

Volume XXVIII.

Number 3

# O.A.C REVIEW

November

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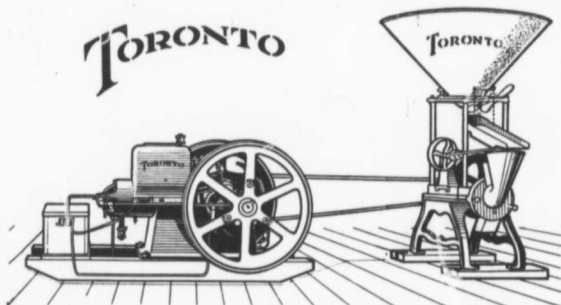
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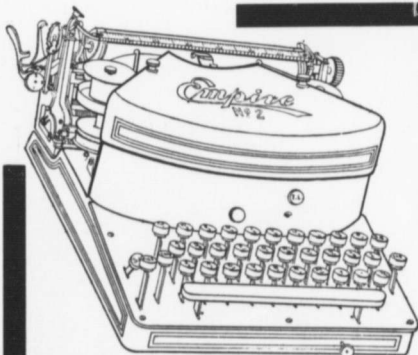
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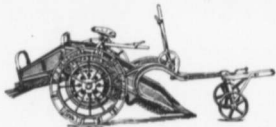
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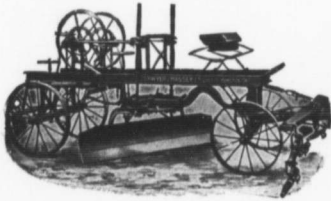
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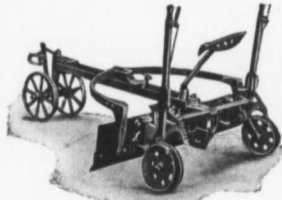
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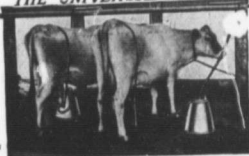
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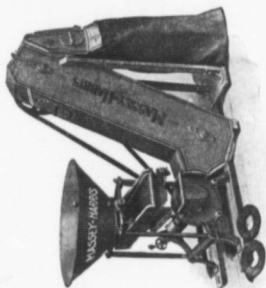
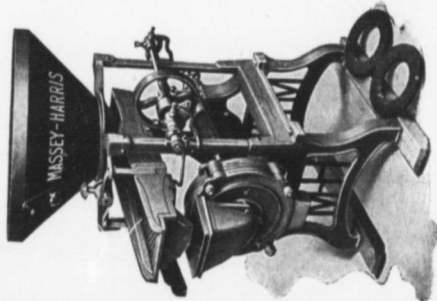
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*Minister of Agriculture, Toronto, Ont.*

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## November

*The weird winds whistle thro' the trees  
They're robbed of autumn gold,  
And laugh shrill laughs of fiendish glee  
Their bareness to behold;  
Then 'round the corners of the house  
Long, dismal tales unfold.*

*The fire is flickering forth its flame  
To cheer the close of day;  
The father reads in solemn tones  
Of carnage 'mid the fray,  
While mother knits and granny turns  
The heel for little May.*

*Mabel G. Parkinson*

# THE O. A. C. REVIEW

"THE PROFESSION WHICH I HAVE EMBRACED REQUIRES A KNOWLEDGE OF EVERYTHING."

VOL. XXVIII.

NOVEMBER, 1915.

No. 3.

## The Opportunities of the Cereal Breeder

By C. R. Klinck, B.S.A.

**L**IFE is a game of chance and we are all playing it. Are you striving for riches, wisdom, fame or name or merely to pass exams? In order that we may obtain any one of these it is well that we understand the laws or principles that have helped others in making these their own. Nature would seem to go hard with some of us, while but few enjoy the first four. It is true that some men are born great while others have greatness thrust upon them. As chance and circumstances have ordained, we are where we are, in order that we may learn how to dodge the unlucky numbers and to draw the best our way.

Like most mortals, the cereal breeder is never satisfied. Not content with Ontario varieties others have been obtained from all parts of the world. At present, I cannot give you the great number of varieties of grains, that have been tested at this college. The inferior ones are gradually weeded out and discarded so that last year we had but 44 varieties of winter wheat, 33 of spring wheat, 29 of barley, 63 of oats and 22 varieties of peas. Comparatively few of these are known throughout the province and we have perhaps wearied you by telling you that Dawson's Golden Chaff, Red Fife, Mand-scheuri, American Banner and Petter, Early Britain and Canadian Beauty are among the best for Ontario farmers. Not content with these we have tried

to find the best within the best and O.A.C. 21 and O.A.C. 72 need no introduction. Attempts have also been made to put something better within these best or to combine the desirable qualities of several varieties. This is done by hybridization. It is this branch of the work that I wish to touch upon that you may not look for results too soon.

Camerarius established the sexuality of plants in 1691, and, in 1719, Thomas Fairchild, an English gardener, made the first hybrid, of which we have any record. Since then many have specialized in this branch while others have taken it as their life hobby. The first of these men realized that there was a splitting up and redistribution of parental characters in the hybrid but none of them attempted to explain just why or how. It remained for Abbe Mendel, an Austrian monk, to work out this law of inheritance. This was published in 1865 but not until 1900 when De Vries and Correns rediscovered this "Mendel's Law of Hybrids" was any practical or scientific use made of it.

Mendel's Law depends upon three important principles, viz:—

- 1.—The two parents must possess one or more character pairs.
- 2.—The purity of the germ cell.
- 3.—The Law of Chance.

Character pairs are the opposing characters that the parents of a hybrid

possesses. Thus, of two wheats, one may be bald and the other bearded; one may have red chaff and the other white; one red grain and the other white and one may give hard, flinty wheat while the other is soft and starchy. When wheats with any one of these contrasted pairs are crossed the hybrid will contain both characters. If these are of equal potency the resulting plant will be an intermediate form. If, however, as is often the case, one of the characters is strong or dominant the first generation hybrid will show that character to the exclusion of the other. A hard wheat crossed upon a soft one usually gives a blend but in some instances you will get grains that are harder or softer than

plant. When seeds from these are planted we get three bald plants to every one bearded. From the definite proportions in which certain combinations of character are produced and from the fact that many of the progeny of a cross will soon breed true, it has been concluded that the sperm cells and the egg cells of a hybrid, that unite to produce a young plant, include the potentialities of one only of a pair of characters. A wheat anther may contain eight hundred pollen grains. It may be that no two of these carry the power to produce similar plants but no one of them has both bald and bearded powers or both of any other pair of characters.

The following table gives the main

	WHEAT	BARLEY	OATS	PEAS	PEAS
1.	Bald.....	Bald.....	Black.....	Round.....	11. Inflated pods
2.	Bearded.....	Bearded.....	White.....	Wrinkled.....	12. Wrinkled
3.	Red Chaff.....	Six-rowed.....	Thick hull.....	Yellow Cotyledons.....	13. Axial pods.
4.	White.....	Two-rowed.....	Thin.....	Green.....	14. Terminal.
5.	Red grain.....	Many stools.....	Many stools.....	Brown seed-coat.....	15. Green pods.
6.	White.....	Few stools.....	Few stools.....	White seed-coat.....	16. Yellow pods.
7.	Lax heads.....	Tall.....	Tall.....	Red or purple flowers.....	17. Black hilum.
8.	Club head.....	Short.....	Short.....	White flowers.....	18. White hilum.
9.	Velvet chaff.....	Early.....	Early.....	Long straw.....	19. Blunt pods.
10.	Smooth chaff.....	Late.....	Late.....	Short straw.....	20. Pointed.

either parent. One theory, to explain this variation, is that hardness itself is not a distinct character but a combination of several. Apart from composition, hardness may be influenced by size, shape, plumpness, maturity and dryness of the grain. However, when a bald wheat is crossed upon a bearded, or vice versa, the first generation hybrids will all be bald. This rule of nature, whereby one of a character pair hides the other, is known as the Law of Dominance.

The hybridizer runs no risk of producing a hybrid germ cell. As previously stated a bald wheat crossed upon a bearded always gives a bald

character pairs of each of the four leading classes of cereals. Since the dominant character of a pair is always placed first, and the characters are numbered in order, an odd number will always indicate a dominant character.

Since full names occupy much space and abbreviations are often confusing we shall use their numbers instead. If studying the first pair of characters mentioned for wheat the only powers that the sperms or eggs from a hybrid of these could carry would be 1 and 2. If the second pair is now considered each of these may unite with each of the former and we would have sperm



carrying 1,3, 2,3, 1,4 and 2,4 powers. In like manner characters 5 and 6 can be added to each of these four giving us eight kinds of sperm-cells and a similar number of egg-cells. Twelve pairs of characters would, in this way, make 2.12—4096 kinds of male and a corresponding number of female cells. Not one of these would carry both potentialities of any one pair of characters.

The Law of Chance or the third important principle of Mendel's law has been tried by most of us; if not at exams, perhaps at our county fair. Nature is fairer than these, but she would appear to have certain co-related characters or groups of characters, that draw her way. The farmer wants a hardy, big-yielding wheat, combined with characters 1, 3, 7, and 10, while the miller is not as particular so long as it is hard, for this is the best indicator of quality. If we consider 11 as hard grain and 12 as soft we can make some germ cell, that will promise almost ideal wheat. If such has been produced it has not yet been recognized.

After making a study of the varieties still retained on the experimental plots one concludes that the farmer will still grow the big yielders and the millers will take whatever they can get. Nature, in producing good milling wheats, has given them weak straw combined with characters 2, 4, 5 and 11. It is very easy to produce a 1, 3, 6, 7 plant from a 1, 4, 5, 7 and a 2, 3, 6, 8 parent for, by the law of chance, one would appear in every 256 plants, of

the second generation. If the parents differ in twelve characters only one ideal plant would appear among every 16,777,216 of the second generation. The breeder who attempts to find his plant among these would undertake an almost hopeless task. Were he to test 16,000 plants per year, it would take more than 1,000 years to grow but one row from each of them. A Burbank and a Methuselah combined would not be wise to undertake this. However, in actual practice, for each recessive character that is in the plant we select, we run one half less chances and for every third plant we select with a dominant character we again divide our work by two. In this way most of the distinctly dominant or recessive characters in any hybrid can be fixed in from two to six years or generations. If no selections are made and the plants continue to self-fertilize, the hybrid plants soon occupy a very small part. When but one pair of characters is studied all the plants of the first generation will be hybrids. In the fourth generation one in eight, and, in the seventh generation, only one in sixty-four will segregate and show both characters. By these means Dr. Saunders of Ottawa, produced the Marquis spring wheat. Many promising winter wheats have been found. Many of these have harder grain than either parent. To our disappointment, the baker informs us, that these have not high milling quality. Since it does not seem natural for an ideal wheat to be produced on an ideal plant we must try and try again.



## The O.A.C. Contingent of the Canadian Officers Training Corps

*Prof. W. H. Day.*

**D**URING the Autumn of 1914 several meetings composed of many of the students and staff of the O.A.C. were held to discuss the advisability of organizing a military unit at the College. An organization Committee composed of representatives of the students and staff was appointed. An Engineering Corps was at first thought of but after consultation with Divisional headquarters at London an Officers Training Corps seemed more advisable. A final meeting was called to consider the matter at which the Hon. J. S. Duff, Minister of Agriculture and then-Lieutenant-Colonel W. E. Hodgins, then D.O.C. 1st Division, London, were present. After addresses by them it was decided to form a contingent of the Canadian Officers Training Corps, and application for the organization of such a contingent was filed in January, 1915, and it was authorized on March 1st.

During the organization period drill was carried on twice a week under temporary sergeants, and later by the provisional officers, but in March Sergeant Instructor W. H. Prowse was sent to assist in the preparation of the contingent for the Lieutenant's examination to be held after the completion of the College examinations. The total enrollment last year was one hundred and eighty-five but only twenty-four wrote on the examination, all of whom were successful and were granted Lieutenant's certificates. One of these has received a commission in the Overseas forces, and another is awaiting appointment.

This year it is the intention to hold the C.O.T.C. examinations in March so that they will not conflict with the regular College examinations. There will be a Captain's Course as well as Lieutenant's. Each candidate who passes the Lieutenant's examination receives a grant of five dollars and on passing the Captain's examination a grant of ten dollars.

The object of the Officers' Training Corps is two-fold, first to provide officers qualified to take commissions in other branches of the Canadian Militia or in Overseas Contingents; secondly to give those who do not wish to qualify as officers an opportunity to become proficient in military drill and conversant with the principles of military operations, so that if at any time they are called upon to defend their country or feel it their duty to serve in overseas forces they are in a position to do so to the very best advantage. Besides these the drill incidentally serves another very important purpose—it furnishes invigorating exercise, thereby improving the carriage, physique, and general health.

The enrollment this year is now two hundred and fifty-six, of whom about twenty-five are members of the staff, the remainder members of the student body. We have been promised uniforms at an early date, and shall probably have them before this appears in print. The contingent is organized in two companies the establishment of which is 115 of all ranks per company, so that each company is now thirteen

over strength. These companies are only half the size of the overseas companies.

The Officers Training Corps is not a new idea. Its formation was authorized by the Militia Act of 1904, but few if any contingents were organized until last year shortly after the outbreak of war. Now contingents of the Officers Training Corps are established at most of the Colleges and Universities throughout Canada. It is prob-

able they will endure long after the war has ended.

"The Canadian Officers Training Corps," quoting from the C.O.T.C. Regulations, "forms no part of the organization for war, and will not be called out for active service as a corps, but in case of a 'levee en masse' its members are liable to military service under the Militia Act in the same way as all other male inhabitants of Canada."

## Harvesting the Ice Crop

### Co-operation Among Farmers an Economical Advantage in this Work.

**T**HERE are few localities in Canada that have not available a river or smaller stream from which a supply of ice may be obtained for use during the summer months. The ease with which the ice crop may be secured is probably the reason why it is not taken advantage of to a greater extent than at present. For economical harvesting operations it is advisable that a number of the farmers of a community co-operate, sharing the expense and making the labor proportionately lighter.

A few tools are necessary to harvest the ice supply efficiently. A steel scraper to remove the snow covering is desirable; some styles of road scrapers may be used, or a very good homemade scraper may be made of wood and faced with a strip of steel. An ice plough facilitates the work of scoring into blocks for breaking off. A slice bar for breaking off the blocks can be made similar to a crowbar, with a sharp blade from six to eight inches wide.

An ice saw may be improvised by removing one handle of a cross-cut saw. A number of pike poles, ice tongs and a chain, with heavy pair of ice tongs attached, complete the tools required. A platform, one end of which may be let down into the water, and the other end raised level with the floor of the sleigh, permits the use of a horse in taking the ice out of the water and loading on the sleigh.

The ice should be packed as solidly as possible in the ice house and care taken to have sufficient insulating material around the outside and on top. If more ice is required than can be accommodated in the ice house, it may be piled outside, first laying boards on the ground, and covering them with a layer of sawdust or straw. The sides and top should also be well covered and protected with boards to prevent the wind carrying away the insulating material. Sorted in this way the ice till will keep well into the summer.

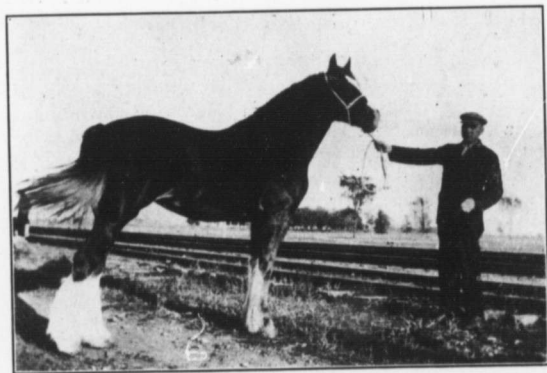
## The Better Farming Special

By J. C. Neale, '17.

TO supplement the work of the District Representative, in the carrying of information to the farmer in a practical and easily understood manner, is part of the task with which the Institutes Branch of the Ontario Department of Agriculture is confronted. Agricultural bulletins and farm journals will reach only a small percentage of the rural population; also the old adage, "Seeing is believing," seems particularly adapted to some of the men one meets in travelling throughout the province. To meet the demands

departments, each presenting solutions for the many vexing problems with which the farmer is continually dealing. The cars were open usually from 9.00 a.m. until 5.30 p.m., thus affording every interested person ample opportunity to study each feature at his leisure. Movable seats were carried in the cars, so that, for the lectures on live stock, a miniature grand stand might be erected, to allow everyone the option of sitting or standing, according to his inclination.

At about half-past one, by which



"Quality in Every Feature."

which are thus thrust upon it, the Institutes Branch, in conjunction with the Canadian Pacific Railway, sent out, on October 4th, two demonstration coaches to travel over C.P.R. lines in Ontario, stopping at stated points, where demonstration lectures could be given upon various agricultural topics.

The first car was devoted entirely to Live Stock, while the second was given over to exhibits from various other

time a fair crowd had usually assembled, the voice of the genial Dr. H. G. Reed of Georgetown — a gentleman well known to all prominent Ontario horse-breeders — would ring out, "If all those interested in live stock will kindly step this way, our lectures will commence." This was the cue for a general exodus from both cars and a scramble for seats in the front row of the "grand stand." The first animal to be brought

forth was a two-year old Clydesdale mare, of the type favored by present day breeders—clean limbed, fairly up-standing, graceful, and exhibiting quality in every feature. Dr. Reed would go carefully over each point of the animal, explaining everything in detail and answering the multitudinous questions of his audience in a truly enlightening manner. Next came a Percheron mare, exhibiting the characteristics of her type and a quality which would be difficult to surpass. Following the horses, came the dairy cattle, a member of each of the three principal breeds in Ontario—Holstein, Ayrshire and Dual-purpose Shorthorn—two classes of sheep—Cotswold and Shropshire—and last, but not least, two classes of hogs—Berkshire and the typical bacon breed, the Yorkshire. Demonstrations upon these three latter classes were conducted by different men at different places, Prof. Geo. E. Day of the Ontario Agricultural College, one or two of his assistants, and several prominent stock breeders of the province being present on different occasions.

Following the stock lectures, the crowd surged toward the second car, where much interest was evoked by the exhibits of the Departments of Field Husbandry, Botany, Poultry, Dairy and Physics. The Field Husbandry exhibit, in charge of "Pete" Forsyth, B.S.A., showed clearly the advantages of seed selection, proper dates of seeding and improved varieties, as well as bestowing a wealth of miscellaneous information upon those really interested.

Upon the walls of the space allotted to the Department of Botany, were tacked large mounted specimens of three of the worst of our noxious weeds,—Perennial Sow Thistle, Field Bindweed and Bladder Champion—while the shelves contained a goodly

stock of specimens of weeds, weed seeds and fungus diseases. Pamphlets were distributed, dealing with the identification and eradication of the most harmful species.

At the Poultry Department, were threshed out many of the vexing problems connected with that apparently most erratic creature, the laying hen. Miss Yates of Port Credit, who is familiar with every phase of the theory and practice of poultry culture, and who can, moreover, make the same demonstration twelve times in an afternoon and still smile, proved an excellent source of information regarding types of houses, fattening and laying rations and a host of other difficulties of which only a poultry-man can conceive.

The Dairy Department dealt chiefly with the handling of milk and its products in a sanitary, practical and profitable manner, prominent features being the covered milk pail, the milk scales, the Babcock tester, and the septic tank for the disposal of Creamery and Cheesery sewage.

The Physics Department confined itself entirely to tile drainage and protection of buildings from lightning. The latter provided a never-ending topic for discussion, owing to the prevailing prejudice, throughout the province, against this most useful application of science to the needs of the general public. It was with great difficulty that some men could be led to believe that lightning rods were useful for any other purpose than to dispossess them of some their hard-earned dollars. Having spent a week in charge of this department, the writer knows whereof he speaks.

As the major part of the discussion at the cars, was of interest chiefly to men, and that the ladies might not consider themselves neglected, one of

the "troupe" was a Women's Institute delegate, who addressed the members of the Women's Institutes in the afternoons, upon topics purely of interest to women. The delegates sent out were ladies whose views and opinions were well worth considering. Miss Ethel M. Chapman, Associate Editor of the *Farmers' Magazine*, being the one who was present during the week which the writer spent with the train.

Following the events of the afternoon, an evening meeting was held, usually in the Town Hall or other suitable building. Addresses were given on different phases of agriculture, followed by a moving picture "show," which was both interesting and instructive. Especially did this part of the evening's entertainment interest the younger members of the audience, who, when the last address was over, waited in breathless silence for the first "click-click" of the unwinding reel. Three large, thousand-foot films were run through, showing in an altogether novel manner such interesting features as Rural School Fairs, surveying for drainage levels, the ditching machine in operation, the judging of live stock at the Canadian National Exhibition, 1915, the sanitary production of milk, improved methods in orcharding and other amusing incidents of minor importance.

To estimate the value of the "Better Farming" train to the general agriculture of the Province would be a difficult problem indeed, but there can be no doubt that much is done in this way, which could be accomplished in no other manner. In an article on Demonstration Lectures, Mr. Geo. A. Putnam, Superintendent of the Farm-

ers' Institute Branch, Ontario Department of Agriculture, says, "Teachers are coming to value, at its true worth, this form of instruction, and the possibility of applying this method in the fields of agriculture and household science is unlimited." As before stated, only a very small percentage of the people may be reached by means of literature, and, in any event, mere reading cannot convey the same impression as an actual demonstration. Also, the people who are in greatest need of further information—and many of whom are reached in this way—are those who do little or absolutely no reading, outside of the daily or weekly newspaper. The distribution of literature—pamphlets and bulletins—in conjunction with the demonstration, is more likely to have the desired effect than the mere mailing of this matter to the individual. His interest and curiosity has been somewhat aroused by the demonstrations and, while it is still fresh, he is more likely to read than if the bulletins had come to him casually through the mail. The adaptation of motion pictures to educational purpose is decidedly something new, especially in Agriculture, yet there is no field in which their use may become more widespread. How much more impressive it is to see an apparently living animal move across the screen, to be able to observe the style and action of a horse, as well as the good points of his conformation, than to view a mere photograph or lantern slide. Every branch of Agriculture has a use for motion pictures to illustrate some of its phases; hence, in the near future, we may expect their general adoption in Demonstration Lectures.

## The Drainage Plot: Its Value

By L. G. Heimpel, '18.

**A**BOUT three years ago the Department of Agriculture of the Province of Ontario purchased a traction ditcher and placed it in the hands of the Department of Physics of the Ontario Agricultural College. By its use it was purposed to prove to the farmers of the province the value of underdrainage, and demonstrate to them the best methods of tile draining. For three years this machine has been in operation at different places in the province, underdraining one or two

extent, and must be uniform in contour, texture of soil and fertility. It is desirable to have the plot in as public a place as possible, for which reason it should be situated along a much travelled highway, and should slope towards it. There must be also at no great distance from the field a suitable outlet for the drains.

After such a field has been found, a survey is made from which a system of drains is planned and mapped. This map is handed to the men in charge of



A Typical Demonstration.

demonstration plots in a county. It is at work this year, and we shall try to describe how a low, cold field, which had never attracted any attention, save as a rural skating rink in winter, is transformed into a drainage plot and becomes a centre of interest to the farming community for years to come.

The plots are chosen by efficient men under the direction of the Department of Physics, and must possess the following requirements:

The field must be about ten acres in

the traction ditcher, who construct drains as required.

From the time the unwieldy "Ditcher" arrives at the field until it has completed its task the field is the centre of interest and gossip for the community. Few farmers within a radius of several miles of the plot but will have paid a visit to the scene of operations, and through questioning have gained valuable information as to the ways and means of underdraining.

Although the machine and its oper-

ators have these visitors every day, the most important event in the evolution of a drainage plot is the demonstration. The enterprising District Representative of the county circulates through the medium of posters and newspapers the announcement that a drainage demonstration is to be held at Mr. Blank's farm and that speeches are to be made by experts from the Department of Physics of the O. A. College. Expectancy runs high, and "Demonstration" talk is heard on all sides. The following, overheard by us, occurred between two neighbors, one of whom was an Irishman:

First neighbor—"But what do they do at this demonstration anyhow?"

Second neighbor—"Oh, I don't just know, but some one said that the Lieutenant-Governor will be here to let the water into the tile."

Demonstration day generally finds the work in full swing, and when the farmers arrive the lesson of the value and necessity of underdrainage as well as the best methods of constructing the drains is made clear both by word and example. These demonstrations are almost always very well attended, and we feel certain that they do a great amount of good in convincing those attending how low, wet land, producing hitherto nothing more valuable

than coarse grass can be made to produce the finest crops.

But the value of a drainage plot does not cease here. Only one half of the field is drained, the remainder being left in its natural state. In one half of the drained portion the drains are laid four rods apart; on the other half they are laid two rods apart. Half of the drains are laid at depths of from two to two and one-half feet, the remainder at depths of from three to three and a half feet, thereby making the experiment a three-fold one, and since there are drainage plots in almost every kind of soil, it is possible for the Department of Physics to compile accurate data as to the important questions involved, such as at what distance apart drains should be laid in different soils, and as to what depths they should be placed to give the best possible results.

The standing crops on the different parts of the plot later shows the community the actual results that follow underdrainage. Also through this work the Department is enabled to secure accurate information and place before the farmers of the province and of the Dominion reliable advice as to construction and costs. To the question, Does underdrainage pay? the "drainage plot" answers—"It does pay and it pays well."

## Why is a Hen?

*By P. D. Vahey.*

THE above heading may strike you as being rather peculiar, yet the average farmer of today knows very little of the why and the wherefore of the ordinary hen.

This is an age of progress, and in no place has this fact been more clearly demonstrated than on the farm. Larger

and more improved machinery is being used, more care and attention is being paid to the breeding of stock and in the selection of seed grain, more luxurious facilities for transportation are in evidence, and rural social conditions are improving, yet the vast majority of farmers pay very little, if any,



attention to the farm poultry. Wherein lies the cause of this indifference?

In the first place the farmer fails to realize that a well managed flock of poultry is a paying proposition, hence very little care or attention is exercised in the feeding or housing of the birds. The care of the young chicks is generally left to the housewife who already has more work than she can reasonably attend to, hence they are more or less neglected. The hen house, in a great many cases, is merely a corner of the general stabling, partitioned off to keep the fowl from the other stock. They

offering such unexcelled opportunities for poultry raising should be importing from other countries such a large amount of poultry products annually.

However, it is gratifying to note that our Government has seen the need along this line, and during the past few years has established a number of breeding stations throughout the province. Their aim has been to produce a bird that would be best suited to the needs of the farmer,—one in which is combined both the egg-laying and meat-producing qualities. The Barred Plymouth Rock was chosen as



Poultry Exhibit at Rural School Fair.

are generally fed once a day upon whatever grain is least expensive and most abundant, and the farmer feels quite satisfied if they, in return, supply a few eggs for the table and an occasional "roaster" when the "parson" comes to dinner.

Again, not enough attention is being paid to the breeds kept. Several breeds are allowed to intermingle, and the resulting generations will deteriorate just as surely in poultry as in live stock of any other kind.

It is a lamentable fact that a country the size of our fair Dominion, and

a bird well suited for this purpose, and since that time, by means of trapping and conscientious breeding, a bred-to-lay strain has been built up.

The object at the present time is to get these birds distributed throughout the province. Already a great many of the more enterprising farmers are availing themselves of the opportunity of securing sittings of eggs from these high layers, and a large number of young cockerels are being sold every year. It is here that the Rural School Fairs are doing a good work. Each year hundreds of dozens of eggs from

these bred-to-lay birds are distributed through the District Representatives to the school children of the rural communities. These eggs are set and the chicks hatched from them are cared for by the children through all the stages of their development, and in the fall are shown by the children at their own fall fair. It is hard to say just how far-reaching the results of this work will be. Not only will the home flock be improved by the addition of birds of this quality, but a greater interest will be taken by the children in this line of

farm work. When we consider that the children of today will be the men and women of tomorrow, the future of the poultry industry looks very encouraging.

With these, and other factors at work, it is to be hoped that the farmers will soon come to a full realization of the profits to be derived from this important branch of farm work, and that poultry keeping will be established in a prominent place among the agricultural activities of our Dominion.

## The District Representative

By J. G. Archibald

**U**NLESS it be the Kaiser, there is probably no man so much talked about in rural Ontario today as the District Representative, or, as he is more frequently dubbed, "that agricultural fellow," "the school fair man," etc. And very few come in for so large a share of criticism, mostly adverse, much of it unjust, in a certain sense, and yet not altogether unjust.

This last statement may seem confusing, or even contradictory, so an explanation is in order. By far the greater part of this adverse criticism comes from the farmers who either do not know the district representative personally, or have only a bare acquaintance with him. They have heard in a vague way of what his business is among them, and, like so many others, they immediately, and without further inquiry into the matter size him up as a "dude," or a "kid glove" farmer, and some even go so far as to regard him as a parasite upon society, living on the fruits of other people's labors. This is the unjust part of the criticism.

Now it is the business of the district representative to correct this false impression of himself and his work, and if he doesn't do it the criticism is not altogether unjust. And, I can say without fear of contradiction that, too often, such is the case. I say this from my own personal experience, not only in the county in which I was stationed, but in the neighboring counties, and from frequent conversation with men who have had experience in this same work at various points all over this province.

In very many cases you will find that the representative is well acquainted with, at the most, about 10 per cent. of the farmers, and almost invariably they are the prosperous go-ahead men of the district, who do not need his advice, or any aid he may be able to bring, half as much as the large majority whom he does not know.

I wish it to be plainly understood that I am not making any personal allusions or insinuations, or that I am wanting to knock the district representatives in general. If I cher-

ished such feelings this article would not appear. I am personally acquainted with many of the representatives and I honestly believe that they are men with the very best intentions and with the interests of the work at heart. But I ask anyone who has ever had anything to do with this work to consider seriously the statement which I have made; I am sure that deep down in his heart he will admit that it is true. Not intentionally true but through thoughtlessness and lack of initiative much is left undone which might profitably be done. There is something radically wrong in the working out of the system, which must be corrected if any measure of success is to be obtained.

Therefore I would say

#### To the Representative

Get out and get well acquainted with as many of the farmers as you possibly can, whether good, bad, or indifferent. If good, keep your ears open for all the valuable information they may give, for their practical experience is worth more for their particular locality than all the college training you can scrape up, and don't be afraid to ask lots of questions. It doesn't show ignorance, it shows broad-mindedness, and we can always learn something from the other fellow. If bad or indifferent, suggest in a kindly way how they might better themselves. Never make the mistake with a backward farmer of quoting "the college" as your authority; quote from your own experience or the experience of his well-to-do neighbor, and point out wherein he is lacking. One good, heart to heart talk with a farmer does more good than a dozen Farmers' Institute speeches, or as many bulletins.

So, when you have rounded up your office work, attended to any outside

executive work which may present itself, and have given the assistant enough to keep him going for a week, don't yield to the temptation to recline in your office chair and read the market reports; go around to the livery and get a horse and rig for the day, or run down to the garage, crank up the ubiquitous "Ford," and proceed to mingle with the farming community. Get out to the back lots and the back concessions and let the farmers know who you are and what you are endeavoring to do. You will have an appetite for your supper when you get back, and you will feel that you have accomplished something however small, and in the end "the littles make the muckles."

#### To the Undergraduate Who Looks Forward to Representative Work.

The tasks of the district representative are many and varied. You must be prepared to do anything from addressing a Women's Institute meeting to doctoring a sick cow; from erecting a 30 x 50 tent to doing journalistic work for the local papers. In short you must be a capable, "all-round" man.

You must have a practical knowledge of all ordinary farming operations. The man who has not spent at least several years at practical work on a farm will never make a successful representative. The farmers soon find out how much you know about farm work, and if you can't hitch a team to a plow or harrow, or build a load of hay, or stook a field of wheat, don't attempt the representative job. It wouldn't be logical and you would be laughed at, that's all.

You must be a good "mixer," that is you must be able to be free, and yet not "fresh," with every man with

whom you come in contact. Never appear to be in too much of a hurry when you meet a man. Stop and talk to him for a few minutes, and show an interest in what he has to say. If you are judging school fair plots don't hurriedly score the plot and "beat it" in order to avoid a conversation with the owner of the place. To stop and chat for a few minutes may seem a delay at the time, but in the long run more good will be done by these little talks than if you had hustled around in a mad endeavor to finish the job and be done with it. Always have a cheery greeting for every man you meet, no matter how little acquainted you are. It does you no harm and it may do him a whole lot of good; and, if you can, always call a man by name. These may be little things, but they will go a long way towards your popularity and success.

And last, but not least, like every other man serving the public, you must be prepared to take lots of abuse, letting it in one ear and out the other. A thin-skinned or quick-tempered man should never contemplate being a representative. If he does, sooner or later there will come a clash, which, to say the least, would be detrimental to his own dignity and to that of the calling which he pursues.

#### To the Farmer.

Make use of your district representative. He is placed in the county for your good, and it is up to you to cultivate his acquaintance. Welcome him to your home and talk over your agricultural problems with him. Don't be afraid to state your opinions, and be broad-minded enough to give due consideration to his if they differ from yours.

Don't think of him as a man above you, a man with a soft job, nothing to do but drive around the country with a white collar on. If he has a soft job it's your fault to a certain extent because you will not give him anything to do. Call upon him for assistance in any doubtful matter relating to your farming practices, and when you have got to know him and profited by the acquaintance, tell your neighbor, so that he may profit also.

\* \* \*

In conclusion let me state that I have firm faith in the district representative system of agricultural advancement. I think it has come to stay. But there is a right and a wrong way of going at everything, and the ultimate success of the work depends to a greater extent on the personal initiative of the representative himself, and to a lesser extent on the hearty co-operation of the rural community with him.



## Poultry Raising in B.C. During the Past Year

*By J. R. Terry.*

IN common with most other branches of agriculture, the poultry business has not been so profitable as in years previous. Owing to the quiet times the prices realized for eggs and market poultry have been much lower than for many years past. During the past year the number of fowls raised has decreased about forty per cent as compared with the year previous. This decrease was caused not so much by the lower prices received for products, but rather on account of the higher price of feed-stuffs. Take the cost of wheat alone. In some cases, the price rose fifty per cent. However, we are glad to report that the prospects are much brighter at the present time. With the usual higher prices for eggs in the Fall, has come a very welcome lowering in the price of food-stuffs.

During the past three or four years the Provincial Government have been running an International Egg-Laying Contest. This has done a great deal

to stimulate the breeding of strictly utility poultry, and has been the means of grading up the average farm flocks very considerably. In no other Province in the Dominion is there a bigger percentage of pure-bred fowls kept on the farms. Particularly is this true in the newer sections of the Province. In the northern parts of the Province, such as the Buckley Valley, Prince Rupert, and Peace River districts, the proportion of pure-bred fowls on the farms is very high. This is due to the establishment of Poultry Breeding Stations in different sections there.

Some of the problems confronting the poultry raisers at the present time are, lack of co-operation in marketing, exorbitant transportation rates, the dishonesty of some dealers in selling other than fresh eggs as such, the lack of proper inspection of poultry imported into the Province, and the strong competition of cheaply produced Oriental poultry products.

## The Art of Beekeeping

*By H. H. Selwyn.*

AT first sight, beekeeping looks like a get-rich-quick scheme. In fact there are many people today who have bought one or two colonies in May and without more than a few hours' labor all told that summer have gathered in the equal, often more than the equal of the original outlay, in beautiful white sections of purest honey.

This is where the delusion begins, and, incidentally, ends. The amateur figuring that if one colony brings in ten dollars' worth of honey, one hundred will bring one hundred times as much, goes into the business on a large scale (the same season if possible so as not to miss a crop), and loses all his stock during the rigorous months of the

ensuing winter. Briefly put, this is the sum and substance of the majority of failures in beekeeping.

When a colony of bees is purchased in the Spring everything is plain sailing toward the harvesting of a crop without the assistance of man in so far as the bees are concerned. But, without experience, the balance of the year will most surely bring disaster.

Even as good wintering insures a rapid upbuild in Spring, so does autumn preparation ensure good wintering and in the majority of cases this knowledge is gained only by experience and experience along any line whatsoever is costly.

First and foremost the prospective apiarist must learn the value of young and prolific queens and their influence on the surplus being worked for. To the amateur a frame of brood is a frame of brood, but to the trained eye one glance is sufficient to show whether the producer of the brood stands in the 3,000 to 4,000 eggs per day class or whether she is "killing time" on the combs. In other words the queen is the key stone of the structure. Should she fail, the upbuilding of the colony is doomed.

Next in importance is the matter of food supply during the long winter months. The beginner never gets it into his head that bees need honey during times of dearth, that is, until he has lost most of them. This is a fact. The actual period during which surplus is stored **in quantity** does not exceed six weeks out of the twelve months. Yet within that time if the season be good, a strong colony will often lay away two hundred pounds. Records go to prove it. But because they do it then do not think such conditions continue to exist. Do not imagine the bees in some miraculous way are able to soar into the heavens

at all times and return with nectar. The range of the bee is only 2 to 2½ miles from home and the observant bee-man must know what forms the source of supply. Therefore leave the bees forty or fifty pounds of their store for winter and spring sustenance. If honey is precious duplicate it with good cane sugar syrup but don't stint them their source of heat and energy. Bees never waste, never overeat or throw away an atom when living as Nature intended.

Lastly it has to be learned that bees are much like human beings in that they must have good dry comfortable quarters during winter with plenty of fresh air—not necessarily warm. The respiration of these tiny insects calls for oxygen and they constantly give off carbon dioxide and moisture. Therefore some form of slow but steady ventilation must be provided for. This is generally best obtained by placing the hives in an underground repository built in dry sandy soil.

Such a dwelling maintains the constant temperature of mother earth and meets with the demands of the clustering bees which abhor a fluctuating temperature, as it causes a contracting and expanding of the cluster and an accompanying gorging of food to meet the increased demand for heat.

This works havoc with the intestinal tract. Abnormal quantities of waste material gather and dysentery is set up which soon wipes out the entire cluster.

This is not a glowing treatise on the study. Yet every man who wishes to succeed in prying from Nature some of this inexhaustible store of the finest of sweets, of which tons annually go to waste, must face such facts and learn that they are part and parcel of the undertaking. Beekeeping does not

line up in the "something-for-nothing" specialized branches of agriculture and list. Not by any means. On the profit runs conversely with risk. Both contrary it is one of the most highly are equally great.



*As W. J. Locke says:*

**"To earn one's bread; to perpetuate one's species; to create duties and responsibilities; to meet them like a brave man; to put the new generation upon the right path; to look back upon it all and say, 'I have fulfilled my functions,' and pass forth quietly into the eternal laboratory-- is not that Life in its truth and essence?"**

Chicago, Ill., Nov. 8, 1915.

Dr. Creelman,  
College.

Father passed away yesterday morning. Interment at Vineland Station, Tuesday afternoon.

Walter Rittenhouse.

**T**HIS brief message announces the passing away of a good friend and generous patron of Ontario Agriculture—Moses F. Rittenhouse, born on a farm at Vineland, went as a boy to Chicago, worked in a lumber yard and finally became one of the best known lumber men in America.

As his circumstances improved, he often revisited his old home and soon began to assist in improving the neighborhood. He rebuilt the old school, added a library and manual training department, started a school garden, and employed a caretaker and gardener by the year to look after the school grounds. He then bought a fine grove and built a large meetinghouse. He engaged a band to play one night each week in the summer time, and this grove and this hall became the centre of attraction for young and old for miles around.

When the location of a fruit Experiment Station was under consideration by the Government, he stepped in and offered to buy a farm and present it to the Department. His offer was accepted and the farm has now been operated for eight years for the benefit of the fruit growers of Ontario. Since then Mr. Rittenhouse has taken delight in "fixing up" the old neighborhood. He spent \$35,000 on the road alone, put in a pumping station at the lake for water supply for the school and hall and farm, planted shade trees, and built cement walks for the school children, and generally took pride in the improvement of the district. He made no speeches, he avoided all publicity, he kept in the background at all times, and he lived in a rented house to the time of his death.

It might well be said of him as was said of Brutus:—

"His life was gentle and the elements so mixed in him, that Nature might stand up and say to all the world "This was a man."

G. C. CREELMAN.



# THE O. A. C. REVIEW

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## Editorial

Professor Reynolds' acceptance of the call to the Presidency of the Manitoba Agricultural College has caused a blank in the faculty of the Ontario Agricultural College and in the life of the student body that will indeed be hard to fill. For the last twenty-two years he has been closely identified with all that pertained to the welfare of the College and his absence from our midst will be felt for a long time to come.

It was in September 1893, that Professor Reynolds first came on the College staff. He was born on December 25th, 1867, on a farm near Solina, Durham County. He taught in a rural school for a year and then went to Toronto University, from which he was graduated B.A. in 1893. He came to the College in the year of his graduation and became Assistant Resident ~~Master as successor to John McCrae~~ now at the front and a son of Colonel McCrae of Guelph. Professor Reynolds immediately started developing the department of English and Physics which subjects at that time were combined

He was Lecturer in English and Physics in 1896-7 and Professor of

English and Lecturer in Physics from 1898 to 1906. In 1903 Professor W. H. Day came on the staff as Demonstrator in Physics and in 1906 Professor Reynolds finally decided to devote all his energies to the development of the Department of English. Since 1906 he has been Professor of English.

About the time that Professor Reynolds came to Guelph the first Bachelors' Club was formed with G. A. Putnam, Professors Harcourt, G. E. Day, Hutt, Harrison and Reynolds as charter members. This condition of affairs, however, did not last long, as the city of Guelph, so long noted for its generosity to the College students in this respect, furnished wives for all of the charter members of the Bachelors' Club inside of five years. On 23rd December, 1897, Professor Reynolds married Miss Gowdie of Guelph. Professor Harcourt on that occasion stood by Professor Reynolds as groomsmen.

During the early years of his connection with the College he used to work on the farm during the summer months. Throughout his whole connection with the College he has always maintained the closest connection with

life on the farm. In late years he has owned and successfully operated a dairy farm of 65 acres about 2 miles from the College. His purpose in life was always to keep closely in touch with the farmers so that he could use all his talents to promote their welfare. How well he succeeded in this object we need not say, because all who ever came in contact with him know. He it was who started the system of under-drainage survey work which has now grown to such dimensions and which has meant so much to farming and is destined to mean much more in the future. He was a great student and good disciplinarian. He won the respect and admiration of the students by his breadth of view, frankness and fearlessness of opinion.

But high as is the place Professor Reynolds has won in the lives of students and ex-students as farmer, student teacher and Professor is his place in their characters as a man and a gentleman.

While expressing our appreciation of Professor Reynolds' sterling qualities, we must also remember Mrs. Reynolds. Although she is not so well known to the College students of later years, she will be long remembered by those who had the good fortune to be students when the size of the student body permitted of the closer social contact between the students and the faculty and their wives and homes. Those students will long remember Mrs. Reynolds for her unflinching self-sacrificing, happy spirit, which was always ready to sympathize and enter into the lives of others around her.

Our best wishes go with Professor Reynolds and his wife and family. We hope their life in the West will be long, prosperous and happy. We know that the Manitoba Agricultural College is to be congratulated in having secured

a man who has proved his worth and we prophecy for both President Reynolds and the Manitoba Agricultural College a great future of service in the New West.

#### PROFESSOR MCCREADY

Professor S. B. McCready before coming to Guelph was head of the Science Department in London Collegiate. In January, 1905, he succeeded Dr. Muldrew as Professor of Nature Study at the Macdonald Institute. He later undertook the lecture work in Botany in this College, holding the position that Professor Howitt now fills.

He conducted the first class of public school teachers selected from the different provinces of Canada and sent to Guelph by Sir Wm. McKenzie.

A few years ago, when the Department of Education took over the Department of Nature Study, Professor McCready became Director of Elementary Agricultural Education for Ontario. It is perhaps in this field that Professor McCready has made his greatest contribution to rural life in Ontario. He was an enthusiastic and ardent believer in the rural school and its possibilities and to him possibly more than to any other one man is due the recent great awakening of interest in teaching Agriculture in the school.

Possibly the greatest monument to his memory has been the establishment of summer schools for rural teachers and school inspectors. A summer school for Normal school pupils was established in 1909 and about the same time a five week's course for rural teachers. Conferences were held for school inspection and last year a summer school was held for them lasting two weeks.

Through these conferences and summer schools a great stimulus has been

given to rural education. The foundation has just been laid and the fruits of Professor McCready's labor will be reaped for many years to come.

He is now at Prince of Wales College, Charlottetown, P.E.I., where he is establishing a Department of Rural Science. May he and his family have success and prosperity in their new field of labor.

\* \* \*

The pity is that men of the calibre of Prof. Reynolds and Prof. McCready cannot be allowed to finish their work here. Since the opening of the term, Mr. Galbraith and Mr. Southworth have accepted positions on the staff of the Manitoba Agricultural College and Mr. McCulloch has lately left to undertake work for the Oregon State College of Agriculture. We are glad to see the ability of our men recognized by sister institutions, but Ontario should be able to offer these men scope for their highest work. Is it that the powers that be do not recognize the value of these men to the Ontario Agricultural College and the country at large. Our Alma Mater has a reputation justly earned and broadly known but she must look alive lest she be outrun by some of her young rivals in adjoining provinces and states.

One of our exchanges—The Oregon Countryman—in a recent number has this to say of Mr. McCulloch: "The Poultry Department has been very fortunate in securing Mr. A. C. McCulloch, of Ontario, Canada, to fill the vacancy made by the loss of Mr. Lunn. Mr. McCulloch took his graduate work in Poultry under Prof. W. R. Graham, one of the foremost poultry men of the day, and since completing his course has been instructor in poultry at Ontario Agricultural College. Coming as he does, with training from one of the leading Eastern Colleges, much is expected of our new instructor."

\* \* \*

For the second time the O.A.C. has carried off the championship at the inter-faculty meet at 'Varsity. The usual celebration took place but some of the "old boys" would have thought it scarcely deserving of the appellation of celebration.

The students are to be congratulated on the sensible and hearty way in which the parade and, indeed, the entire function was carried out. It is to be hoped that hereafter, similar affairs will be carried out in the same proportions.



## Alumni

To Ex-students of the O.A.C.:—

The success of our magazine and the Alumni Department in particular depends on your co-operation.

The purpose of the Alumni Department is to keep in touch with the old boys and it is impossible for the Editor of this department to do so without co-operation.

If you have anything of interest to contribute to these columns in the way of photographs of old boys, their homes or what they are doing, we would appreciate it very much, for only in this way can the Alumni department be made of genuine interest. Once more then we ask your hearty co-operation in the matter.

H. G. Crawford, '15, spent the past summer doing investigational work for the Provincial Department of Entomology at Simcoe, Ont. Mr. Crawford's work consisted of an enquiry into the life history of and injury done by *Capsidae* (plant bugs).

Mr. Crawford recently spent a few days at the O.A.C. before returning to his home at Wilton Grove, Ont., where he intends to reside for the winter and engage in research work.

A. G. Dustan, '15, is now working for the Dominion Department of Entomology, with headquarters at Bridgetown, N.S. He will be more particularly engaged during the coming winter in connection with the control measures for Brown-tail Moth in that Province.

Geo. Jackson, '15, is assisting the District Representative for the Department of Agriculture at Newmarket, Ont.

G. A. Williams, Associate of '17, has left the Chemical Department at the O.A.C., where he worked during the summer in connection with fertilizer tests, to be assistant to the District Representative for Hastings County, headquarters, Sterling, Ont.

Harry Sproule, Associate '16, has joined the staff of the Dairy Department at the O.A.C.

We take the liberty of reprinting the following interesting account of Mr. C. M. McLennan, Associate '10, from the columns of the *Nor'-West Farmer*. Mr. McLennan is another O.A.C. man making a name for himself in the field of journalism.

### "Mr. McLennan Joins Our Staff.

We have pleasure in presenting herewith the portrait of Mr. C. M. McLennan, who has just joined the editorial staff of *The Nor'-West Farmer*, coming direct from his farm at Rayley, Alberta.

"Mr. McLennan enjoys a diversity of experience that should prove invaluable to him as an agricultural journalist. He has taken a course at the Ontario Agricultural College, he has been previously in western agricultural journalism, and, last, but by no means least, he has "made good" at farming on his own account. Though born in Mexico, Mr. McLennan is thoroughly British and Canadian in his instincts, so much so that shortly after the outbreak of the present war he offered himself for enlistment in the 20th Battery, C.E.F., but, owing to a physical injury received in youth, he was rejected by the examining physician.

After completing his high school

course, he took the associate course at the Ontario Agricultural College, Guelph, finishing in 1910. Going west to Alberta and Montana, he "punched cows" and was foreman of a sheep ranch for two years. From 1912 till early in 1915 he was agricultural editor and staff reporter for the Lethbridge Daily Herald, and as such gained a large acquaintance with the men and affairs of that province. Leaving that position, Mr. McLennan has since been farming on his own account, and he comes direct from the plow and threshing machine to our office.

#### Engagements.

Mrs. M. E. Oliver, of Hamilton, Ont., announces the engagement of her daughter, Rita Sinclair, to Captain Herbert L. Keegan, 50th Battalion C.E.F., Calagry. Both young people have many friends here and we offer hearty congratulations.

Captain Keegan is a graduate of 1913. Prior to enlistment he was acting as Assistant to the Superintendent of the Dominion Experimental Farm at Agassiz, B.C.

J. C. Fuller, Associate of '17, passed through Guelph on October 25th on his way to Montreal from where he will sail to join the Princess Patricia Canadian Light Infantry in France.

A number of Mr. Fuller's friends from the College met him at the station to wish him good luck and a safe return.

#### WEDDING BELLS

##### Tisdale-Black

The marriage of Edith Rose, daughter of the Rev. James R. and Mrs. Black, of Aurora, to William Herbert Jaffray Tisdale, of the staff of the University

of Saskatchewan, son of Mr. and Mrs. P. L. H. Tisdale of Brampton, took place at the bride's home on Wednesday September 28th. The bride was given away by her father and he and his son, the Rev. Binney S. Black of Montreal, shared in conducting the marriage ceremony. The bridal robe was of Duchess satin with a panel of pleated ninon, Miss Alison Black, sister of the bride wore coral colored taffeta, trimmed with cream point d'esprit and lace. The flower girl, Miss Catharine Black, the bride's niece, was in a white mull frock, with pink shoes and stockings.

Captain L. B. Henry of the 76th Battalion, C.E.F., was groomsman. Miss Amy Robsart Jaffray played the wedding marches. Mrs. Fred Tisdale, of Rusholme Road, and Mrs. Harvey H. Black, sang.

##### Colquette-Dougherty

One of Guelph's pretty autumn weddings took place on September 30th when Alice Ethel, daughter of the late Alexander and Mrs. Dougherty, was married to Richard Daniel Colquette, B.S.A. of Peterboro, son of Mr. and Mrs. R. J. Colquette of Feversham, by the Rev. Wilfred Goetz of Norfolk Street Methodist Church. It was a house wedding and there were no attendants, her brother Mr. William G. Dougherty giving away the girlish bride, who wore ivory silk crepe de chine, pearl-trimmed and a bridal veil caught with orange blossoms. Mr. John Hockin the bride's cousin played the wedding march and Prof. Chas. Kelly sang. There was a reception after the ceremony when about 75 guests paid homage to the young couple. Later Mr. and Mrs. Colquette left for Peterboro, the bride wearing a tailored suit of brown cloth and a brown hat trimmed with ostrich tips.

**Harding-Hallet**

A very quiet wedding took place on Wednesday, July 21st, in St. George's Church, Guelph, when Agnes Eleanor, youngest daughter of the late Mr. and Mrs. J. Hallet, Guelph, was married to Mr. Percy S. D. Harding of Perth, Ont., son of the late Douglas Harding and Mrs. Harding of Sutton Montis, Somerset, England. The ceremony was solemnized by the curate, the Rev. Percival Mayes in the presence of the bride's sisters and one or two intimate friends.

Mr. and Mrs. Harding will reside in Perth, where Mr. Harding is District Representative for the County of Lanark.

Owing to the fact that the "Review" is not published during July and August the editor regrets his inability to announce these marriages at an earlier date.

Alumni '14—

652 Niagara St., Victoria, B.C.  
September 18, 1915.

Mr. George Spencer,  
O.A.C., Guelph.

Dear George:—

I am just back from a trip up the Windemere Valley lying between the Rockies and the Selkirks. One stage from Invermere to Golden we covered by auto—a most delightful trip. That country is Switzerland over again on a larger scale. Ducks and geese in thousands but bearing charmed lives! I even had the ill-luck to empty two barrels into a cheeky coyote who stood looking at me and didn't get him. I met Thatcher of '15. He lives at Spillimacheen.

It is quite a change to slide down from 3,000 feet elevation to sea-level again. I certainly love the mountain air and scenery. But when I attempt

to describe the latter and use words adequate to the occasion—then unkind persons ask what I have been drinking.

A great variety of experiences out here! I judged not only live stock at the fairs, but bread, cookies, jams, butter-making contests, babies and waltzing couples! I have not, however, tackled ladies' fancy work, but would undertake a beauty contest at any time.

Sincerely yours.

BERT HOPKINS.

Pergamino, F.C.C.A., Argentine  
Republic,

August 3rd, 1915.

Mr. George Spencer,

Department of Entomology,  
O.A.C., Guelph, Canada.

Dear Spencer:—

I've just had the pleasure to receive your kind letter, dated June the 10th, which I hurry to answer.

Here we are working in the principal Experiment Station of the country, as Director. At present the technicians are not very many for it's a newly re-organized section (Agronomic and Experiment Station—an Agronomic Station is considered of more importance) of the Department of Agriculture of the Argentine. This one, is, by the way, one of the best organized and one of the most important institutions of its kind in the world. I do not exaggerate, George; it's a fact. The Direction General of Agricultural Teaching and Investigations, on which the Station depends, I believe has no equal in existence. The Direction General of Live Stock is recognized by American (U.S.) authorities to occupy the first rank of all of its kind. The Direction of Colonization is doing great work. One of the principal divisions, the Direction General of Agriculture and Agricultural Defense,

is combatting the plagues of our country, plagues as you do not have up there: the locust, for example, which destroys from 20 to 25% of the entire harvest, and over thousands of acres of wheat, leaves nothing. A great many other sections are under this division (e.g. Botany, Entomology, Chemistry, Agricultural Mechanics, Forestry, Special Studies, Introduction of Seeds, etc.). Amongst other dependencies of the Ministry of Agriculture (as we call it) I might enumerate the following: Lands, Colonies, Geology and Mines, Immigration, Meteorology, etc.

We have twenty-two experiment stations throughout the country, where-in experiments are carried on, all the way from camels, llamas and tropical fruits in the north, grapes, wines and fruits of temperate climate in the west, to cereals and live stock in the centre and south.

Yours very truly,

H. CASTRO ZINNY.

In the July number of the "Review" it was requested that persons having addresses of O.A.C. boys at the front, kindly send them to J. M. Creelman, Treasurer of Class '15 Comfort Fund, Grimsby, Ontario.

Addresses have been very slow in coming in and the Editor takes this

opportunity of again bringing this before the readers of the "Review."

### OBITUARY

#### CORPORAL STEWART KENNEDY

Corporal Stewart Kennedy, youngest son of Mr. and Mrs. John W. Kennedy, of Apple Hill, Ont., was reported killed in action on July 2nd. Corporal Kennedy was a B.S.A. of the Agricultural College, Guelph, and was for some time in the live stock record branch of the Department of Agriculture at Ottawa, and subsequently District Representative at Perth. In 1912 he entered Queen's University at Kingston, taking the science course. While out on railway construction work during vacation of 1914 he joined the 51st Soo Rifles. He was wounded at Lange-marck, but soon recovered, and returning to duty, was killed instantly on July 2nd, being struck by a bullet in the side. He was buried where he fell, and through the kind thoughtfulness of one of his officers a snapshot of his grave has been received by his mother. His captain gave Corporal Kennedy the commendation of being the most reliable non-commissioned officer in his regiment.

A memorial service was held in the Maxville Church, of which he was a member, conducted by the pastor, Rev. H. D. Whitmore.



## Athletics



### O.A.C. vs. SR. MEDS. TORONTO

**T**HE first quarter was not noted for scoring. The local line did some pretty bucking and had possession of the ball most of the time. College bucked down to within a yard of the touch line and lost the ball; Meds. gathered it in, ran back and O.A.C. forced them to rouge. The sound of the whistle found O.A.C. within a few yards of the Med's. line again. 1st quarter 1-0 for locals.

College opened in the second quarter by a heavy buck and White went over for a touch. Cook converted. O.A.C. went down the field again and Evans went across for five points. Meds. kicked, Cook returned, Sullivan by a speedy run and sure tackle nailed his man fifteen yards from the line. Meds. failed to make yards—O.A.C. bucked, Evans made another touch.

2nd quarter 17-0 for O.A.C.

Meds. seemed to tighten up a little in 3rd quarter and forced a rouge on

O.A.C. O.A.C. bucked to within five yards of Med's line.

3rd quarter 17-1.

Springstead opened the last quarter by going over for a touch which was soon followed up by another from Michael and as far as scoring was concerned the game stopped.

Final score: 27-1 in favor of College.

#### O.A.C. Line Up

Scrimmage—Steckle, Springstead, Taylor (Binkley, Begg).

Left Wing—Inside, Clare; middle, Surgenor; outside, Weld.

Right Wing—Inside, Michael; middle, Evans; outside, Sullivan.

Flying Wing—Musgrave.

Halves—Right, White; centre, Cook; left, McEwan.

Quarter—Carncross, Captain.

### O.A.C. vs. HAMILTON ROWING CLUB II.

The final game of the Intermediate O.R.F.U. series for this division was played at Exhibition Park on Saturday, October 30th, when the locals met Hamilton Rowing Club in the return game.

It will be remembered that the word "fight" is generally associated with Hamilton athletics and they tried to live up to their reputation here last Saturday.

The home boys started out the first quarter by forcing three rouges on the Hamiltonians, but could not carry it any further for a while at least. During the 2nd and 3rd quarters the visitors gained a couple of touches and five rouges. They seemed to have the locals outclassed in every respect until within five minutes of closing time when the boys introduced a little "Pep" and some real class y plays, making two



touches and converting both of them; but it was too late in the day for a victory to come their way so they had to be content with ending the game by a tie, 15-15.

#### Line Up

Scrimmage—Steckle, Springstead, Langley.

Left wing—Inside, Clare; middle, Surgenor; outside, Sullivan.

Right wing—Inside, Taylor (Evans); middle, Michael; outside, Cassels.

Halves—Right, White; centre, Cook; left, McEwan.

Flying wing—Musgrave.

with the firsts in Guelph, caused them to have a 13-1 score tallied against them.

The chief difficulty this season seemed to be in getting suitable back divisions for either team. The backs in the first team were a little weak and those of the second team were worse still. In both the games played Saturday these weaknesses showed up badly, and although the lines were working only fair, a strong back division would probably have altered results.

The boys were only able to gain one rouge from Woodstock although sev-



O. A. C. Track Team—Champions Interfaculty Meet.

Quarter—Carncross, captain.

Spares—Foreman, Weld.

#### O. A. C. II. vs. WOODSTOCK.

The O.A.C. Seconds journeyed to Woodstock Saturday morning, Oct. 30th, and played a losing game with Woodstock rugbyists. It will be remembered that the locals trimmed Woodstock in the first game of the series by 10-6 and their hopes ran high to repeat the victory. But fortune failed to smile on them and that, combined with the fact that one of their best men, Cassels, was playing

eral times they tried hard for a touch. They finished strong and showed much better condition than their opponents. Woodstock made most of their points by kicking, being able to make only one touch. This defeat gives Woodstock the championship of the Junior O.R.F.U. for this division.

#### O. A. C. Line-Up.

Scrimmage—Sutton, Richardson, Hoard.

Left wing—Inside, Pearsall; centre, Begg (Graham); outside, Lanis.

Right wing—Inside, Jakes; centre, Delong; outside, Hunter (Fairless.)

Halves—Left, Ingram; centre, Corbett; right, Edwards, captain.

Quarter—Copeland.

Flying wing—Bues.

#### VARSIITY TRACK MEET.

**H**ISTORY has repeated itself and again we are champions of the inter-faculty meet, having bettered our five point lead of last year by four additional points.



"RED" WALLACE,  
Grand Champion O. A. C. Sports.

The meet was held on Friday, Oct. 22nd, a clear, cool day, ideal for such an event. The number present was surprisingly small, the O.A.C. having about the largest representation of all the faculties.

Thirteen faculties were represented in the various events, ten of them securing points. Our closest competitors were the Arts men, who ran us close

through two thirds of the events. At one time it looked as if they might win out, as they had a slight lead on us.

Our boys secured practically all their points in the running events, not getting a place at all in the jumps, and only third in each of the weight events.

A. H. White, '17, won the half mile in easy style, finishing fresh and with a big lead on his man.

In the 220 yards, Newton, '18, and Varey, '16, secured second and third place. Varey won the first heat of this race and should have had the final, but a streak of bad luck in the form of a cramp in the side handicapped him seriously.

In the 440 we had to be contented again with second and third, White, '17, and Wallace, '18, landing these. Both of these races were won by the grand champion of the meet, McLean (Pharmacy) an unusually strong runner.

In the mile run, Raymond, '19, finished first, with Lambert, '18, a close second. Both of these men ran in excellent form, saving themselves and being contented with third and fourth place till the last lap, when they forged ahead and crossed the line winners.

The three mile event saw four more points added to our score, Raymond getting second, and Lambert third. The winner in this, Kennedy of Trinity, was an easy runner, and being fresh he got a lead on the start which our boys could not overtake. Had they been as fresh they would probably have chased him close. Schuyler, '16, got second place in the hurdles, adding three more points to the score.

The relay race was an easy win for the boys, Welton, '16, ran the race of his life, finishing a few feet in the lead. Clark, '16, Bird, '17, and French, '16, gradually increased this lead to half a lap at the finish.

The faculty standing at the finish was:—

Ontario Agricultural College.....	37
Arts.....	28
Science.....	21
Pharmacy.....	13
Victoria.....	8
Medicine.....	8
Trinity.....	5
Forestry.....	3

Dental..... 1  
 St. Michael's..... 1  
 Wycliffe, Vets., and Education had representatives, but they failed to make any points.  
 Results of the events in detail:—  
 Grand champion—C. McLean (Pharmacy).  
 Geddes' gold medal for one mile run won by R. D. Raymond, '19.

## College Life

### MASQUERADE DANCE

THE Macdonald Hall and O.A.C. Sophomore annual Hallowe'en dance, held on Friday evening, Oct. 29th, was a decided success. The committees in charge, although confronted with many obstacles from the first to the last, spared no pains in making things as pleasant and enjoyable as possible, and those who undertook to personate some notorious characters or undergraduates of the same school are to be congratulated upon the success with which their fantastic ideas were put into effect. Mr. Scarecrow with his graceful movements saved many a corn patch from total ruin. John Chinaman also solicited big orders, and many admired the innocence of the school girls and their older sisters in Middies.

The Hall was very artistically decorated with flags, bunting, pennants, Jack o'lanterns and other equipment in keeping with the season, which required much planning and labor during the short hour at the disposal of the committees in charge.

The music furnished by the Lomas Orchestra of Hamilton was most heart-

ily enjoyed by all, especially those who seemed most inclined to make the best use of it, and were reluctant to withdraw especially after those moonlight airs. Happily, however, number ten led to a change and all found refreshment in the lunch provided and so nicely served.

The members of the Y.W.C.A. and Y.M.C.A. are also to be congratulated upon the success with which they conducted the entertainment of those who congregated in the drawing room and library. The witches' den under the stairs speaks for itself and those who indulged were held in awe and suspense, by such clever interpretation of their past, present and future. Many found the Lost Heir, many more a pre-historic placing for the tail on the pig, while others excelled in the art of millinery.

All who were present, including members of the faculty, graduates and ex-students, report a most enjoyable evening. To the students themselves, it forms one of those connecting links in developing the necessary social side of Collegé education and will be long remembered as a bright spot in the hum-drum of daily routine.

## LITERARY

**T**HE first regular meeting of the O.A.C. College Literary Society was held in Massey Hall on the evening of October 12th.

The main feature of the evening was the first of a series of inter-year debates held annually at the College.

President W. P. Macdonald took the chair, and announced the following programme:—

Solo.....Mr. J. R. Higgins  
Solo.....Miss M. Johnson  
Debate—Resolved: "That the present war will end in the dissolution of the German Nation."  
Solo.....Mr. P. L. Fancher  
Reading.....Miss Fairclough

The affirmative of the debate was presented by Messrs. J. H. McCulloch, and A. E. Romyn, of the Senior year, while Messrs. R. G. Sutton and P. B. Slack, of the Junior year, upheld the negative.

That there is no declension of literary

enthusiasm at this College was plainly evidenced by the large turnout at Massey Hall, to this, the first meeting of the year.

The debaters received the best of attention during their argumentations, and are to be congratulated upon the excellency of their preparations. Mr. Sutton's analogy of a tree took well with the hearers, and evidently counted for much with the judges, Prof. J. W. Crow, H. S. Fry, B.S.A., and P. E. Sackville, B.S.A.

A decision was given in favor of the negative, Prof. J. W. Crow acting as critic.

National anthem.

## Elections

## First Year Executive

Honorary President—W. H. Squirrel, B.S.A.

President—E. Stillwell.

Vice-President—R. D. Allen.

Secretary—D. C. Kimball.

Treasurer—R. E. White.

## Macdonald

## THE PAPER CHASE

**W**HAT visions of October beauty are conjured up by that phrase?

On October 16th the Athletic Association held a most successful one.

The hares, Beatrice Watson and Dorothy Chown left the Hall at eight fifty—ten minutes before the hounds—each armed with a large bag of "trail."

The crisp air and bright sunshine proved invigorating and the tireless hares laid trail up hill and down dale—over ploughed fields, through picturesque woods and nettle patches, barn yards, gardens, barbed wire fences—nothing stopped these hares.

The hares returned to the Hall at half-past ten, twenty minutes in ad-

vance of the first hounds, Mary Birkett and Edith Elliott, then came Adah Wells and Agnes Malcolm, and Marie Curtis third.

In a few minutes the rest of the hounds returned, all having spent a most enjoyable morning.

The Athletic Association is certainly the centre of a great deal of activity in the Hall this year.

The Rifle Club has been organized and thanks to the kindness of Col. White and Miss Adams, promises to be a great source of pleasure and profit to all its members.

The ambulance section under Mr. Kendall is arousing great interest and

keen competition is being exhibited for places in the ranks of the lucky thirty-two. One afternoon a week is being given to drill and it is proving of great value both educationally and physically.

The Athletic Association thanks Mr. Kendall very much for the kindness he has shown in giving his time and attention to this object.

### RED CROSS

THE opening of this season's activity in Red Cross work took the form of a fete which was held on Macdonald campus, Saturday, September 25th. Everyone in any way connected with the Hall, Institute and O.A.C. was generous and the sum cleared and handed to the Guelph R.C. Society amounted to \$190.00.

The Society downtown very kindly supplies us with wool for socks as well as all the factory cotton we have time to make into bandages. The socks and bandages are, of course, handed over to the Guelph branch. It has been proposed that we buy our wool and knit for the O.A.C. men. In order to do this we need money—to overcome this difficulty the girls who are able are contributing five cents a week to a R.C. fund at the Hall. Any extra money will be given to Mrs. Creelman to help on the work she is doing for the College men at the war. Twenty-five dollars has already been sent to Mrs. Creelman—fifteen dollars collected from the men at the rugby game on November 6th—and ten dollars from the girls.

Meanwhile the rolling of bandages goes steadily on and the clicking of knitting needles is heard throughout the Hall—led by the enlivening efforts and unflinching goodwill of Mrs. Fuller.

### THE SENIOR NORMALS ENTERTAIN THE JUNIORS AT DINNER

Great curiosity was aroused among the Junior Normals one Friday evening, when each drew from her Post Office box a tiny, interesting-looking envelope with Hallowe'en seal.

"The Senior Normals the Juniors invite To a Hallowe'en Dinner on Tuesday night

So all fuss up and come and eat That the Juniors and Seniors may have a good treat."

Such were the contents.

Promptly at six fifteen on Tuesday evening the Juniors made their way to the drawing room, where they were received by the President and members of the Senior Class. Each Senior then took under her protection one of the "new girls" and the President with Mrs. Fuller followed by the Secretary with Miss Boughner led the procession to the dining room. The interested and envious eyes of the unfortunate occupants of the regular tables, all turned to gaze.

The table decorations were all in keeping with the season, jack o'lanterns surrounded by autumn vines, and fruit, while many candles shed a soft light over the ensemble. Each place was marked by a small pumpkin card with grinning face and the menu was guarded by an ominous-looking witch.

The very dainty and appetizing dinner served testified to the skill of the hostesses and set an ideal for each little junior. Their skill was only rivalled by their charm and devotion to the entertainment of the guests. The party broke up shortly after eight o'clock, each feeling that she knew the members of the other class better and that the best of good-will would in the future exist between them.

**THE BONFIRE**

The Time—10 p.m., October 22nd, 1915.

The Place—Mac. Hall Campus.  
The Girls—Mac. Girls.

It was surely a good and kind fate who conspired to bring about such ideal settings for the annual bonfire. For that the bonfire shall occur is an unwritten law in the O.A.C. code. Some news from the outside world does penetrate the confines of Mac. Hall and great excitement was felt when it was known the night of the bonfire had arrived; and that Mrs. Fuller had so kindly arranged that we might enter into the merriment by word and act.

But no pleasure is without pain and "making up time" like its namesake waits for no man, nor hurries either. Thus it is with sympathy we think of those who missed the triumphal entry.

The Hall was a deserted house on the cry of "They Come," but our loudest cheers were far from expressing the heartiness of the welcome and our pride in the champions' individual success and the honor brought to the College.

The bonfire blazed gloriously, the flames whipping the darkness and illuminating the scene—thereby revealing a balcony of happy, but alas, inaccessible faces. Laughter and song punctuated with class yells, filled the night so long as the fire blazed. But as the flaming structure fell and the shadows grew longer and deeper we realized that all good things have an end. Everyone joined in singing Auld Lang Syne and then to Good Night Ladies we reluctantly left

That all the lights soon went out, that some smelled smoke and knew there must be a fire, was an annoyance to some, a source of amusement to

most, but all agreed in voting it a happy and merry time.

"But the moon was bright  
On that happy night!  
No one said nay  
For us to play.  
In laughter and song  
Ran the fun along,  
Encircling all.

**MACDONALD HALL ELECTIONS****1. Students Council**

President—E. Hopkins.  
Vice-Pres.—M. Moxon.  
Sec.—F. Reek.  
Treas.—A. Scott.

**Representatives**

Sr. Housekeeper—J. McIlquham.  
Sr. Associate—F. Beven.  
Sr. Associate—N. Wells.  
Jr. Associate—M. Hoey.  
Jr. Housekeeper—E. Elliott.  
Jr. Normals—L. Nixon.  
Homemaker—B. I. Hearst.  
Homemaker—C. H. Turner.

**2. Literary Society:**

Pres.—B. Watson.  
Vice-Pres.—D. Bright.  
Sec.—F. Shannon.  
Treas.—G. Ramage.  
Con. of Social Com.—G. Hodgettes.  
Con. of Prog. Com.—P. Miles.  
Con. of Dec. Com.—M. Balkwell.

**3. Athletic:**

Pres.—F. Beven.  
Sec.—K. Percy.  
Treas.—N. Easton.  
Base Ball Manager—M. Stewart.  
Basket Ball Manager—E. Hopper.  
Jr. Rep.—D. Chown.

**4. Y.W.C.A.:**

Pres.—L. McDonald.  
Vice-Pres.—L. Nixon.  
Sec.—M. Wilson.  
Treas.—N. Henderson.  
Con. of Musical Com.—E. O'Flynn.  
Con. of Social Com.—E. Smith.  
Con. of Mission Com.—E. Scott.

Sr. Phil. Rep.—J. McIlquham.  
 Jr. Phil. Rep.—E. Montgomery.

6. Review:

Sr. Review Rep.—M. Sexton.  
 Jr. Review Rep.—B. N. Birkett.

7. Class Presidents:

Sr. Normal—E. Scott.  
 Sr. Housekeeper—N. Henderson.

Sr. Associate—F. Shannon.  
 Jr. Normal—O. Murray.  
 Jr. Housekeeper—R. Fraser.  
 Jr. Associate—F. Cooke.  
 Homemaker—A. V. Marsh.  
 Homemaker—B. I. Hearst.  
 Homemaker—C. D. Wilson.  
 Short Course—M. Musselman.



- HIS FIRST DANCE -  
 - HOW HE FEELS -

## Macdonald Locals

Mr. Iveson (in Chemistry Lab.)—  
 "Yes, Miss Beven, you may come over  
 Saturday morning to make up work."  
 Some more of you had better come too.  
 I can handle four or five girls just as  
 easily as one."

Three cheers for Mr. Iveson.

### GIRLS TAKE WARNING

The O.A.C. men when inviting you out  
 feel capable of entertaining you. Leave  
 your knitting at home.

One who knows.

Mr. Sk-It-n (leaving famous meeting  
 where Senior Dinner was "sat upon")—  
 "Never mind fellows, I wouldn't touch  
 one of those girls with a ten-foot pole  
 anyway."

J. P-ars-n—"Oh, girls, we saw the  
 cutest little calf over in the barn this  
 afternoon."

M. St-wa-t—"What kind was it, a  
 Jersey?"

J. P-ars-n—"No, I don't think so,  
 they called it a heifer."

K. Percy (demonstrating)—"Now,  
 girls, after pouring the boiling water on  
 the tea, you should put it in a cool place  
 to set."

"Pinkey" Wallace (at close of Rugby  
 game with Hamilton)—"Wait! wait!  
 girls. Dont' go away. There's going  
 to be a fight."

Wallace, no doubt, was looking out  
 for protection.

Mr. Bryd-n (noted for modesty)—  
 "But, oh! won't there be wailing and  
 gnashing of teeth in Mac Hall!"

Mr. Cl-rk (self-satisfying look)—  
 "Well, I always thought that the night  
 before was time enough to ask a girl  
 to go anywhere, but now I **know** it."

Groans from the crowd.

Prof. Harcourt—"What is caused by  
 the union of oxygen and hydrogen?"  
 Fair Junior—"Smoke."

Mr. P-w-ll with fair companion,  
 after enquiring their way to the Baptist  
 Church, was told to follow a certain  
 street.

They came to the river.

When the Senior English Class enter  
 their lecture room in Massey Hall they  
 frequently find the blackboard covered  
 with such strange and complicated  
 sentences as the following:

"Voila la fenetre."

"J'aime les dames."

"La Crayon est sur la voie; n'est  
 de pas?"

And the girls are lost in admiration  
 for the marvelous fourth year.

Mr. Unwin (questioning Homemaker  
 A Class)—"Can you tell me what  
 position Colonel Sam Hughes occu-  
 pies?"

Homemaker (rather diffidently)—  
 "Isn't he President of the United  
 States?"

## Local Editor's Query Column

Dear Sir:—To settle an argument, I  
 would like to know why a hen lays an  
 egg.—Dick.

Ans.—If she dropped it, she'd break  
 it.

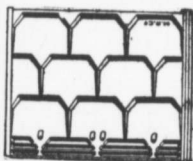
Dear Sir:—My sister and I are  
 troubled by rats. Could you suggest a  
 remedy?

Ans.—None, unless you want to try  
 Herpicide.



## "Eastlake" Galvanized Shingles

Put in roofs thirty years ago are in perfect shape today.



And they look good for another 30 years! That's service! Not claims, or hearsay, but genuine service. All the time they have been protecting the buildings underneath from Fire, Wind-storms, Rain, Sleet and Sun. The "Eastlake" Galvanized Shingle besides being the most durable, has never been equalled for ease in laying, simplicity and perfect weather-tight qualities.

Send for booklet and prices.

### Beautify your Home with Metallic Steel Plates

They give an artistic touch to any room in the house and are valuable for school, church, lodge, etc. What is more valuable, they are fire-proof, easily put on over old walls, are clean, sanitary and last practically forever. A touch of paint or a wash cloth makes Metallic Steel Plates look like new.

Send for illustrations and price-list.

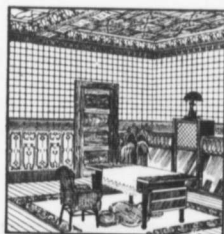
"Empire" Corrugated Iron, "Metallic" Siding, and many other specialties in metal.

### Metallic Roofing Co., Limited

Winnipeg.

Manufacturers.

Toronto.



Kind Sir:—I have a brother at the front who has been wounded in the knee. Can you recommend anything that would help him along?

Ans.—How would a crutch do?

Dear Query Editor:—Why is Mr. Michael getting bald?—Perplexed.

Ans.—The College beds are not as long as those at home.

Dear Local Editor:—Our dog howls in a most aggravating manner. How can we stop him?—Anxious Ann.

Ans.—Use a Maxim silencer.

The "Query Column" has been instituted at the earnest request of the Review readers. All correspondence will be strictly confidential and the questions will receive careful consideration by experts in this line.—Local Editor.

## Locals

Soph. (reviewing Botany notes with roommate)—"Give me an example of aerial roots."

Roommate—"Leggatt's moustache."

Sign of prosperity for the coming winter—Burrows was seen boarding a street car one day recently.

Rowley thinks that the only way to beat White in a race is to get "Reddie" first.

Mr. Baker (in third year Lab.)—Can any of you give me the classification of the road-house?"

Nixon—"Order Fordoptera. Family Tin-lizzidae.

Miss A. to McEwen—"If you were to break your knee in a Rugby game where would you go?"

McEwen—"I'd go to Africa where the negroes. Where would you go if you were to injure your knee?"

Miss A.—"I would go to Italy where the Sheeny grows."

Selwyn—"Do you believe in indiscriminate osculation?"

Skinner—"Well, that depends."

First Israelite—"Ve got signess to our house."

Second Israelite—"Vat's wrong?"

First Israelite—"My poy's sig."

Second Israelite—"Iss he?"

First Israelite—"No, Ikey."

Dr. Bethune—"The bumble beetle flies around and makes a sound about the same size as a bumble bee."

Doc. Reed, after Freshmen had been raising a row:

"Boys! boys! I cannot appreciate this aqurous humor."

Mr. Caesar (in second year Ent.)—"No housefly ever bit anybody."

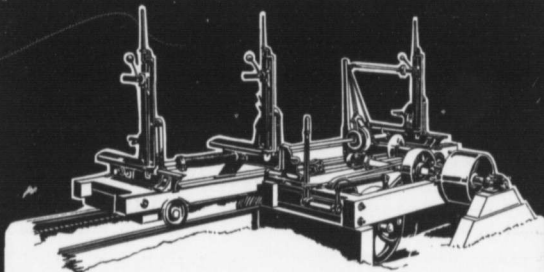
McGregor—"I've been stung by a chicken, though."

Mr. Britton to Mr. Fancher—"Heard you were turned down at the recruiting office."

"Yes, I have a floating rib."

"Why don't you try the navy?"

## WATEROUS PORTABLE SAWMILLS



**IF** the trees on your farm are first quality timber, why cut them on a mill that will lower their market value?

The Waterous Portable Outfit will cut your trees into lumber that is as fine as that turned out by any custom mill. Hundreds of users, who didn't know any more about timber sawing than you do, are proving that every season.

The secret is that the Waterous Portable Mill is built just a little better than is necessary to do portable work—it has special fittings found

only on higher priced mills, that help you cut your logs as they should be. What is more, the Waterous Portable is dead easy to set up, simple to operate, and is built so strong that it will keep on cutting first-class lumber year after year without trouble.

The profit in your trees, and in your neighbors' is worth your investment in this reasonably priced, high-grade mill. Quality counts every time—and especially in lumber making, with prices as high as they are now.

*Send us a card to-day for our Portable Sawmill Catalogue*

**The Waterous Engine Works Co., Ltd., Brantford, Canada**

Please mention the O. A. C. REVIEW when answering advertisements.



## Will Your "Boy" Spend Christmas "Somewhere in France?"

### Then Help Him Spend It Merrily?

Nothing is too good to send to the boys who are serving King and Country. But let our gifts show thought and judgment as well as good-will and love.

Among the few really acceptable gifts—smokes and pipes, chocolates and sweet biscuits, fountain pens and tooth brushes, toilet and shaving supplies—the Gillette Safety Razor ranks as a warm favorite, for one of the real luxuries of trench life is a clean, comfortable Gillette shave.

It's a luxury the lucky ones share with their pals, so send plenty of extra blades. If he has a Gillette already, a few boxes of blades will go far toward making him

the most popular man in his Company.

Welcome as it is on the firing line, the Gillette is even more keenly appreciated in the hospitals. With it the wounded can shave themselves safely, easily and regularly. They certainly do enjoy the Gillette—and Doctors and Nurses can scarcely speak well enough of it.

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Office and Factory:



GILLETTE BLDG.  
MONTREAL



# OFFICIAL CALENDAR

OF THE  
DEPARTMENT OF EDUCATION, FOR THE YEAR 1915

## October:

1. Principals of High and Continuation Schools and Collegiate Institutes to forward list of teachers, etc. (Not later than October 1st.)  
Municipal Council declares by resolution for forming Municipal Board of Education. (On or before 1st October).  
Notice by Trustees of cities, towns, incorporated villages and township Boards to Municipal Clerks, and resolution of Separate School Boards to hold Trustee elections on same day as Municipal elections, due. (On or before 1st October).  
Faculties of Education at University of Toronto and Queen's University, Kingston, open.
15. 'Trustees' Report on purchase for Public School Libraries, to Inspectors, due. (On or before 15th October).

## November:

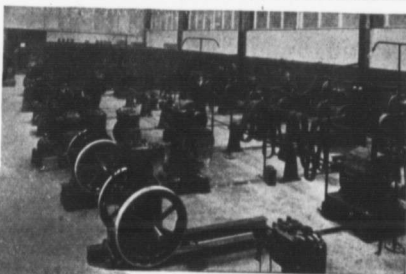
1. Inspectors' Reports on Rural Library grants due. (Not later than 1st November).  
Inspectors' application for Legislative aid for Free Text Books to Rural Schools. (Not later than 1st November).

## December:

1. Last day for appointment of School Auditors by Public and Separate School Trustees. (On or before 1st December).  
Township Clerk to furnish to the School Inspector information of average assessments, etc., of each School Section. (On or before 1st December).  
Legislative grant payable to Trustees of Rural Public and Separate Schools in Districts, second instalment. (On or before 1st December).
7. Returning officers named by resolution of Public School Board. (Before 2nd Wednesday in December).  
Last day for Public and Separate School Trustees to fix places for nominations of Trustees. (Before Second Wednesday in December).
13. Local assessment to be paid Separate School Trustees. (Not later than 14th December).
15. County Council to pay \$500 to High School and Continuation School where Agricultural Department is established. (On or before 15th December).  
Municipal Councils to pay Municipal Grants to High School Boards. (On or before 15th December).
17. Autumn and English-French Model Schools and Normal Schools (first term) close. (Model School Syllabus). (Normal School Syllabus).

## LISTER GASOLINE ENGINES

Over 10,000 in use



### TESTING ROOM

By means of special electrical dynamometers an accurate test of the brake horsepower is taken of every Lister Engine before shipment.

The Lister Gasoline Engine is built in one of the largest and best equipped factories in the British Empire

"An Engine of the highest grade at a moderate price"

Used for educational purposes at the O. A. C., Guelph

**R. A. LISTER & CO., Limited,** 58-60 Stewart St. **TORONTO**  
Winnipeg Quebec St. John, N.B. Works, Dursley, England



## "I See Bill Erected Another Natco"

—Same old story. Bigger profits, more stock, an additional silo. And why is the second silo always a Natco, too? The reasons why are best appreciated by owners of other silos not built for good, whose walls are not air, moisture and frost-proof, resulting in much spoiled ensilage. The Natco stands year in and year out just as the day it was erected, yielding sweet, succulent silage in all parts, through all conditions of weather. Better benefit by the ex-

perience of others and erect the silo that's windproof, decayproof, fire-proof and verminproof—the

## NATCO EVERLASTING SILO

"The Silo That Lasts For Generations"

It's built of hollow vitrified clay tile which will endure forever, and whose glazed surfaces absorb no moisture and totally exclude air and frost. It's reinforced by bands of steel laid in the mortar, and can resist all wind and silage pressures; thus a taller silo with a smaller diameter can be erected for there is no danger of a blowdown. Plan for your new silo now. Send today for a list of Natco owners in your province and ask for Catalog 7.

**National Fire Proofing Company of Canada, Ltd.**  
Toronto, Ont.

Made  
in  
Canada

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It's Wise to Line Modern  
Farm Buildings with  
**LINABESTOS**

"The ONLY Wallboard that is  
Fireproof"

Fireproof — dampproof — vermin-proof and sanitary—easily whitewashed, painted or cleaned—lighter in weight than plaster—practically everlasting—and moderate in price—LINABESTOS is one of the most valuable building materials ever offered.

It is made of Asbestos and Portland Cement, moulded under enormous pressure into sheets 3-16 inches thick, 42 or 48 inches wide, and 4 or 8 feet long. It is nailed or screwed direct to studding or joists, at very small labor cost.

As ceilings for concrete or stone stables, it will stand the condensation of moisture without flaking, cracking or falling.

Frame stables, pig pens and poultry houses lined throughout with LINABESTOS are far more easily kept clean and free from vermin.

For the interior of separator rooms and other dairy buildings it is ideal in its cleanliness, while its fireproof qualities make it especially suitable for engine or feed-cooking rooms, or for garages.

Write us for a sample of LINABESTOS, and for Booklet giving full information about it. Address

**Asbestos Manufacturing  
Co., Limited**

Drummond Building, Montreal  
Factory at Lachine, P. Q. (near  
Montreal)



The Ogilvie Flour Mills Co., Ltd., after a careful study of the needs of the home-bakers, decided to make a flour particularly suited to their requirements. The result was

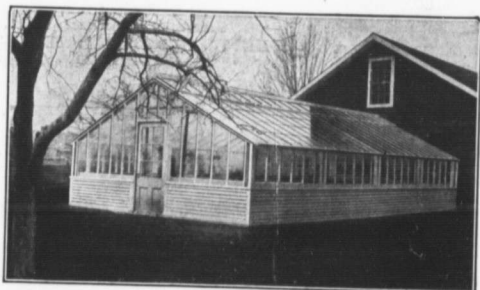
**ROYAL HOUSEHOLD**

so named because it is used by the Royal Family.



Every pound is guaranteed and is especially adapted for either bread or pastry.

**The OGILVIE FLOUR MILLS CO.,**  
LIMITED  
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## WINTER PROFITS

Turn your time in winter to the greatest profit by raising hothouse fruits and vegetables. There's an eager market for them.

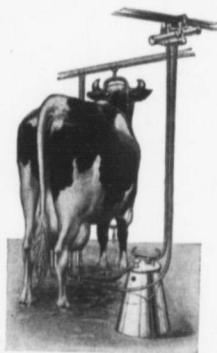
Your success depends on having the most efficient greenhouse at the least cost, and OUR success has been in erecting just such houses. We know where money can be saved, so that the price you pay is the lowest consistent with the requirements for commercial work.

Booklet "A" will tell you something it will pay you to know about Glass Gardens, but best of all write us direct. Write now, while you have this address before you.

### GLASS GARDEN BUILDERS LIMITED

201 CHURCH ST., TORONTO

TRANSPORTATION BLDG., MONTREAL



If you have not read about the Sharples Milkers or seen them operating you'll wonder what is responsible for this great success. **First:** The teat cups used have a double action (see cuts above) suction draws the milk and then the teat is given a positive squeeze from the point upwards—massaging the teat and keeping it soft and pliable. All previous mechanical milkers have failed because they did not squeeze the teat. Competitors have tried to produce this action by similar construction, but lacking successful design and application their machines naturally failed. We guarantee the Sharples Milker will not injure the most valuable cow.

The **Second** reason for success is because by actual free trial we have proved our claims and justified our confidence in the machines. So far as we can learn, we are the only firm ready to allow a free trial of a Mechanical Milker.

Another reason is the firm back of the machines—look up our standing and financial stability, our manufacturing record—the quality of our product.

These things are things that count when investing your money.

## Sharples Separator Co.

1130 DUNDAS STREET, TORONTO.

Mr. Wright (in Botany lecture)—  
"We have the suckers produced under-  
ground."

Stevenson—"Aren't there suckers  
above the ground, too?"

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## Hotel Waverley

Spadina Avenue and College St.  
TORONTO - CANADA

Any Verral Taxi will drive YOU from Depot  
or Wharf—FREE.

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MISS E. S. MARRIOTT,

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METCALFE'S CHOCOLATES—  
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## D. M. FOSTER, L.D.S., D.D.S.

Dentist

Cor Wyndham and MacDonnell Streets.  
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## Best Furs at Reasonable Prices



The unparalleled demand for furs this season has resulted in uniformly higher quotations from all manufacturers of fur garments. Fortunately our complete stock was bought in August; our prices are therefore exceptionally reasonable. We give quotations here-with:

New Fur Sets—High chin-chin collars, and small barrel muffs, in black lynx, golden beaver, Siberian squirrel, French seal and natural badger..  
.....\$50.00 to \$67.50

Hudson Seal Sacque—Finger tip length, the skirt cut with medium wide flare, chin-chin collar of beaver ..  
.....\$135.00

Hudson Seal Sacque—Three-quarter length, in military style, belt, deep collar and cuffs of seal ..  
.....\$150.00

(Write for Further Quotations)

## Murray-Kay, Limited

17-31 King St. East, Toronto, Canada

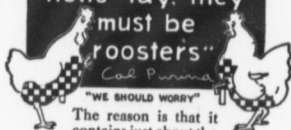
# HOTEL CARLS-RITE TORONTO

The House of Comfort  
American Plan \$2.50 up  
European Plan \$1.00  
"Meet Me at the Carls-Rite"

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**"IF PURINA CHICKEN CHOWDER won't make your hens lay, they must be roosters"**  
*Carl Purina*




**"WE SHOULD WORRY"**  
 The reason is that it contains just about the chemical ingredients found in an egg.

**Purina Chicken Chowder**  
 is made of alfalfa, corn meal, linseed meal, charcoal, bran, middlings, granulated meat. It should be fed dry in a hopper or box. Also throw Purina Scratch Feed on a litter of straw three times a day. The more Chicken Chowder Biddy eats, the more eggs she will lay. Call today and get a bag.



Write us for 1915 PURINA BOOK  
**The Chisholm Milling Co., Ltd.**  
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**A Good Idea!**  
 Use **Windsor Dairy Salt**  
*Made in Canada*



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... THE ...  
**New Fall Fashions**

HIGH-CLASS LADIES' TAILORING  
 AND TAILORED DRESSES

We are always to the front with the latest fashions and goods. Try us and you will come again and send your friends.

**J. N. LANE**  
*Ladies' Tailor*

*Masonic Block, Quebec Street, Guelph*

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## Spencer Microscopes

embody numerous features which appeal strongly to the critical laboratory worker :

Low compact construction—lower than others—avoids inconvenience especially if student's chair is low or his table high.

Seamless rubber covered stages. Extra large stages with long distance with arm to optical axis, thus accommodating large objects and slides. Black lacquered body tubes which completely avoid reflection of light into eyes.

Tested optical accuracy—for 75 years Spencer optics have been leaders.

Highest type of mechanical construction—with emphasis on practical usability.

The illustration shows No. 66, a model specially suitable to high school or similar work. Write for full particulars and prices of Spencer Microscopes.

## The GEO. M. HENDRY CO. Limited

EDUCATIONAL EQUIPMENT

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## Co-Operating with the Agricultural Colleges

When two men are working close together and are striving to bring about similar results, it is logical to assume that they will sooner or later become acquainted with each other.

That is what happened between Agricultural Colleges and

**Wyandotte**  
Dairyman's  
Cleaner and Cleanser

One of the prime objects of the Dairy Department of Agricultural Colleges is to promote the cause of better products. This is the sole purpose of Wyandotte Dairyman's Cleaner and Cleanser. Not long after Wyandotte Dairyman's Cleaner and Cleanser was discovered Dairy Authorities found that the assistance rendered by Wyandotte Dairyman's Cleaner and Cleanser in the work of producing clean, pure dairy products was invaluable, hence the common ground for mutual co-operation.

INDIAN IN CIRCLE



To-day there is scarcely a single exception to the rule that Dairy Colleges in this country and Canada and other dairy nations use Wyandotte Dairyman's Cleaner and Cleanser in their own Dairy Department. They practice what they teach.

For the convenience of those engaged in the dairy business, Wyandotte Dairyman's Cleaner and Cleanser is carried in stock and can be promptly obtained from any of the leading dairy supply houses.

The J. B. Ford Co., Sole Mfrs., Wyandotte, Mich.

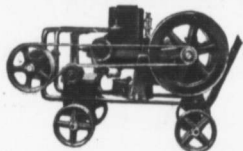
IN EVERY PACKAGE

This Cleaner has been awarded the highest prize wherever exhibited

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*"Goes Like Sixty"*

Engines, Grinders, Wood Saws  
Ensilage Cutters, Spraying  
Outfits, Pumps, Washing Ma-  
chines, Speed Governors, Etc.



Gilson Engines have special exclusive features which put them in a class by themselves. Every man who gets a "GOES LIKE SIXTY" engine secures for himself

"Safety, Service and Satisfaction"

PRICES RIGHT—EASY TERMS

Write for full particulars and our new illustrated catalogue.

**Gilson Manufacturing Co. Ltd.**

52 YORK STREET - - GUELPH, ONT.

**Greenhouse  
GLASS**

SINGLE AND DOUBLE STRENGTH

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Special Make, Flat  
and Nicely Cut Edges

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The Toronto Plate Glass Im-  
porting Co., Ltd.

91-133 Don Roadway - Toronto

**One Egg in Winter is Worth  
Three in Spring**

Therefore see to it that you get Winter Eggs.

**Gunns "Shur-Gain" Beef Scrap**

Is the best known means to attain this end. It supplies the necessary protein, and is a substitute for the insect life consumed by the fowl in Summer.

Beef Meal                      Grit                      Bone                      Shell  
Blood Meal                      Charcoal, etc.,

Always kept in stock.

**Gunns Limited, West Toronto**

Write for our Poultry book.

# Canadian Northern

Through Service

## Toronto to Winnipeg

**NOVEMBER 1st**

Via Parry Sound, Sudbury, Port Arthur and Fort William

CONNECTIONS AT WINNIPEG UNION STATION FOR EDMONTON, CALGARY, PRINCE ALBERT, SASKATOON, REGINA, BRANDON, and all important points in Western Canada and the Pacific Coast

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MONDAY, WEDNESDAY and FRIDAY  
ALL MODERN EQUIPMENT RELIABLE EXPRESS SERVICE

Through tickets to all points and berth reservations from Local Agents, or write to R. L. FAIRBAIRN, General Passenger Agent, 68 King St. E., Toronto, Ont.

**CANADIAN  
PACIFIC**

## Pacific Coast Tours

*Via the Scenic*

### Canadian Rockies

*At Attractive Fares*

Through Trains—No Change—See that your ticket reads

**CANADIAN PACIFIC**

"Nature's Exposition Route to the California Expositions"

Particulars from J. Hefferman, Agent C. P. Ry., Guelph, or write M. G. Murphy, D. P. A., Toronto.

## SEMI-READY SPECIAL ORDERS

### TAILORING



By means of the physique type system devised by Semi-Ready I can send YOUR PHYSICAL PHOTOGRAPH to the Semi-Ready Tailoring Shops and have a suit made to your measure for \$18.00—to fit you exactly, without need for a try-on. 300 imported patterns to select from—and certain delivery here within six days.

**Suits and Overcoats \$18 to \$30**

**R. E. NELSON**

## Sweater Coats and Sweaters To Order



Our goods are all HAND-FINISHED. They do not fray at edges and button-holes.

The pockets wear as long as the coats. Write for prices.



**Thos. Warren** 359 Spadina Ave.  
TORONTO

## For You—a Wonderful Book on Farm Drainage—FREE!

Do you know you can take as much crop off 100 acres properly drained as you can off 200 acres not drained and save half the labor? It's a fact. Do you know that proper, inexpensive tile drainage assists pulverization—lengthens the season—prevents surface washing, makes your land lighter to work, prevents drought and increases the quantity and improves the quality of your crops?

Why not have us send you, today, free of charge, a very interesting booklet on this subject? Much to learn—nothing to pay. Don't neglect anything that will help you grow better, bigger crops. Proper drainage means as much as two dollars in your bank account for every one that goes there now, and the Government lends you money for the Tile, if desired.

Write us today. Mention this paper. Your book is waiting.

**DOMINION SEWER PIPE COMPANY, Ltd.**  
Swansea, Ontario



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**Guelph's  
Ladies' Store**

Women's and Children's  
Garments

Dress Goods and Silks

Exclusive Millinery

Perrin's Kid Gloves

Northway Coats and Suits

Crompton's C-C a la Grace and  
Parisienne Corsets

**THE WHITE HOUSE**

**Furniture Mart**

Large Stock of

NEW MEDIUM PRICED FURNITURE  
at **E. J. PATRICK'S**

156 WYNDHAM ST.

Next door to Apollo Theatre.

**CUT FLOWERS**

Choice Cut Flowers always on hand. Roses,  
Carnations, Valley, Violets and all  
Flowers in season.

**GILCHRIST'S**

Phone 436. St. George's Square.

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Loose Leaf Manufacturer

89 Quebec St. E. Phone 1107L. GUELPH.  
All Kinds of Loose Leaf Systems, Binders  
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ACCOUNT BOOKS MADE-TO-ORDER  
Prompt, Efficient Service.

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Square**

Sells the Best Meats  
and Poultry

Phone 191 - - - Open all Day

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**PARIS CAFE**

GOOD FOOD—QUICK SERVICE  
SPOTLESSLY CLEAN—ALWAYS OPEN

Five Meals for One Dollar.

Also Table Board for \$3.50

and 21 Meals, \$4.00

41 WYNDHAM ST., - - - GUELPH

**H. H. Worden**

O. A. C. Barber Shop. Three Barbers.

No Waiting.

St. George's Sq. Cars Stop at Door.

**M. J. Rudell, D.D.S., L.D.S.**

Dentist

(On the Corner)

Over Guelph and Ontario Investment  
and Savings Society Bank

PHONE 16

**DUNBAR**

THE QUEBEC STREET FLORIST

Has always a large quantity of Guelph  
Grown Plants and Cut Flowers in the  
pink of condition; also imported  
Roses, Lilies-of-the-Valley and  
Violets.

99 QUEBEC ST. E. - - - Phone 335

**R. H. McPherson**

Barber

Get your hair cut at 145 Wyndham street,  
An extra barber employed at the highest  
wages for your sake.

PHONE 1187

TAXICAB AND LIVERY SERVICE

OPEN DAY AND NIGHT

**ROYAL CITY GARAGE CO.**

TRAFALGAR SQUARE, GUELPH

**TENTS TO RENT.**

See Us when you want to Rent a Tent  
for College Functions.

AWNINGS, TENTS, FLAGS, ETC.,  
FOR SALE.

THE GUELPH TENT AND AWING CO.  
PHONE 1055 GUELPH

**REAL ESTATE**

If you wish to buy Property, or if you have  
any to sell, call on us.

PHONE 411

We have a fine list of Ontario Farms—  
Money to Loan—Conveyancing.

**D. H. BARLOW AND COMPANY**

**GUELPH RADIAL RY. CO.**

**TIME TABLE**

Cars leave St. George's Square for Elora Road, Suffolk Street, Waterloo Ave., O. A. College and Ontario St. as follows:

	<b>A. M.</b>	
6:15	8:25	10:35
6:35	8:45	10:55
6:55	9:10	11:20
7:20	9:30	11:40
7:40	9:50	12:05
8:00	10:15	:
	<b>P. M.</b>	
12:25	4:05	7:55
12:45	4:25	8:15
1:05	4:50	8:35
1:30	5:15	9:00
1:50	5:40	9:20
2:10	6:05	9:40
2:35	6:30	10:05
2:55	6:50	10:25
3:20	7:10	*10:45
3:40	7:35	:

Returning, Cars leave Terminals 10 minutes later.  
 \*Saturday night only.  
 Cars run to Power House only after last trip.

**READ**

**THE CURTIS PUBLICATIONS**

- SATURDAY EVENING POST
- LADIES' HOME JOURNAL and COUNTRY GENTLEMAN

For Sale by District Agent,

**GEO. M. HENRY**

63 Quebec, GUELPH, ONT.

**FLOUR**

- SNOWDRIFT - - - Manitoba Patent Flour
  - PEOPLES - - - Blended Flour
  - DICTATOR - - - Pastry Flour
- Made from the choicest of Canada's Wheat  
 We will ship to any place.  
 Write us immediately for prices.

**THE James Goldie Co., Ltd.**  
 Guelph — Ontario

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**The Kennedy Studio**

Is equipped to produce the best in  
*Groups or Individual Portraits*

**A STUDENTS' SPECIAL in PHOTOS**  
 at \$1.50 a Dozen

**The Kennedy Studio**

23 Wyndham St., Guelph  
 Phone 498

**PEEP SIGHTS**

For Farm Drainage Purposes, as designed by Prof. W. H. Day, sent by mail to any address.

**H. Occomore & Co.**

124-126 Wyndham St., GUELPH

**C. E. HEWER**

49 Quebec St. West  
 Cleaning, Pressing & Repairing.  
 Goods called for and delivered.

**Phone 808**

- Pants, pressed .....\$0.15
- Pants, cleaned and pressed .25
- Coats, pressed ..... .30
- Coats, cleaned and pressed.. .40
- Suits, pressed ..... .50
- Suits, cleaned and pressed.. .75
- Dry Cleaning Suits.....1.50

Monthly contracts for Students. Moderate charges for alterations.

1915 **O. A. C.** 1915

**S**TUDENTS should try some of our delicious  
**Bon-Bons** put up in all sorts of fancy  
packages—**quality** unsurpassed.

We cater to the best class of trade.

**HOT DRINKS, LUNCHESS, COLD DRINKS**  
Everything for Refreshments

***The Kandy Kitchen***

LOWER WYNDHAM STREET

**Guelph and Ontario  
Investment and  
Savings Society**

(Incorporated A.D. 1876.)

Capital Subscribed,	\$1,000,000 00
Reserve Fund,	581,221 00
Assets,	3,719,560 72

Debentures issued for One Hundred  
Dollars and over for five years at 4½  
per cent., payable half yearly.

Deposits of One Dollar and up-  
wards received and interest paid or  
compounded half yearly.

Office: Society's Building, corner  
Wyndham and Cork Streets, Guelph,  
Ontario.

**J. E. McELDERRY,**  
Managing Director.

**DIAMOND  
and SHIELD  
O. A. C. PINS**

**Leather Fobs**  
**Twenty-five Cents Each**

**SAVAGE & CO.**  
**JEWELLERS**



YOU ARE STUDYING IN GUELPH, THE HOME OF  
**CANADA'S BEST PIANO**

**THE BELL**  
 "BUILT TO LAST A LIFETIME"

Without exception the best built, the best  
 finish, the best tone and the best and easiest  
 action

SOLD ONLY AT

**KELLY'S MUSIC STORE**

33 LOWER WYNDHAM STREET

HEADQUARTERS FOR  
 THE VICTROLA THE EDISON AMBEROLA SHEET MUSIC  
 ALL MUSICAL INSTRUMENTS RECORDS STRINGS  
 REPAIRING, TUNING AND RENTING

*The Royal Bank  
 of Canada*

Capital	- - -	\$11,560,000.00
Reserves,	- - -	\$13,500,000.00
Assets,	- - -	\$180,000,000.00

A General Banking Business done. Drafts issued to, or cashed  
 from, all Countries; 374 Branches throughout Canada, West  
 Indies and Cuba, and our own offices in London, Eng., and New  
 York.

Savings Bank Department with separate room for Ladies.

**R. L. TORRANCE,**

Manager,

Guelph Branch.

# UNION BANK OF CANADA

50 YEARS IN BUSINESS

Capital Paid Up  
\$5,000,000

Reserve  
\$3,400,000

Total Assets  
over  
\$85,000,000



JOHN GALT,  
President.

G. H. BALFOUR  
General Manager

H. B. SHAW,  
Asst. Gen. Mngr.

310 Branches in  
Canada

HEAD OFFICE, WINNIPEG.

## FARMERS' BUSINESS

Special attention given to accounts of Students, Farmers, Cattle and Hog Dealers, Farmers' Notes Discounted and Farmers' Sale Notes cashed or taken for collection.

## SAVINGS BANK DEPARTMENT

The advantage of a Savings Bank Account is that it earns you 3 per cent. interest night and day, and you can always get your money any time you want it, and every day your money is deposited with us we pay you.

The Dominion and Provincial Governments have large sums of money on deposit with this Bank and this should assure the public that your money is absolutely safe, as we are one of the oldest, largest and strongest Banks in Canada.

We want your name on our list, and we also want to meet you personally, when you call. \$1 will open an account. Office old Traders' Bank Building, next door to post office.

WILLIAM BROWN, Manager

GUELPH

ONTARIO

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**STUDENTS**

OF HUMAN ANATOMY

There are Students of "Human Anatomy" just as there are  
Students of**AGRICULTURE**

or any other professions.

The men who cut the cloth for our **HIGH-CLASS Made-to-Measure SUITS**,  
are more than mere Cutters, they are students of **HUMAN ANATOMY**.**OUR DESIGNERS** possess that "sixth sense" which finds expression in the  
Artistic, Stylish, Well-fitting, Youthifying Garments that have made our Special  
Order clothing to signify all that is **BEST** in tailoring.We are showing some of the Smartest Lines in **SUITINGS** and **OVER-  
COATINGS** for young men that ever came into this city. Made-to-Measure,  
\$15.00 up to \$35.00.

Every Garment guaranteed to please or Money Cheerfully Refunded.

Emoc Ni Ereh (Come in Here)

**GEORGE WALLACE**

YOUR CLOTHIER AND FURNISHER

30 LOWER WYNDHAM ST. — PHONE 510 — GUELPH

P.S.—**LADIES' MAN-TAILORED SUITS** tailored by a New York Expert  
and made to individual measure. Our Specialty Expert here every Wednesday.**ARTISTIC TAILORING**

AT MODERATE PRICES

There's a Style and Elegance about our Tailoring that has won us an  
envied reputation.Men, who know and who wear good Clothes, are free to say that there  
is no better combination of quality, price and workmanship, than a Suit,  
Overcoat, or pair of Trousers made to order in this establishment. It is  
to your decided advantage, Sir, if you appreciate good Tailoring, to**HAVE YOUR CLOTHES MADE HERE.**There's always that "something" about our Tailoring that gives it an  
individuality, both in cut and fabric. We're not fancy priced Tailors—**NO ONE SAYS THAT.**

Come in for a consultation before you decide the Clothes proposition.

**CLOTHES CLEANED AND PRESSED.****R. W. WATERHOUSE,**

Tailors to men who know. - - 36 Quebec St. W., Guelph, Ontario

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# Here's the load for DUCKS

It's a fast, hard-hitting load that gets what it goes after.  
And it's a dependable load *always*.

Dominion Shot Shells are primed with the new "3 B" primer, the largest and most sensitive; the powder used is the best that can be obtained; the shot is double chilled; loading is accurate and uniform; inspection and testing are thorough.

Every element that enters into the making of a perfect shell is to be found in

## the "Canuck"

the best load for every kind of shooting that requires a speedy shell.

**DOMINION  
CARTRIDGE CO.,  
LIMITED,**

868 TRANSPORTATION BUILDING,  
MONTREAL.



EYESTRAIN IS THE STUDENT'S  
GREATEST DRAWBACK.

GLASSES PRESCRIBED AND  
FITTED BY US HIS GREATEST  
FRIEND.

EYES EXAMINED—GLASSES  
MADE AND FITTED.

**A. D. SAVAGE**

Optometrist and Manufacturing  
Optician.

"Right At The Post Office,"

1091 K

GUELPH

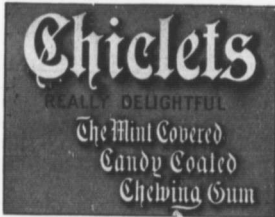
## ONTARIO VETERINARY COLLEGE

110 University Avenue,  
TORONTO.

Affiliated with the University of  
Toronto, and under the control of the  
Department of Agriculture of Ontario.

COLLEGE RE-OPENS OCT. 1st, 1913  
Calendar "A" on application.

**E. A. A. Grange, V.S.M.Sc.**  
Principal



*Make a Cosy Corner*

BY COLLECTING THE CUSHION COVER COUPONS WITH EACH PACKAGE

**College Printing**

Is A Specialty With Us

Every order receives the personal attention that ensures the delivery of the better class of work. Consult us about your printing.

We have an exclusive range of Novelties for

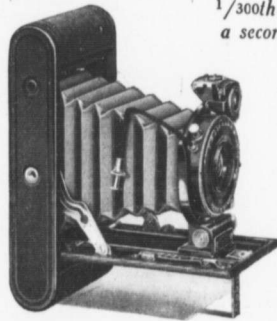
**Christmas and New Year**

Something that will please you. Come in and see the samples.

**The Guelph Herald**

PRINTERS AND DESIGNERS LIMITED OF GOOD PRINTING

Herald Building, - Douglas St.



*1/300th of a second*

**No. 1 Autographic KODAK, Special**

Small enough to go in the pocket conveniently.

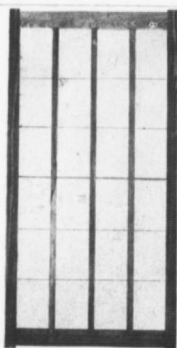
A shutter with a speed of 1/300 of a second, and of sufficient size to utilize the full working aperture of the lens. And the lens has more than speed, it has quality—and, what is equally important in a small camera, a sufficient length of focus to avoid distortion.

Pictures 2 1/4 x 3 1/4 inches

Price with Zeiss Kodak Anastigmat Lens, f. 6. 3, - - \$45.00

All Kodak Dealers

**CANADIAN KODAK CO., LIMITED**  
TORONTO



**Bars and  
Sash**

**Hotbed Sash and Frames**

## GREENHOUSE CONSTRUCTION MATERIAL

LOUISIANA RED CYPRESS

**BATTS LIMITED**

VENEERED AND PINE DOORS,  
STAVED COLUMNS, ROUGH AND  
DRESSED LUMBER, NEWELS,  
GREENHOUSE MATERIAL,  
BALUSTERS AND PANELLING,  
INTERIOR FITTINGS AND TRIM.

352-4 WEST TORONTO  
PACIFIC AVENUE ONTARIO



**Blast the  
Boulders  
Blow up  
the stumps**



### Put your unproductive land on a paying basis

Reap the added profits that CXL stumping powder will clear the way for you to make.

The whole process is so simple, so little labor is needed, so short a time required, and the cost is so small compared with the additional amount your land will earn, that there should be no further delay in clearing your land of stumps and boulders. Let us explain how.

CXL stumping powder is no more dangerous than gun powder. There's a CXL explosive for every blasting purpose.

Send for free booklet, "Farming with Dynamite."

**Canadian Explosives Limited, Montreal - Victoria**



## RENNIE'S SEEDS ALWAYS GROW

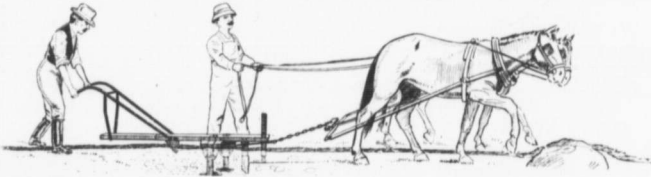


The Best Vegetables and the Finest Flowers

**CANADA'S OPPORTUNITY**—Every foot of fertile soil in Canada must be sown and cultivated to its limit. The world needs all the products of the soil we can sow during 1916. While our supplies are large, we advise ordering seeds early in case of shortage, as the demand will be enormous.

### WM. RENNIE CO., LIMITED

Head Offices and Warehouses: Adelaide and Jarvis Streets, Toronto. Branches: 190 McGill Street, Montreal, Que.; 1138 Homer Street, Vancouver, B. C.; 394 Portage Avenue, Winnipeg, Man.



**This is the DAWSON DITCH DIGGER \$38.00 F.O.B. Toronto**

Now on the market after having been tested thoroughly by leading farmers and demonstrated before the Department of Agriculture and Drainage Authorities. A most efficient worker wherever tile is needed. Work costs only 70c to \$1.50 per hundred feet

Write for Testimonials and Particulars

**The CANADIAN DRILL & CHUCK Co., Ltd.**

180J Spadina Ave., Toronto

## Standard Steel Tube Posts

### For the Up-to-date Farmer!

The Steel Tube Post outlasts the wooden posts five to one. Dampness won't rot it, insects can't weaken it, and it takes one-third the labor to erect.

Standard Posts and Standard Woven Wire Fencing make a combination that ensures the farmer using them the best job possible in fence erection.

There's an agent in your vicinity. If you don't know him, write to us and we will send you full particulars.

## STANDARD TUBE AND FENCE CO.

Limited.

WOODSTOCK - - - ONTARIO

Makers of Standard Woven Wire Fencing, Farm Gates and Steel Tube Fence Posts.

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# BOOKS



## That Should be in Every School and Library and Every Farm Home

Farm Management—Warren .....	\$1 75
Essentials of Agriculture—Waters .....	1 25
Feeds and Feeding—Henry .....	2 25
Productive Feeding of Farm Animals—Woll .....	1 50
Productive Swine Husbandry—Day .....	1 50
Types and Breeds of Farm Animals—Plumb .....	2 00
Productive Horse Husbandry—Gay .....	1 50
Soil—King .....	1 50
Fertilizers—Voorhees .....	1 25
Home Floriculture—Rexford .....	1 00
Insects Injurious to Fruits—Saunders .....	2 00
Insect Pests of Farm, Garden and Orchard—Sanderson .....	3 00
Hand Book of Nature Study—Comstock .....	3 25
Canadian Dairying—Dean .....	1 00
Butter Making—Meyer .....	1 50
Productive Orchardng—Sears .....	1 50
Bush Fruits—Card .....	1 50
Vegetable Gardening—Green .....	1 00
Garden Farming—Corbett .....	2 00
Productive Vegetable Gardening—Lloyd .....	1 50
Principles and Practices of Poultry Culture—Robinson .....	2 50
Honey Bee—Langstroth .....	1 25
Principles of Rural Economics—Carver .....	1 30
Co-operation in Agriculture—Wolff .....	1 90
Rural Schools in Canada—Miller .....	2 00
New Lives for Old—Carlton .....	1 20

We can also supply any agricultural text or reference book published.

The Association pays transportation charges on all orders of \$5.00 and over within the Province.

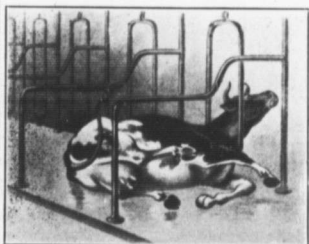
Address all communications to:

**The Students Supply Store**  
O. A. C. College, Guelph, Ont.



## The Cow Stall Floor Problem

Is solved for all time by the use of **Cork Paving Brick**. These Brick possess all the good features of both wood and cement, with none of their faults. Cork Brick are warm and resilient, non-slippery, perfectly sanitary and remarkable for durability in service.



No accidents like this on Cork  
Brick Floors.

## Cork Brick Floors

Are used by hundreds of prominent stockowners in the United States and Canada, and also by many Agricultural Colleges and Government Experimental Stations.

Send for sample brick and booklet which gives particulars regarding this remarkable floor material. Both are free.

**ARMSTRONG CORK &  
INSULATION CO.**

LIMITED

McGill Bldg., MONTREAL, QUE.

## Home, Sweet Home

THE most beautiful thing in the world to-day is the home life which has been developed.

But life insurance should be carried so that in the event of the father's death the family will not be compelled to forsake the old place for one less comfortable. The Mutual Life of Canada prides itself on being

the Company that makes Canadian homes—

the Company that protects Canadian homes—

the Company that maintains Canadian homes.

Provide against the loss of the old home in the event of your death by means of a policy in

**THE MUTUAL LIFE  
ASSURANCE COMPANY  
OF CANADA**  
WATERLOO, ONTARIO

108

# STONE'S FERTILIZERS

Do you realize that there will be a largely increased demand for Food Stuffs this year? Are you preparing for the higher prices by increasing your production?

## STONE'S FERTILIZERS

will help you to get the most out of your land. They will pay you a large dividend on their cost.

**BIGGER YIELDS,**

**BETTER QUALITY**

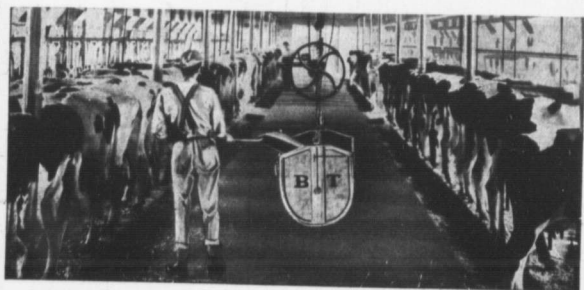
Brands for every crop. Write for particulars.

**William Stone Sons, Ltd**

Head Office: Woodstock.

Branches: Ingersoll & Stratford.

Live Agents wanted.



## Keeps Your Barn Cleaner

A BT Manure Carrier takes all the manure from the gutter to the pile without dripping. The big wide-mouthed bucket can be lowered close to the gutter and quickly filled without any of the manure being slopped over the passages.

You can run the load along the overhead track out as far from the barn as you wish. It doesn't matter if the yard is muddy, slushy or drifted full of snow, because the BT Carrier runs right over them. There is no need for big manure piles accumulating close to the barn where they rot the sides, take paint off implements, crack the harness and injure the health of the stock.

The BT Manure Carrier makes stable cleaning such a simple, easy job that it is sure to be done regularly and thoroughly.

Clean handwheel for raising bucket keeps your hands out of manure and also serves as a handle for pushing.

Twice as many BT Manure Carriers are sold every year as all other makes combined. Write for new, illustrated book that tells all the facts. Simply send your name and address and state when you think of putting in a Manure Carrier. Book will be mailed free.

**BEATTY BROS., Limited, 201A Hill Street, Fergus, Ont.**

BT Galvanized Steel Stalls, Stanchions, BT Water Bowls, Steel Horse Stable Fittings, Steel Pens for Bulls, Cows and Calves, Steel Hog Pens and Hog Troughs.

**BT**



## Farm Inside as well as Out

Do some intensive farming and get three times the number of crops you do in your extensive farming.

Build one of our greenhouses, one of our thoroughly practical kind with no fuss and frills, simply a straightaway, thoroughly well-built, enduring, glass enclosure. Then raise lettuce, tomatoes, cucumbers and strawberries. You will find no difficulty to market them, and the price average will net you a

nice, snug profit each year. Get a good man for your foreman; then in the winter keep on your regular summer force in the greenhouse. By doing this you can keep your good men all the year round, and go a long way towards solving your labor problem.

Incidentally, you will make money. Let us go into all sides of the question with you. Send for our Commercial Greenhouse Catalog.

**Lord & Burnham Co.**

**Greenhouse Designers and Manufacturers**

Royal Bank Building, Toronto.

Transportation Building, Montreal.

Factory—St. Catharines, Ontario.

Please mention the O. A. C. REVIEW when answering advertisements.



# The Survival of the Fittest

Tried in the furnace of competition and subjected to the test of years of practical use on nearly 2,000,000 farms the world over, the De Laval has proved its overwhelming superiority to all other cream separators.

Twenty years ago there were as many makes of factory as of farm separators, but for the past ten years the De Laval has had this field almost to itself, 98 per cent of the cream separators in use by creamerymen and market milk dealers to-day being of the De Laval make.

It has taken the inexperienced farmer a little longer to sort the true from the untrue, the wheat from the chaff, in the maze of confictory catalog and local dealer separator claims, but year by year the ever-increasing proportion of farm separator buyers is reaching the same conclusion as the creamerymen—that the De Laval is the only cream separator they can afford to buy or use.

Many other cream separators have come into the limelight of publicity

for a few short months or a few short years, claiming to be "as good as" or "cheaper" than the De Laval, but their users have sooner or later found them lacking in some one respect or another, and even where a few have seemingly done well their users have come to learn that the De Laval was a still better machine.

The unfit or the less fit cannot possibly survive for long in separators or anything else. Think of all the separators you used to see advertised so extravagantly in your favorite farm papers? Wher are they now? Why do you seldom, if at all, see their names mentioned? Simply because the fittest must survive and the others must fall out of the race.

The De Laval has triumphed over all other separators, and its supremacy is now almost as firmly established in farm as in factory separators because its separating system, design and construction are essentially different from and superior to other separators.

**DE LAVAL DAIRY SUPPLY CO. LIMITED**

**MONTREAL PETERBORO WINNIPEG VANCOUVER**

**50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER**

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