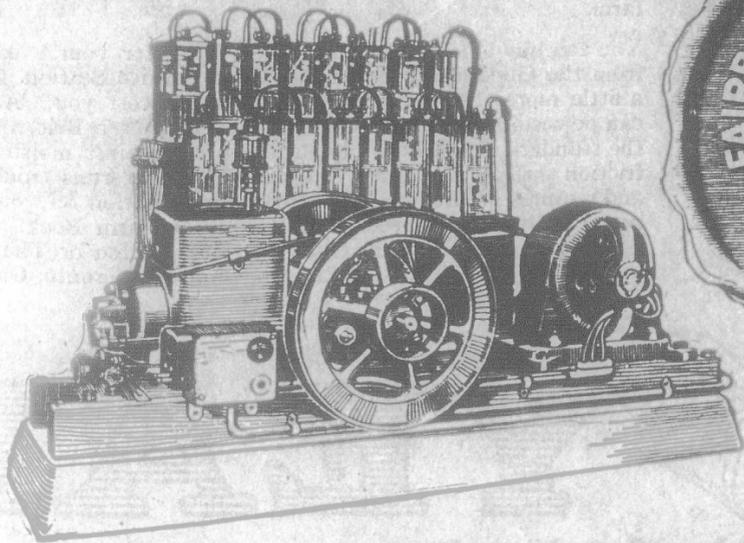
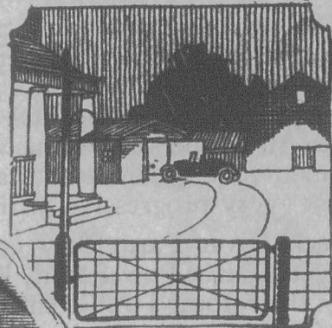
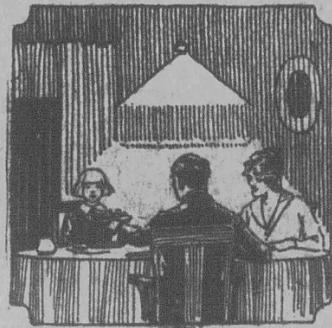
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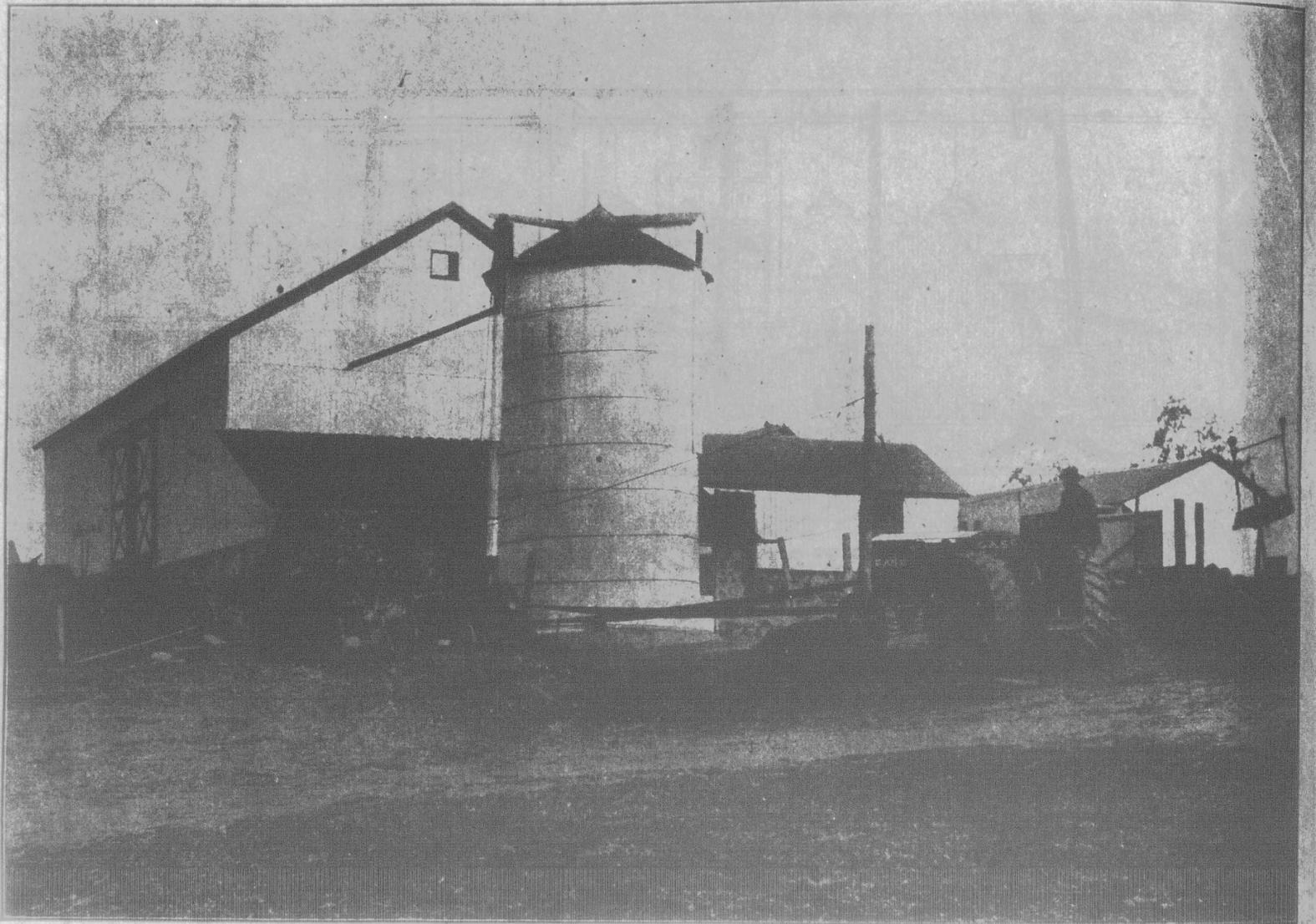
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## Gaining Time and Power With Goodyear Belts

**D**AYS saved at any job is a net gain of real money value to a modern farmer. When so marked an earning in time, with all its accompanying factors of labor and machinery and fuel saving, is directly traceable to the type of belt used on the farm's power equipment, the qualities of that belting are bound to interest every progressive farmer.

At Rock River Farm they credit to the action of a Goodyear Extra Power Belt, the saving of two days in filling their four 14 x 40 silos over the time it took them formerly.

Out at Dalmead, Alberta, there is a whole family of Extra Power enthusiasts—the Van Der Veldes—who believe that the time and money saved by Goodyear Extra Power Belts far overshadows its slight extra cost. A. Van Der Velde has been using Extra Power for the last three seasons and says "They have proven far better than you told me they would." N. Van Der Velde says "Even if it is loose, it hugs right to the pulley. I have never thought of using any belt dressing. Other years I was pouring some kind of belt dressing on all the time." John also writes us "I am well satisfied with the long life of Extra Power

Belting and think it worth double the extra cost." Martin, writing about the Extra Power Belt on his separator, bought in 1916 and still in use, says "It is as good as new. I have threshed for two weeks without any covering on my blower pulley. I have never used any dressing. Have run for two solid weeks without relacing."

Goodyear Extra Power Belts run trouble-free, and carry steadily, uninterruptedly, the time-saving, money-making flow of power. Silos filled or threshing done, the same equipment piles up the same results in wood sawing, feed grinding, water pumping—any work that you can hook up a tractor or engine to do on the farm.

You can buy Goodyear Extra Power Belts for your every need from the Goodyear Mechanical Goods Service Station for just a little more than an ordinary belt would cost you. And you can be certain that every Goodyear Extra Power Belt will have the standard Extra Power qualities—proof against moisture, the friction surface that grips, the flexibility that runs trouble-free and requires no breaking in. Helpful information on your farm power problems is offered in the Goodyear Farm Book. Either the Goodyear Mechanical Goods Service Station or The Goodyear Tire & Rubber Co. of Canada, Limited, Toronto, Ont., will furnish you one gladly.

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