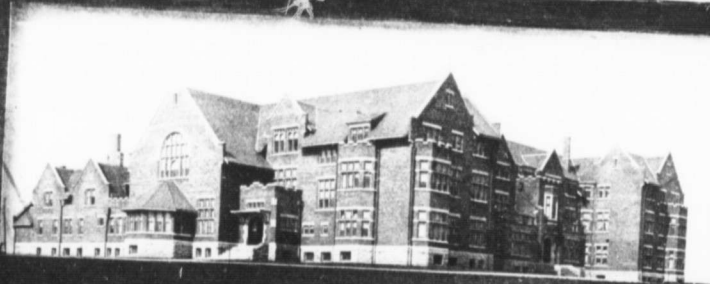
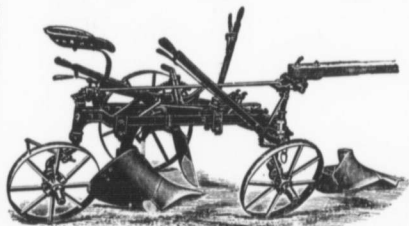


THE O.A.G. REVIEW

OCTOBER, 1911



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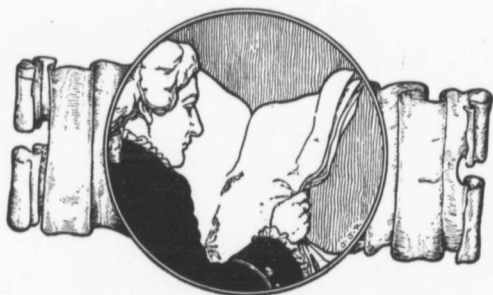
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CONTENTS

VOL. XXIV.

OCTOBER, 1911.

NO. 1.

	Page.
Principals of Co-Operation—S. E. Todd, B.S.A., Petrolia....	1
Experiences of a College Student as a Teacher In Alberta....	5
Agriculture.....	9
Experimental.....	14
Horticulture.....	21
Poultry.....	27
Editorial.....	31
College Life.....	35
Alumni.....	40
Athletics.....	44
Macdonald.....	46
Locals.....	50

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THE O. A. C. REVIEW

THE DIGNITY OF A CALLING IS ITS UTILITY

VOL. XXIV.

OCTOBER, 1911.

NO. 1.

Principles of Co-operation

S. E. TODD, B.S.A., PETROLIA, ONTARIO.

IT is a hackneyed saying that "this is the age of specialization," but it is nevertheless becoming more marked all the time. Specialization is justifying itself, because it makes for efficiency. The idea of specializing is now becoming quite a recognized principle among progressive farmers. The day of the "mixed farmer" is passing because he was "mixed" in more ways than one. The complications arising from the endeavor to successfully conduct many branches of farming forced the farmer to recognize that a mastery of two branches was about the limit of the human mind. So the old slovenly methods are disappearing slowly and the increased efficiency of the specialist in fruit-growing, dairying and pure-bred grain and stock breeding is evident in the improved farm-steads now becoming a common feature of Old Ontario.

While we have been advancing in methods of production we seem scarcely to have considered the equally important question of marketing. In all industries there are two main essentials to success: efficiency and economy in production on the one hand and in marketing on the other. These two are interdependent, and efficiency cannot be secured in either unless the one is used as an aid to the other. In many lines to-day efficiency in production is limited by the methods of marketing

and vice versa. Great wastes in production are occurring because of gross inefficiency in marketing methods and educational work in all branches of farming is terribly hampered by the fact that little discrimination for quality is possible where the farmer has not "specialized" the business of marketing. One has not far to go for proof of the statement. The bacon industry in Ontario that a few years ago bade fair to become a successful rival in the British market of the Danish product is being beaten out because of poor methods of marketing the product. Because of competition between each other and the mutual suspicion that exists between the farmer and the manufacturer a flat price is paid for hogs of all qualities. A few years ago the price was manipulated in such a manner that farmers become disgusted and refused to raise hogs. The result has been great loss both to manufacturers and farmers. The whole of this might have been averted by proper systems of marketing such as the Danes have adopted.

When specialization in farming began to be experimented with many serious mistakes were made because of the general lack of knowledge on the subject. It was not until farmers recognized that there was a distinct science underlying the operations of each branch that real advancement be-

gan to take place. When these sciences were in the formative stage and were struggling for recognition by farmers, everyone had their own ideas and theories, and each one who achieved a measure of success in his crude experiments posed as an authority on the subject while the student who was really gathering facts that later became recognized as fundamental was looked upon as a visionary and an idealist. This is just the condition that specialization in marketing has assumed at present. Here and there throughout the Province are to be found marketing organizations some partially successful, some utter failures, each experimenting and groping along, yet all equally certain that their way is the proper way.

There was a day when business concerns, joint stock companies, partnerships and individual business enterprises were mixed in a merry medley which brought great injustice to members of the concerns on one hand and to the outside public on the other hand. Business law slowly evolved through a voluminous series of legislative statutes until it crystalized into the sharply divided forms of the present, the complete powers and limitations of which are set forth in our consolidated "Companies' Act." Farmers' marketing organizations are just now in that formative stage, nothing very distinct is understood by the terms "Co-operative," "Joint Stock," "Share Capital," "Association with share capital," "Association without share capital," "Limited Liability" as applied to features of such organizations. Just as it was found necessary to restrict the powers, liabilities and operations; just as it was found necessary to define the various terms used in ordinary business organization and to closely re-

strict the use of these terms so that everyone should come to understand their meaning; just so will it be found necessary to formulate a proper system of statutes that shall define and regulate the farmers' business machines, i. e., the Co-operative Society.

Meanwhile the student of this branch of economy is looked upon as more or less of an idealist because he insists that the "joint stock company" is not suited to co-operative organization or because he states that the farmers' marketing society cannot be worked and engineered by a private company no matter how philanthropic may be their purpose. When he insists that good intentions will not remedy faulty principles or that failure through over hasty action is sure to bring disaster he is told by men who should have learned better that it is necessary to work with the materials at hand and that a correct system may be a very beautiful dream but is unattainable. This attitude is just as ridiculous and unscientific as that of the man who insists on working with poor cows simply because he has them at hand. Before Co-operative organization ever becomes generally successful certain principles must be recognized and adhered to by the mass of farmers and by the organizations themselves.

The first principle that should be learned is that a co-operative society is successful only when it increases the efficiency and income of each member just in proportion to the amount of business done through the association by that member. The society is organized originally, for the sole purpose of increasing the efficiency of the original business of the members, i. e. farming. For this reason the details

of organization will differ from that of a joint stock company.

A co-operative society is an organization for "self help." Each member must be prepared to assume his own share of responsibility in the society and must do his share to make the society successful. It is also a society for "mutual helpfulness." Fay states that it is "An Association for the purpose of **joint trading**, originating among the weak and conducted always in an unselfish spirit, on such terms that all who are prepared to assume the duties of membership may share in its rewards in proportion to the degree in which they make use of their association." Members must recognize that the quality and quantity of the product sent to the society is largely the determining feature in the success of the association. The society must be able to market a reasonably large quantity of first-class quality of goods, and this can only be secured by the individual effort and loyalty of the members. Societies should have some means of enforcing these principles on the members.

A co-operative society is essentially a trading organization, therefore, it must be sound both industrially and financially. **Industrially** it must have a volume of business large enough to make economy of management possible; the smallest Danish butter-factory manufactures the milk from six hundred and fifty cows; it is hopeless to expect a factory having one hundred cows to be permanently successful. It will be seen from this that people must learn the lessons of co-operation and specialization in production, i. e. whole communities must work together to produce for the co-operative factory. It is the belief of the writer that ordinary slovenly mixed farming

and co-operative organization can never go together. **Financially** the organization must have sufficient capital to successfully meet the demands of business. This working capital must be secured at as small expense as possible and yet must offer sufficient inducement to investors to always make capital available. Two methods are followed: 1. The issuing of shares on which there is a fixed dividend. If our co-operative law definitely restricted each member to one vote there would be little objection to this method, but as according to our law a member of a society has a vote for each share held by him this method is very objectionable. 2. By borrowing the needed capital. Economy in borrowing depends on the nature of the security offered. For this reason Danish societies borrow under "unlimited liability" in which each member becomes responsible for the whole amount of capital borrowed. There is an arrangement within the society whereby each member becomes responsible for a certain share of the liability. A second method is for members to give notes for a certain sum as fixed by the society. These notes are not paid by the members but are used as collateral security by the Executive with which to borrow money to do business. (see bulletin 192, Ontario Department of Agriculture).

The principle of one vote for each member is important. The society is organized to serve each member equally and where a few influential members control a large vote the society is bound to fail. In Europe societies with "unlimited liability" and in Great Britain under "share capital" organization, the principle of "one vote" has long proven to be perfectly satisfactory.

Division of profits is the next important principle. Profits must be divided according to the business done with the society by each member: if a member does one thousand or one hundred dollars worth of business with the society all profits that appear must be proportioned on the basis of business done by the individual member, because profits have been made possible by the member only in proportion to the business he has placed in the hands of the society. Only by such division of profits can the principles of "one vote" and "a fixed dividend on shares" be justified, and it is to secure such a division of profits that

the principles above stated are adopted.

There are many other details that might be discussed but the above are basic principles that must be learned by people generally before co-operative organization will be successful in Ontario. I believe that it is folly to attempt to organize co-operatively until these principles are fairly well understood, because the organization of the marketing and of the farming industry is not a matter of little moment, but is perhaps the greatest financial undertaking ever attempted. Let us have patience to teach first and organize later.



Experiences of a College Student as a Teacher in Alberta

WILL Jones, commonly called Bill, was unlike any other ambitious young fellow in that he had the Western fever. The reasons for this desire were impossible to explain by Bill, but go he must, and go he did. As a College student wishing to obtain considerable money to defray expenses in the sophomore year, which are always exceedingly high, he decided to seek a position as teacher in one of the summer schools in the West since he held a third-class teacher's certificate, and had had two years' experience teaching in Ontario. Furthermore as a student he realized the educational value of travelling, especially in his own country.

Bill's first task was to secure a situation. In looking over the papers he noticed several teachers' agencies advertising for teachers for the Western schools, but after communicating with them he found that they, like himself, were looking for money too, so he decided to take other steps in securing a school. From a Canadian Almanac he ascertained the names of the Public School Inspectors throughout the northern part of Alberta and Saskatchewan, thinking that summer schools would be more prevalent in those districts. By communicating with those Inspectors he obtained the names of Secretaries of school districts requiring teachers for the summer. Then by using the respective Inspector's names in writing to those Secretaries he had successfully paved the first step towards securing a school. In the meantime he had forwarded his certificate and a few recommendations to the De-

partments of Education of the two provinces, from whom he learned that should a School Board apply for a permit to allow him to teach their school that it would be granted. Soon replies were received from the different Secretaries, not one of them failing to answer his application, as Bill had taken the precaution to enclose a stamped, addressed envelope.

As money was the major attraction for Bill, he, of necessity, accepted the school offering the highest salary, which proved to be that of Stony Rapid School District, at \$60 per month. In studying the school law Bill found that should he remain for four months or more that his salary would be reckoned proportionately with the number of days taught to the number of teaching days in the year, thus his salary of \$720 per year would amount to \$370 or \$74 per month, should he remain until the middle of September, at which time he would have to return to College, in order to be present at the initiation, which is a very vital feature to a Sophomore.

Having secured a school at so great a distance Bill's next difficulty was to ascertain how he could cut down travelling expenses. Knowing that a College student returning to his home could travel for half fare when the ticket amounted to \$40 or more, he immediately took steps to get this reduction as he was going from College to "his" home. A certificate was obtained from the President of the College to the effect that he was a student, which when presented at the G. T. R. ticket office, in Guelph, permitted him to

secure his ticket for \$22.85, which regularly sold for \$45.70.

The spring exams. were concluded on Tuesday, April 13th, and that evening another College student, who was going West to teach also, and Bill boarded the train for the Great West, having previously prepared a lunch for the journey. Having secured their ticket from the G. T. R., they, of necessity travelled via that service to Toronto; thence to Winnipeg, C. P. R., tourist, and from Winnipeg to their destination, C. N. R. They arrived in Winnipeg on Thursday morning, after having spent two sleepless nights in an upper berth, on account of the continued swaying of the car in travelling through the rocky portion of New Ontario and owing to the expressions of "joy" emitted by one of those "pink-toed little beauties," which shared the lower berth with papa and mamma.

On Thursday evening they proceeded on their journey and on Friday morning parted at Net of Lakes, Sask., where Bill's friend had secured a school. Bill journeyed on to Manville, Alberta, arriving there early Saturday morning. Upon making inquiries he found that Stony Rapid School District was thirty miles distant, and since Manville was the post office of the people of that district it was not unexpected when he found no person at the station to meet him, as his letter of acceptance of the situation only preceded him a few days. Finally he learned that an old German settler by the name of Pepper was in town from Stony Rapids. He hunted him up and made arrangements to continue the journey with him. They decided to start about ten o'clock. When ten o'clock came there was no Pepper; he waited until noon and still no Pepper; at one o'clock he finally located him in

one of the bar-rooms unable to sit up. Money not being very flush with Bill he began to take the matter rather seriously, so he got Mr. Pepper to get his dinner, which had the desired effect of settling his nerves. Then they got out the ponies and loaded the sleigh with the many provisions for the natives of Bill's school section. In looking over the parcels such names as Ole Forde, Ole Christianson, Knut Knutson and Christian Hansen confronted Bill. It was then that he first realized that he was going into a settlement of Norwegians. About two o'clock they started on their trip across the prairie with Mr. Pepper lying in the bottom of the sleigh and Bill performing the duties of teamster. This being his first trip along those winding trails he had to rely on the instinct of the horses to keep to the right trail. After travelling a few miles the sleighing became very poor and since the horses were small and the load heavy Bill decided to walk and accordingly got Mr. Pepper perched up on the seat with the lines in his hand. In a short time the team was left behind and Bill became so engrossed in watching the many gophers which were renewing old acquaintances after the long winter, that he did not notice that Mr. Pepper had fallen of the sleigh. He walked on for several miles until the sleighing became better, then awaited the approach of the team and driver. As the team came up he noticed that Mr. Pepper was in serious difficulty, his hat had fallen off and he seemed to be very sick, in fact. Bill said he looked very much like a raging maniac. Not having had much experience with drunkenness Bill became a little nervous, but he soon found that Mr. Pepper was very nervous, as he had indulged in the wrong beverage, having taken some stimulant

from one of the bottles of formaldehyde which he was taking home to be used in treating the spring grain for smut, in mistake for a bottle of "Old Rye," which he was also taking home for purposes better known to himself, perhaps "medicinal." Bill wished to return to Manville post haste to secure medical aid, but Mr. Pepper made him understand that he would rather proceed homeward. After driving back considerable distance to get the load that they again set their faces towards Stoney Rapids School District which was twenty miles distant. Mr. Pepper remained in the bottom of the sleigh in a half stupid condition throughout the whole journey only breaking the silence once by saying: "I guess that'll kill smut all right." About eight o'clock the little log school house loomed into view. It was then that Bill thought that "There was no place like home," as he had encountered several foreigners along the trail who had come out to the sleigh and taken their few necessities after gazing upon them (Bill and Pepper) in wonderment. By this time Mr. Pepper was able to sit up, so he left Bill with the Chairman of the School Board, Mr. Oscar Brandon, who was a Norwegian and lived within a quarter of a mile of the school.

After eating a supper of salt fish, rye bread, corn syrup and thick, sour cream, Bill was shown to what was intended for his sleeping quarters for the summer. This was in a north-east corner of the upstairs with two small boys in the south-east corner, and Mr. and Mrs. Brandon in the west end and with numberless bed-bugs in all the corners, the only partition being a quilt hung up between the east and west apartments.

Next day being Sunday and since there were no religious services to at-

tend Mr. Brandon and the teacher visited those families who had children to attend school, and informed them that school would begin Monday morning. Bill found that the pupils would be all Scandinavians with the exception of one girl and one boy who were English. In all there would be twelve children, five of whom could not speak English; but before the summer had ended there were only seven children in attendance, the older ones having to stay home to help in the duties about the homesteads. As a general rule these Scandinavian children proved to be very bright and learned the English language quickly.

Although the people were foreigners they were the desirable type, the men being very industrious, carrying on the vocation of dairying quite extensively since the climate and soil conditions of that region were adapted to grazing and the growth of an excellent quality of hay and all kinds of roots. Although their homes were made of logs and mud still they were very hospitable and gave strangers the very best available. The people of Ontario might well copy the emigrants who are coming from many parts of Europe in this respect.

The school was a new structure and had only been occupied for a month previous to Bill's appointment, so he decided that it would be to his best interests to get permission from the trustees to room in the school. This was kindly granted and Bill was able to enjoy many pleasant hours freed from that greatest of household pests among the Western homesteaders; but before the summer had elapsed they had found him there and things began to become rather interesting before he journeyed back to College.

As pedagogue his duties were light but "thanks to the people," as Bill

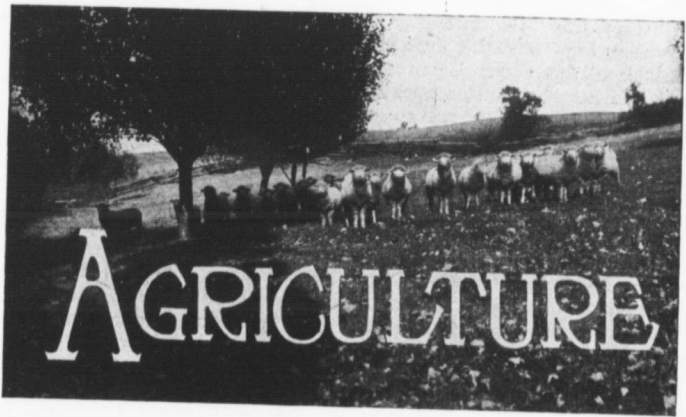
said, "they (his duties) did not stop there." Besides performing the duties of teacher he also, in a small way, acted the missionary by organizing a Sunday School class and by bringing into the section monthly a minister from Manville to speak to the people in the school house. He also performed the duties of clerk of the District in that he carried on correspondence with the Department and finally succeeded in establishing a post office in the District, which had been promised the people during the previous election campaign. He too acted as pacifier on several occasions when some of the foreigners returned from a drunken brawl; and on one occasion he had the trying experience of locking up a big Norwegian who had broken all the windows and most of the furniture in Mr. Brandon's house and had driven Mrs. Brandon out. On another occasion he was a mechanic and helped Mr. Pepper's son set up a binder which Mr. Pepper had been nearly a week in bringing from Manville, owing to that terrible habit of intemperance to which Mr. Pepper was addicted. Thus you

see that a person in accepting a position as teacher in one of those newer districts of the West must be prepared to perform numerous duties, some of which are not the most inviting.

In the fall Bill returned to College feeling richly repaid in more ways than one for his summer's experience. Financially he had \$300 as remuneration for his duties as teacher, after paying \$8.00 per month for his meals and the return fare to Ontario, which cost him a little more than the outward journey, owing to the fact that he went back through the States; but he received a similar reduction upon presenting a certificate from the President of the College to the effect that he was intending to continue his course. Physically he possessed a robustness that one cannot help but acquire in that country which is exactly described in the words, "Sunny Alberta." Furthermore Bill felt that had not these visible rewards been forthcoming that the summer's experience had produced intellectually and morally with himself sufficient recompense for the time spent.

E. B. P.





Helping the Pasture Out

GRASS is nature's food for farm animals, they all thrive on it. Long years of natural selection previous to and during the influence of man has adapted the domestic farm animals of to day to make good use of pasture lands. Unfortunately, our grass season is very short and uncertain, pasture areas have been neglected. Our climatic conditions are such that our stock can live outdoors for a longer period each year than nature provides palatable grass for.

As surely as the summers come and go, the observant individual will notice herds and flocks of lean, restless, dissatisfied animals in the fields and woodlots. The grass may still be green and fresh-looking, but the animals do not feed in such a way as to make good returns in milk or flesh. If the cows could talk and were asked the question, why don't you eat the grass? They would probably say: "Grass, grass, we are sick of grass, it has lost its June flavor, give us something new

for a change. Four long months have we been eating grass, it is no longer palatable to us, we eat it only to satisfy our hunger, we can't eat enough to make gains in milk or flesh. If you would only give us a few mangles or turnips or sorghum or a little grain it would remove the everlasting monotony of grass, dry, withered, and bitter. We have not yet lost the wild character of our ancestors, with the frosts of every autumn a feeling comes to us, it seems to stir our blood, we like to run and jump with our heads and tails up, nice juicy new food is the only thing to keep us quiet. It is the only thing to encourage and enable us to become sleek and fat or to fill the pails with our snow-white fluid, the foundation of the dairy industry and half the food of all civilized people."

It has been in all, and still is in parts of Ontario the custom to depend entirely upon grass lands to sustain the flocks and herds from snow to snow.

The good husbandman so plans his

farm operations that there may be something new, something fresh, and palatable to supplement his pasturage during the period of autumn when the bluegrass, the timothy, the red top and other common grasses found in the area devoted to pasturage are no longer palatable. The animals of the husbandman who makes provision for an abundant supply of feeds to help out the pastures in their work of nutrition, are quiet, content, sleek and fat.

There is an old adage, that the way to a man's heart is through his stomach, if this is true of human kind it is doubly true of animal kind. Human kind appreciate a variety of well-prepared food, a content and well satisfied people are a well nourished people. The same is true with our domestic animals. It has been the pleasure of every feeder of experience to have noted the relish with which his animals consumed a new or changed food, after being confined to foods that were becoming unpalatable. This same pleasure is experienced by every boarding-house keeper when she puts chicken on the table. The work of the housewife is similar in a measure to the work of a stock-feeder, only of course, more refined. The palate of animal kind is not unlike the palate of human kind. Animals appreciate an aroma and a flavor just as much as a college student does.

The difference between feeds that have an agreeable aroma and those that have not, between feeds that have an agreeable flavor and those that have not, is so wide as to make animal feeding either very profitable or very unprofitable.

The ordinary woodlot, wasteland, and stubble aftermath pastures, may be supplemented by the following ways and means.

The sowing of rye in August for late autumn and early spring pasture. Sown at the rate of two bushels per acre, on good soil, it will supply a palatable feed in October and be ready again by the first of May to carry the stock along while the grass is getting a good start.

The sowing of mixed oats and peas as early as possible in the spring, to be used as a soiling crop, has proved a most valuable aid to all progressive feeders during June drouths when grass lands have become brown and parched. They furnish a feed highly nutritive, rich in protein, and fairly well balanced, as a ration for dairy stock.

Peas and barley sown on well-prepared land in July or August will furnish an excellent supplementary pasture for September and October feeding that can be used to great advantage, while the permanent grass lands are recuperating.

Corn, king corn, is perhaps doing more than any other single feed to aid the pastures during August and September. An acre of Stowell's Evergreen Sweet, that has been well cared for, will keep the cows, steers and stock hogs smiling, even if the grass does become dry and brown. Corn ensilage saved in the summer silo has proved to be a splendid supplementary feed to use when pastures begin to fail, in fact, it is as valuable in a summer drouth, as it is in spanning the gap between fall and spring pastures. Animals receiving a supplementary feed of silage maintain their vigor and flesh, and continue to produce milk or meat.

Sorghum is a most satisfactory supplementary feed from both the feeder and animal point of view. The stems of saccharine sorghum are rich in

sugar, and are more eagerly consumed by farm stock than any other coarse fodder. Fed in the pasture land, in the feed lot or in the stable there is no waste, it is a most useful feed where increased milk production is desired. Easily grown, sown either broadcast in a hay or soiling mixture, or in drills, it will give a large quantity of highly nutritious feed. Light soils and warm dry weather favor its best development.

The Greystone turnip holds an important place on many farms, where it is either fed on the land where grown or carted from day to day to the pastures and scattered so the animals can help themselves. Good results may be obtained with broadcast seedings where the crop is to be pastured, providing the land is clean and rich. When the crop is to be pulled and fed in stable or feed lot, it is generally advisable to sow in drills and cultivate. The leaves of the Greystone turnip can be fed to milk-producing cows without fear of an undesirable odor or milk flavor. In a word the Greystone will produce a greater quantity of palatable forage for a minimum quantity of labor expended than either the mangel or swede. It is especially useful for October-November feeding.

The rape plant has been a valued aid in livestock maintenance wherever animal husbandry has reached a progressive stage. It is especially valued as an autumn forage plant for cattle,

hogs and sheep, producing an enormous quantity of succulent feed, it is a capital aid to the feeder when pasture lands fail to give good returns. It is not only valued for its aid in nutrition but has a secondary value by way of preparing the animal system for grain feeding later on. It may be sown as a second crop after fall wheat has been harvested in August or if seeded with oats in spring, it is in a position to grow rapidly after the oat harvest, and supply a valued aid to the native grasses, which are by this time becoming unpalatable.

Many permanent pastures could be aided in their work of nutrition, by a little timely attention on the part of the husbandman. The removal of weed trees, briars, etc., is a work that could be carried on to advantage in the autumn. The liming of patches of grass distasteful to animals could be easily accomplished even after the freezing of the ground. On all pastures, tufts and bunches of grass, covering an area of from one to several square feet, are left untouched perhaps for several years, they look all right to the human eye, but are not palatable to the stock and so are left to waste. Too much nitrogen has caused the rank growth, a little lime scattered over these small areas will sweeten subsequent grass crops, increase the palatable pasture and improve the appearance of the field.

"STEVE," '12.



The Draft Breeds of Horses

WHAT is a breed? We talk glibly about this breed and that breed: of breed character and breed type, but when we ask the question, "What is a breed?" we give cause for considerable reflection. The dictionaries differ, the men of science differ, in their definitions of the term.

A breed is a group of animals possessing homologous character by inheritance so firmly fixed as to be transmitted with reasonable certainty under suitable environment. It is the sum of the homologous characters which constitute breed type, and the horse that embodies in its self most of these characters in their highest estate is the animal which must be adjudged the best according to the standard of the breed involved.

Our histories contain no record of any large breed of horses having been developed on high ground. It was not until the horse in his western migration reached the marshy lands of northern Europe that he began to develop the size and strength that make for the present day draft horse. Belgium and Holland were, no doubt, the fountain head of the stream of equine blood which has given us the draft breeds. The Belgium, the French and the British.

The French Group.

The French Government recognizes two pure draft breeds, the Percheron and the Boulonnais. The Agricultural associations offer prizes for exhibits of four other breeds not claimed to be pure, the Nivernais, the Bretonnais, the Ardennais and the Mulassieres.

The Nivernais are being improved by the use of Percheron stallions. The Bretonnais are a general mixture. The

Ardennais are being improved mostly by the use of heavy Belgian stallions. The Mulassieres are a loosely built breed, the mares of which are largely used for mule breeding. The Percheron foundation was laid about the year 732. The Eastern stallions Arabian and Andalusian were crossed with the larger horses of the low countries. Seventy-five years ago the Percheron weighed from 1200 to 1400 pounds, the increase in size during the past three quarters of a century to the present scale of ton horses is traceable as in all other breeds to the demands of modern civilization. Typically the Percheron is a horse of some range, not squatty or chunky. He has a top line which differs from that of most other breeds in that it is somewhat higher just back of the coupling and between the points of the hip bones. This of course accentuates any lowness of the back or droop of the quarters that may be present. He has good width, his ribs are well sprung out from the backbone and rounded. His quarters should have a rounded contour indicative of promptitude of movement as well as strength. His neck should be well arched, not coarse and well set up. His head should be small in comparison with size of body. There is in the Percheron a breezy gait of motion not seen in other breeds.

The Boulonnais is native of the northern coast of France, and bears strong resemblance to the British breeds. They average larger than the Percheron, show a great amount of bone, but possess less breed character. Iron greys and roans are the common colors of this breed.

The Nivernais horses are much like

the Percheron in form. They are an all black breed with a rather short back rib, light flank and a tendency to undue length of back.

The Belgian.

Bred amid surroundings which favor grossness in horse flesh, the Belgian is the largest heavy draft horse of the present day. This breed is characterized by a marked lack of levelness of conformation, short neck and heavy head are too often in evidence; also the drooping rump. The Belgians' legs are very short with plenty of bone, his body is of great width and he has splendid action at the trot. This breed is fast gaining a place in the equine economy of America.

The British Group.

Opinion of authorities differ regarding the general appearance and size of English horses in Saxon times, but there is little doubt that some improvement took place after the Norman conquest. In the early years of the thirteenth century, stallions were imported into England from Flanders. Whatever influence these may have had is difficult to estimate. The British people have developed their breeds with very little outside aid, making them what they wanted them. All colors are found in the Clydesdale and Shire, but bays, brown and blacks predominate. The Suffolks are a race of Sorrels only. The white markings on legs and face of Clydesdales and Shires is on the increase. The walk of these two breeds has been developed to a marvelous extent, a straightness and trueness of action at the trot, which is not equalled by any other breed.

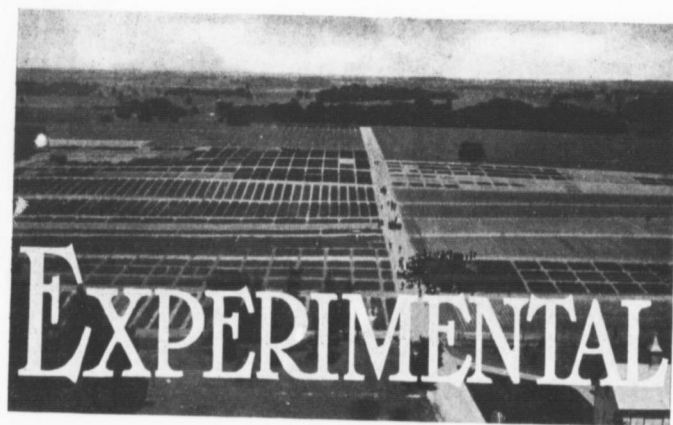
Most of the best Clydesdales now living may be traced to a black Flemish stallion, imported into Scotland in 1750. Other Flemish horses were prob-

ably imported about this time and it is to this Flemish blood introduced 161 years ago that the real improvement of the Clydesdale began. The Scotch breeder in his effort to improve the length and angle of the pastern and the quality of bone and hair has sacrificed somewhat the size, weight and ruggedness of his horse. The ideal Clydesdale in point of action and conformation is a model for all other draft breeds. The rotundity of his barrel, his clean bone, level top, well set pastern, prompt swinging walk, sharp trot, with hocks well flexed and carried close together, straight beneath the body, form a combination which is the joy of every horseman.

The Shire traces back to the black horse of Flanders, but it is doubtful if he owes his great size to this alien cross. The rich fine lands of Lincoln and Cambridge no doubt had much to do with Shire development making him the largest of the British breeds. Shire characteristics of the present day are great weight, strong bone, large amount of hair on legs, paucity of neck in many instances, abundant white on face and legs. Bulk and strength, depth of flank and rib, and plentitude of bone are pre-eminently attributes of the Shire.

The Suffolk is one of the most distinctive types of the drafter known, it enjoys the distinction of having but one color—chestnut. Unlike the other British breeds the Suffolk has very clean legs. Investigators agree that there has always been a race of chestnut horses in Suffolk County. No infusions of foreign or other alien blood have ever been made. The individuals of this breed are not as large as the Shire. They are noted for their splendid dispositions and great tactability.

"STEVE," '12.



Acclimatization of Seed in Eastern Canada

E. S. ARCHIBALD, B.A., B.S.A., DIRECTOR OF FIELD EXPERIMENTS, TRURO, N. S.

IT is still claimed by the majority of farmers in Eastern Canada that seed should be changed every few years, irrespective of conditions under which it has been produced. Others claim that seed to be sown on light soil should have been produced on heavy soil and vice versa. Undoubtedly, there is a certain amount of truth in each theory, more particularly so where climatic conditions vary widely. Splendid examples of this may be found in the potato experiments conducted by Mr. W. T. Macoun, Dominion Horticulturist, Central Experimental Farm, Ottawa. Here, for example, we find that potatoes taken directly from Nova Scotia do much better during the first year than the second. In other words, the acclimatization of potatoes in Eastern Ontario, tends to decrease the yield. But to Nova Scotia this would not hold true, since we have much

superior environments for such crops.

In general, however, investigation has led us to the following conclusions: Where good varieties have been grown in the same district or on the same farm for a number of years, and proper attention has been given to seed selection, nothing will be gained and much may be lost by changing seed. If, however, a superior variety is available or a superior strain produced under similar conditions, then much might be gained. In brief, other than soil conditions and the choice of varieties, the two greatest problems confronting our Nova Scotia farmers of to-day are seed selection and seed acclimatization. It is not the writer's intention to take space regarding the first, other than the fact that all farmers should follow methods of selection as conducted by members of the Canadian Seed Growers' Association,

or purchase seed from those who follow said methods. Reasons for such are self-evident to all up-to-date seed producers.

Inspired by the future possibility of crops such as corn, alfalfa, etc., which throughout Nova Scotia have been considered impossible crops, we have devoted much of our attention to the acclimatizing of these, as well as cereals and roots, representative results of which are as follows:

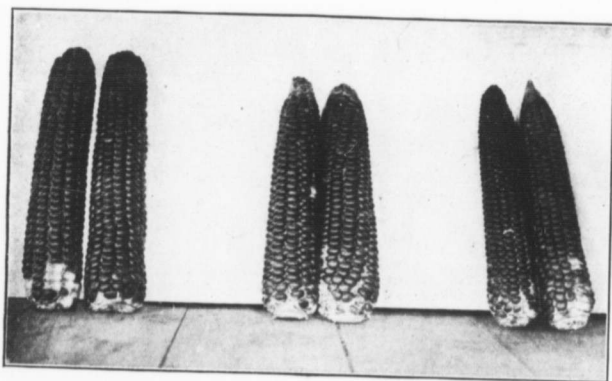
Corn. The maturing of corn for seed, or even bringing it to the glazed stage, has in Nova Scotia been almost impossible in all districts, save the Annapolis Valley. Dent corns will not

tion of which was secured from the Macdonald Agricultural College, St. Anne de Bellevue.

1. Is production after two years acclimatization.
2. Is production after one year acclimatization.
3. Is production after no year acclimatization.

No.	Height of plant. Ft.	Yield of Silage. Tons per ac.	Days to Mature.	Percent Germination of seed produced.
1.	7.1	9.3	130	89
2.	6.7	7.8	136	68
3.	5.5	6.1	141	49

If this can be done with Quebec Yellow, it may be done with any of the early Flint varieties; hence we are now



QUEBEC YELLOW CORN.

even make good silage, owing to their lateness. Hence, we have dealt with the Flint varieties in this work with the object in view to mature varieties suitable for ensilage and thus make possible the establishment of profitable silos in all parts of the Province. In accompanying illustration, will be noted representative ears of Quebec Yellow Corn raised in 1910, the founda-

working on Canada Yellow, Compton's Early and Longfellow. Several hybrids give promise of early maturity and heavy yield of fodder. The corn for 1911, as judged by dates of tossing and size of ears, gives every promise of justifying results of previous years.

Home Grown Root Seed.—During the past three years the neckiness of

turnips, together with lack of uniformity of roots, has decreased the yield in a large percentage. In 1909 we selected roots free from above faults and produced seed from the same in 1910, some results of which are as follows:

Variety.	Yield of cleaned seed per acre. Lbs.
Jumbo	1,189
Holborne Kangaroo	1,026
Magnum Bonum	877
Kangaroo (Steele-Briggs).....	823

Ontario and Quebec have commented most favorably on the above products and there certainly is a great possibility for this industry in Nova Scotia.

Grains.—Banner oats, selected according to C. S. G. A. methods, were obtained from various parts of Central and Eastern Canada. Grown under similar conditions, this experiment has shown that where conditions were nearest to that of Truro, N. S., the yield was proportionately large, and



HOME-GROWN TURNIP SEED.

These varieties were planted, at least, 1,500 feet apart to prevent cross fertilization. Not only was the seed of splendid appearance, but we found the germination percentage in these, as well as the home grown mangel seed, varying from 96% to 100% vigorous sprouts. The germination percentage of seed purchased from seedmen varied from 70% to 97%, the mangels particularly showed very weak sprouts. The 1911 field tests also show most marked difference in favor of home grown seed. Seed experts from

vice versa. Examples of this may be seen in following table, No. 1 in each case representing seed grown one year at Truro, while No. 2 represents seed imported direct from original grower.

No.	Variety Oats.	Height Ft.	Weight per Bushel Lbs.	Per cent Hull.	1910 Yield per acre	
					Straw Lbs.	Grain Bus.
1.	Joanette	3.5	35.	23.8	3975	74.2
2.	Joanette	3.7	34.7	23.8	4615	70.1
1.	Tartar King	4.1	36.7	31.34	3830	78.5
2.	Tartar King	4.2	36.1	31.3	3430	75.6
1.	Sixty Day	3.2	32.	23.7	4700	97.
2.	Sixty Day	2.9	30.6	24.7	4260	77.5

Although threshing is not yet completed for 1911, yet as a whole results will be similar to that of last year.

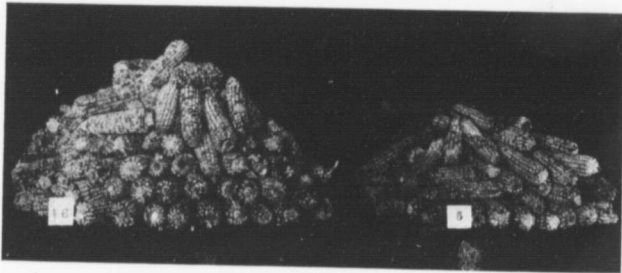
Other Crops.—Alfalfa has been tested for five years, with but small success, even though the bacterial, physical and chemical conditions of soil were made as nearly as possible ideal. During 1910 we raised fair quality alfalfa seed. This was sown in 1911 in test rows for comparison with several hardy strains of Turkestan, Sand and Grimms alfalfas. Not only did it come up sooner, but to date, after one cutting, it stands $7\frac{1}{2}$ inches higher than other strains.

Potatoes imported from other provinces, U. S. A. and Great Britain, also

improve in yielding qualities when acclimatized.

This work in Nova Scotia is but in its infancy and each year many new problems appear. The relationship between acclimatization and percent hull in oats; hardness of kernel and milling values in wheat; earliness of maturity; weight per bushel; yield of straw; insect and fungus resistance, etc., in all crops is as yet but partially known.

Interest in such work amongst all real students of agriculture is growing rapidly. The O. A. C. and all sister institutions are opening this vast field of research and strive to place results before the public in a commercial, as well as an educational light.



Alfalfa, King of Ontario's Forage Crops

TO have made that statement a few years ago without fear of being ridiculed, one would have found it necessary to go to some section of Ontario, where they had been growing alfalfa for some years, and by experience had found out its worth. Like many other good things, it was a long time before its real value as a farm crop became generally known to our Ontario farmers. In many cases, owing to improper handling, it was con-

ing rails. Doubtless, he had allowed it to get nearly ripe before cutting, and then handled so carelessly that most of the leaves were lost, leaving him the bare, hardened, fibrous stems making the term rails very appropriate.

To-day, however, one can claim the highest place for it among our forage crops without fear of contradiction, and with the knowledge that such a claim will be backed up by the vast and ever-increasing number of farmers,



ALFALFA 33 INCHES HIGH—JUNE, 1911.

demned by those who had grown it, and this fact did not help along its popularity.

The writer remembers hearing Professor Zavitz, of Guelph, lecturing to a crowd of June excursionists some years ago on alfalfa culture. After he had finished one farmer made the statement, "I would just as soon grow sweet clover for my stock as that alfalfa. It gets so woody that it is like feeding fence rails." We all have heard similar statements regarding it, and those who have had experience with the crop can readily understand why this man considered it like feed-

who are using it as a food for their live stock. This popularity which it has gained and rightly deserves, has been brought about largely by results that have been obtained by practical feeders, who cannot say too much in its praise. At the same time, it should also be added, that the information on the proper methods of handling, time to cut, etc., distributed widely throughout the Province from the Experimental Department at Guelph, by means of bulletins and lectures, has resulted in improved methods of culture, with a consequent improvement in quality of hay produced. This helped

to give the alfalfa movement an impetus in the right direction, and now the acreage devoted to this crop is annually increasing, although not as rapidly as its merit warrants.

It possesses many superior features over other crops. Three seem to stand out pre-eminently:

1. It yields a greater bulk of more nutritious hay per acre than others.

2. Stock, viz., cattle, horses, sheep, and swine thrive better on it than any other feed used as roughage.

3. It leaves the land in an excellent state of tilth for following crops.

From the fact, that even under Ontario conditions where no irrigation system is used, and where the season is comparatively short,

three and sometimes four crops can be cut in one year; we have the reason why a greater bulk of hay can be cut per acre from this crop than any other. Quite frequently reports come from farmers, of alfalfa yielding them from five to six tons of cured hay per acre per year; while from two and a half to three tons from the first cutting is quite the rule. Compare this with the one and a half to two tons per acre netted by the average timothy field, and conclusions are quickly drawn.

Then, too, weather conditions during the growing season have not such an effect on alfalfa as other crops. A fair crop will be produced in a very dry season, when other forage crops are almost a failure. This is due to the

great depths to which it sends its feeding roots, making it possible to obtain sufficient moisture to thrive when shallower rooted crops are suffering.

At the Kansas Experiment Station a record was kept for a period of four years of the pounds of cured hay, first cutting, produced by some of the leading hay crops. The following is the average results for the four years:

Common alfalfa, 7,345 lbs. per acre.

Red clover, 5,490 lbs. per acre.

Timothy and red clover, 4,604 lbs. per acre.

Tall oat grass, 1,707 lbs. per acre.

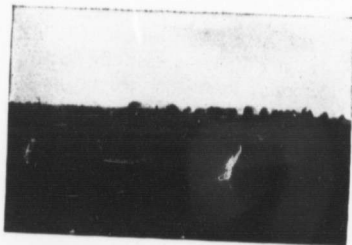
Orchard grass, 1,414 lbs. per acre.

Thus we see that alfalfa gave nearly one ton of cured hay per acre more than the highest of the

others. Records of yields from plots at the O. A. College can be found in the College report for 1910. The record shows the average results for thirteen years to be a yield of 5.1 tons cured hay per acre per year. These figures speak for themselves, and show superiority of alfalfa over other hay crops.

Little need be said about the feeding value of this hay when properly cured. Its composition has frequently been discussed in bulletins, lectures, etc., showing a percentage of protein equal to, and sometimes exceeding that of wheat bran. Thus indicating its value as a source of protein, and its great availability in balancing rations.

It is well known that there are differences in composition of different



CUTTING ALFALFA FOR SEED

parts of the alfalfa plant. The following table prepared by Kansas Experiment Station, should be of interest in this connection:

Part of Plant	% Ash	% Protein	% Fibre	% Fat
Stalks	9.01	10.74	42.17	.94
Leaves	14.33	24.05	13.81	5.99
Flowers	10.56	26.18	15.58	1.68
Whole plant	11.10	16.30	30.53	2.92

From the above table we see that the leaves and flowers are much richer in protein than the stalks, showing the advisability of care in handling so as to retain the leaves on the plant as much as possible.

It is generally recognized that alfalfa exerts a favorable effect upon the fertility of the land, by increasing its nitrogen content. It is able to do this through the agency of bacteria, which live upon its roots in small tubercles or nodules. These bacteria possess the extremely important power of taking up nitrogen from the free state in the air, and placing it at the disposal of the plant, thus leaving the soil much richer in nitrogen than formerly. This accounts for the rank and luxurious growth we see when any cereal crop follows alfalfa.

The large tap root of the plant has a very beneficial effect upon the general tilth of the land. It adds considerable humus when decayed, and also tends to open up a soil to the action of the atmosphere. This is particularly beneficial to a clay soil which needs some such agent to loosen it up, allow the free circulation of air, and the humus to prevent it becoming too closely compacted together.

From the fact that the roots go down to great depths in the sub-soil, much mineral matter which is so necessary for the growth of plants, is obtained from a source that other plants could

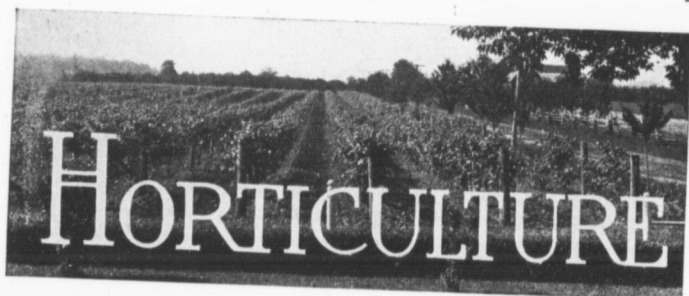
not reach. This is brought to the surface, and if the alfalfa is fed on the farm, is returned to the land and becomes available for following crops.

The condition in which a crop leaves the soil is an extremely important consideration in our choice of farm crops. As our land becomes older, it becomes more necessary to follow a system of farming that will maintain the soil fertility. Wherever grown the effect of alfalfa upon the land is quite apparent.

Alfalfa has come to stay as one of our important crops. While it is true, that some sections of Ontario seem unsuitable for it, there are many sections in which it could be grown successfully that are practically without it. When proper methods of cultivation are adopted, and the habit of growth and general nature of the plant are better understood by the farmers, its successful cultivation will be found possible, where now it is considered a failure.

The gospel of alfalfa is being preached quite extensively at present by the Department of Agriculture and all its branches, but many are still slow to heed. Were conditions in the various parts of the Province now considered unsuitable for it, looked into and the difficulties ascertained, they, in many instances, might be such as to be easily overcome. In few other ways could wealth be brought into the Province so quickly and easily, as if the farmers were generally to adopt this as a crop to produce roughage for their live stock. Much has been done, but much more could be done to bring this about. Perhaps in the future some means will be devised whereby farmers can have demonstrated to them that alfalfa is the BEST EVER and that it can be grown successfully on their own farms.

—E. B.



The Development of Fruit Growing in Canada

W. T. MACOUN, DOMINION HORTICULTURIST.

CANADA has now a world-wide reputation as a fruit producing country. The great trade in apples which has developed within the past half century between Canada and Great Britain has so impressed itself upon the people there that Canadian apples are now well known in the British Isles. In Europe and in South Africa Canadian apples find a market and the demands for our fruit are greater every year. The great exhibitions which have been held in America, Europe and Japan have also done much to draw the world's attention to Canadian fruit; and the splendid displays made by the various provinces from time to time in London have done a great deal to bring about that world-wide reputation already referred to. While the apple has played the chief part in advertising our fruits it is well known outside of Canada that Canadian peaches, pears, plums, cherries, grapes and small fruits compare very favorably with those grown in other countries. So favorably is Canada now regarded as a fruit producing country and so much have people been impressed with the advantages of fruit growing that perhaps, no other branch

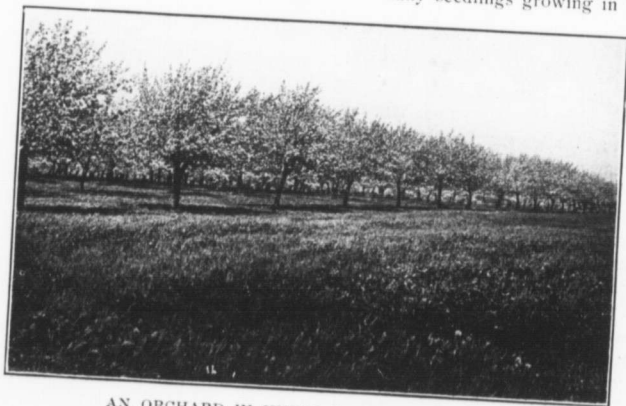
of Agriculture in the Dominion has received such an impetus in recent years.

While the Provinces of Ontario, Nova Scotia and British Columbia are the most noted to-day for fruit culture, Quebec, New Brunswick and Prince Edward Island have great possibilities in this direction, but as we have been asked to confine this article to Nova Scotia, Ontario and British Columbia we shall deal mainly with those provinces.

It is fortunate for Canadians and for Canadian fruit growers that Nova Scotia, Ontario, and British Columbia are situated as they are and so widely separated. Nova Scotia has, but to cater to the British, the European, and perhaps the South African, and New England States' markets to keep her fully employed. Ontario will always have a great provincial trade and no doubt the time will come when an understanding will be reached so that Ontario will co-operate rather than compete with British Columbia growers in the markets of the Prairie Provinces. Ontario has a splendid outlet for her fruit to Great Britain and Europe through the port of Montreal and doubtless will for a long time send

much of her fruit that way. While to the south the great cities of the United States should, if the markets are opened, take large quantities of Ontario fruit. The population of the Prairie Provinces seems destined to be a large one. Huge Canadian cities, such as Chicago, Minneapolis and St. Paul in the United States may be looked for within the next fifty years. Much of the fruit to supply them will be imported from other provinces, and it is to these cities that the British Columbia grower will look for his principal

the same time. In the beginning of the seventeenth century the French colonists in Acadia introduced fruits from France. History relates that apple trees were growing near the banks of some of the rivers in 1663. When the English took possession of the French gardens between 1760 and 1770 apple trees of many sorts were found growing and doubtless other fruits as well. The fruit plantations which had been neglected for several years before the English took possession must have had many seedlings growing in them,



AN ORCHARD IN KING'S COUNTY, NOVA SCOTIA.

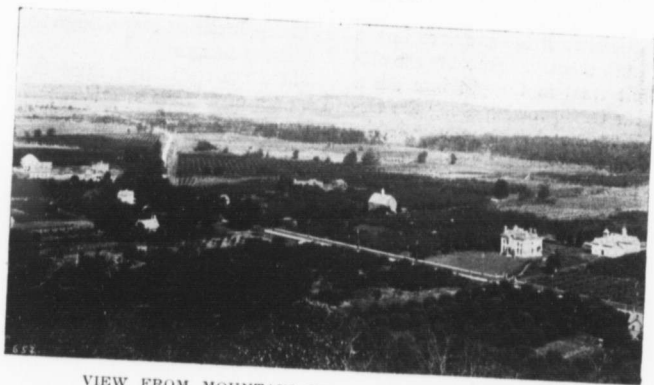
market. In the meantime a ready market is found for what is shipped from British Columbia to the rapidly growing cities and towns on the prairies, and who can say to what parts of the world British Columbia fruit may be shipped when the Panama Canal is completed and British Columbia ports are filled with trading vessels.

The Province of Nova Scotia has the longest horticultural history of any part of Canada with the exception, perhaps, of Quebec, where the colonists must have begun to grow fruit about

the climate of that part of Nova Scotia favoring the growth of chance seedlings. To-day seedling apple trees grow almost as readily there as native trees. It is known that the top grafting of these seedling trees with better varieties was begun as early as 1764 and some of the trees grafted at that time are still alive. On account of the poor transportation preventing a quick delivery of the fruit to the markets abroad the orchards and fruit plantations did not grow rapidly and were of comparatively small size until the last

half century. When the railway from Halifax to Windsor was opened in 1855 boats delivered their cargoes at Windsor and from there the fruit was taken to Halifax. The export of fruit was, however, very small even thirty years ago, the average export of apples for the years 1880 to 1885 being estimated at 23,920 barrels. While the early development, and while the main development of the fruit industry of Nova Scotia up to the present time has been in the Annapolis and Cornwallis Valleys fruit growing is carried on in other parts of the province as well. The

from the winds which blow across the Bay of Fundy. Tidal rivers through and intersecting the valleys help to moderate the climate in winter and also moderate the heat in summer. The spring is comparatively late and the autumn usually rather cool. Most of the older orchards are planted on the lower and heavier soils but some of the most profitable ones are on the sandy and gravelly slopes of the hills, and many orchards are being planted in such situations, as that land is usually cheaper than where the soil is heavier.



VIEW FROM MOUNTAIN NEAR GRIMSBY, ONTARIO.

most promising new district seems to be the south-eastern part of the province where there is a great area of cheap land and where apples and other fruits are doing well.

The Cornwallis and Annapolis Valleys, where most of the fruit of Nova Scotia is at present grown, is practically one valley about one hundred miles long and from six to eleven miles in width and lies between two ranges of hills about six hundred feet in height. On the west of the valley the North Mountain protects the orchards

Apples, pears, plums, cherries and small fruits, and to a limited extent peaches and grapes are grown in these valleys. The mining towns of Nova Scotia, of which there are a great many use large quantities of the small fruits which are grown very successfully in most parts of the province.

It is not possible to state how many fruit trees and bushes are growing in Nova Scotia as it is so long since the census of 1901, and that of 1911 has not yet been announced, but a good idea of the rapid development of the fruit in-

dustry may be obtained from the following figures taken from the report of the Secretary of Agriculture for Nova Scotia for 1910 showing the average export of apples.

Export of Apples from Nova Scotia.

1880 to 1885	23,920 barrels.
1905 to 1910	482,298 barrels.

This year the fruit growers of Nova Scotia expect to harvest the largest crop of apples in the history of the province, 1,250,000 barrels being the estimate.

The history of fruit growing in the Province of Ontario also begins with the settlement of the province in the eighteenth century. Probably the oldest fruit trees in the province are a few pear trees growing along the Detroit River near Amherstburg. The oldest of these trees are said to have been planted in 1705 by the French missionaries. Until there were reliable and regular means of transportation fruit growing could not become a commercial enterprise, but when the railways began to be built, towards the middle of the nineteenth century, the experience of the past became extremely valuable in making commercial plantations. Commercial plantations of fruits may be said to have had their beginning in Ontario between fifty and sixty years ago. The first peach orchard planted for commercial purposes is said to have been one planted by Messrs Joseph and John Brown below Queenston about fifty years ago. It has been estimated that fifty-four years ago there were not more than fifty or seventy-five acres planted to small fruits for commercial purposes in the Province of Ontario.

It is difficult to tell when the first apple orchard was planted in Ontario solely for commercial purposes, as the

apple trees planted for home use were much more numerous than other fruits and farmers began selling and shipping the fruit from these orchards when the markets were available.

A good many apple trees were planted when the U. E. Loyalists came from the United States between 1780 and 1790. About fifty years ago would, however, mark the beginning of the planting of commercial apple orchards in Ontario. The planting of other fruits for sale began about the same time. In 1872, we learn from the report of the Ontario Fruit Growers' Association, that some fruit was exported to Great Britain at that time but with indifferent success.

There are such large areas in the Province of Ontario suitable for fruit culture that it is almost impossible to estimate what the production of fruit in this province might be. The best winter apples, pears, plums cherries and small fruits can be grown successfully over an extent of country about three hundred and fifty miles long and varying in width from thirty to one hundred and fifty miles. This area comprises that part of the province beginning west of the City of Kingston along the St. Lawrence River and gradually widening westward until the Great Lakes are reached. While in some places in this section the elevation is a little too high for some varieties yet on the whole, where the soil is suitable, the climate is favorable.

Eastern Canada is fortunate in having a district like the Niagara Peninsula, which for some time to come will be the headquarters for peaches, cherries and grapes. But along Lake Erie and the southern part of Lake Huron peaches are being grown very successfully and before long there will doubtless be much larger quantities shipped.

While that part of Ontario which has been mentioned is especially suited for apples, pears and the more tender fruits there is a still larger area where summer, autumn and early winter apples can be grown, and where bush fruits and strawberries succeed admirably. It is that part known as Eastern Ontario, and northward and westward to the Georgian Bay, and time only will tell what can be done further north.

The Dominion census which will soon be published will give the most recent statistics in regard to the area

bushels in 1901, and of other tree fruits 1,536,634 bushels; the crop of grapes 23,156,478 lbs., and the small fruits, 16,232,020 quarts. What the increase during the past ten years has been will be known as soon as the figures of the 1911 census are published.

The history of fruit growing in British Columbia does not go back many years, and it is only within the past ten years that a marked development of the fruit industry has taken place. In a paper by the Hon. Richard McBride, Premier of British Columbia, published in the Fruit Magazine for Novem-



A YOUNG IRRIGATION ORCHARD, SUMMERLAND, B. C.

under fruits in the Province of Ontario at the present time, but in the report of the Bureau of Industries for 1901 the following figures are given:

Area in orchards.....	298,347 acres
Area in small fruits.....	24,348 acres
Area in vineyards	11,390 acres
Area in gardens	57,982 acres

According to the Dominion census of 1901 the total number of fruit trees in Ontario of all kinds was 14,087,936. It is quite likely that the figures for this year will be about 17,000,000 trees. The crop of apples alone in Ontario was estimated at 13,631,264

ber, 1910, he states, "While the census of 1901 shows that all the fruit in British Columbia was then grown on about 6,000 acres of land, of which the apple orchards occupied two-thirds the total area devoted to fruit to-day is probably in the neighborhood of 100,000 acres, though accurate figures are not yet to hand." He estimated that the value of the fruit grown in British Columbia in 1910 was about \$2,000,000.00.

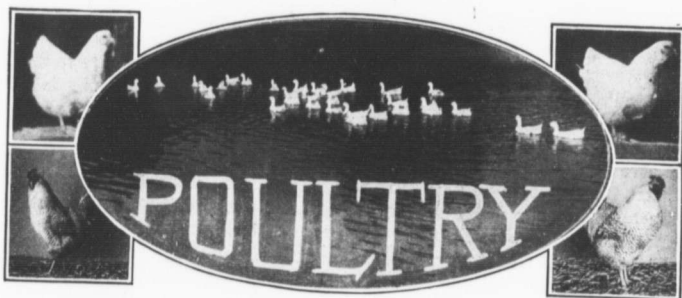
The first cultivated fruit trees in British Columbia are said to have been planted on Vancouver Island by

James Douglas, afterwards Sir James Douglas, and the first governor of the colony, in 1849. When the miners came, after the discovery of gold on the Fraser, in 1859, trees were planted on the mainland and then gradually carried to the upper country. The difficulties of transportation, however, prevented their being taken in except in very small numbers, and thus owing to this cause and to the small population the development of fruit growing was slow. When, however, the Canadian Pacific Railroad was completed in 1887 and branch lines subsequently run so that the valleys, where it was known that fruit would succeed well were readily reached and when the rapidly populated Prairie Provinces offered a good market for British Columbia fruit planting began in earnest with the result stated above.

The climate and soil conditions of British Columbia vary much, and on account of this there are several well defined fruit districts. Beginning from the west side there is the southern part of Vancouver Island and the lower mainland. The climate in this section is mild and apples, plums, pears, cherries, and, in some places, peaches and grapes grow well. Owing, however, to the moistness of the air diseases are more troublesome than in the drier parts. Small fruits do particularly well. On the mainland in the Upper Fraser Valley and the Valley of the Thompson, excellent apples, pears, plums and cherries are grown under irrigation, and grapes are grown more successfully here than in, perhaps, any other part of the province. Coming eastward there is the district about Shuswap Lake of which Salmon Arm is the best known section. Here fine apples, pears, plums and small fruits are grown without irrigation.

About fifty miles south of Shuswap Lake is the most noted fruit district of British Columbia—the Okanagan Valley. Practically all the fruit in this valley is grown under irrigation. Beginning at Vernon, near the north end of Okanagan Lake and extending to Penticton at the south end, many fine orchards are being grown. Many of these orchards are under ten years of age and thus are not yet in full bearing, although, as trees bear younger there than in Eastern Canada these have borne several good crops already. Peach trees are being grown quite extensively at Summerland near the southern end of the lake. There are other valleys again south of the Okanagan of which the Similkameen is the main one. Here, where irrigation is possible, fruit succeeds well and owing to the mildness of the climate the tenderer fruits succeed. In the West and East Kootenays excellent apples and other fruits are being grown, and no one can yet tell to what extent fruit will be grown throughout these great areas. The Grand Trunk Pacific is opening up other fruit districts much farther north where the climate is proving surprisingly mild and where in the near future there will no doubt be large orchards.

When one knows the vast fruit growing areas that there are throughout Canada, more than are ever likely to be planted to fruits, one might be led to think that more fruit will be grown than is possible to market profitably, but the demand for fruit is rapidly increasing; the population of this country is rapidly increasing; peoples of other countries also want our fruit; and if the fruit grown is rapidly and properly distributed to their markets there should be little danger of over production.



Modern Handling of Poultry Products

H. A. McALEER, B.S.A.

IN a recent trip through the mid-west we visited several poultry and egg handling establishments in Kansas. We were given a good insight into the methods practiced there, and to the extent of the co-operation which exists between the United States Department of Agriculture, the packers, the railroad companies, the warehousemen and the retailer, in an effort to perfect a system which will permit poultry products to reach the consumer in the best possible shape.

One of the plants visited is located in Atchison and is a model in many respects. The fattening room is built of brick and has a capacity for handling 15,000 birds. The ceiling is high, and the ventilation good. The floor is of cement and can be easily flushed; the building is lighted throughout with electricity; there is a series of electric fans distributed around the room that insures good circulation at all times. The crates are built in tiers and are movable. In this respect they are a great improvement over our regulation crates as they are handier and take up less room. Each crate is provided with a metal droppings board that

is easy to remove and permits keeping the crates scrupulously clean, about the whole establishment is an air of cleanliness that is extremely gratifying. There were over 5,000 birds feeding at the time of our visit and the temperature was over 95 degrees F. yet the room was free from any offensive odors.

After the period of fleshing, the birds are removed to the killing room. In this establishment string and bench picking is practiced. It is at this stage of the operation that the chain of co-operation mentioned in the foregoing begins. The Food Research Laboratory of the Bureau of Chemistry has charge of the Government interests. A large percentage of the chickens put on the market are not completely bled, this annually entails great loss. Investigation showed that such chickens lacked in firmness of flesh, are inferior in flavor and are prone to early putrefaction. Steps were taken to find the cause of incomplete bleeding, a study was made of the blood vessels of the neck of fowls, shape and the kind of instruments employed in killing. As a result of these studies an illustrated

circular issued by Pennington and Betts, "How to Kill and Bleed Market Poultry," was issued by the department, indicating methods that insured perfect bleeding. In view of these facts it would be interesting and instructive to make a careful comparison between birds dressed by sticking and those killed by our usual method of dislocating the neck. We believe that the latter course would permit of as thorough bleeding as the former, but would not the retention of the blood in the dislocated area have a tendency to eventually taint the flesh?

To remove the animal heat after killing, the chickens are placed in an artificially cooled room, called the chill room. At this plant two such rooms are used, in the first a temperature between 35 and 40 degrees F. is maintained, here the freshly killed stock is placed, remaining three or four hours from whence they are removed to a second room where the temperature is under 35 degrees F., the stock remains in the room until the temperature of the body cavity of the chicken corresponds to that of the surrounding atmosphere. The provision of two chill rooms is to prevent chilled stock from sweating by a rise in temperature, which would naturally follow when fresh killed stock is added.

After the chickens become thoroughly chilled, which usually takes twenty-four hours, the heads of the birds are carefully wrapped in parchment paper, and grading and packing begins. At the time of our visit the output was sent to New York City. The packages used are similar to those used here in handling high grade stock, the boxes are lined with parchment paper, in some lots the birds are individually wrapped, packed a dozen to the box. Before shipping, the boxes are loosely

packed in the chill room until the contents become thoroughly hardened; this helps in a great measure to maintain an equable temperature in the cars. The packages are shipped in a refrigerator car, which is iced at regular intervals along the route.

Mr. Pierce, of Food Research Laboratory, outlined for us the method used in following the transportation. A number of thermographs are installed in different parts of the car, these give a complete graphic record of the temperature from time of loading until the delivery at the destination. These machines are capable of registering the temperature for a period of about seven or eight days, which would cover the time of the longest haul. It is evident that the careful packing and refrigeration of the packers would be rendered fruitless if the transportation is faulty. The thermograph record in different parts of the cars indicate defects of insulation, and, as a whole, the faults of the different types of cars and thus enables the transportation companies to improve their end. The investigation does not cease here but the shipment is followed from the warehouse to the shops of the retailer, every condition being noted.

In the laboratory, there is a complete chemical, bacterial and histological investigation made of samples drawn from time of killing, through the various stages, to the display in the retail shops. Egg handling is not neglected but is given its proportionate share of study through the warehouse and laboratory.

At another packing plant in Topeka the egg industry was given more attention. This house maintained a bacteriological laboratory and was making a study of the bacterial content of eggs that came to their hand in the

regular course of trade. Beside the handling of shell eggs this house handles gallon eggs and also had a machine for the evaporating of eggs; these were sold for packing purposes. Space will not here permit going into a description of this interesting process.

The foregoing facts are valuable at this time when the "Poultry Producers' Association" is appealing to the Government for aid to improve the handling of poultry products. This association is doing good work but is handicapped in making greater progress and accomplishing much needed reforms through lack of authority and finance. It is true that the Dominion of Canada Department of Agriculture was a pioneer in the movement for

better poultry on the American continent. Back in 1896 they established the first of the Illustration stations for the fleshing of poultry. The good work done by those stations is familiar to all. They demonstrated that a high class article could be produced, and they created a demand for high grade poultry that now far exceeds the supply. But with the closing of these Illustration Stations, six years ago, Government aid in poultry production practically ceased if we except the Poultry Department at Experimental Farm at Ottawa. This is to be regretted but we sincerely hope that the Government will again take up the good work left off with closing of the Illustration Station and again be a leader in this line of work.

Poultry at the Canadian National

M. C. HERNER, B. S. A.

THE Canadian National Exhibition has again passed into history, and with it one of the best poultry displays ever made at any "National" show at this season of the year. Though the entry list was somewhat smaller than last year still the quality of the birds shown was better than any previous year. The falling off in numbers was most noticeable in the young stock, due largely to the scarcity of early hatched birds, and the extreme heat later in the season, which was a serious drawback to the rapid growth and proper development of the birds. Considering these difficulties the Ontario poultrymen deserve great credit in bringing out such strong classes in all the different varieties, as were displayed at the National.

The White and Brown Leghorns

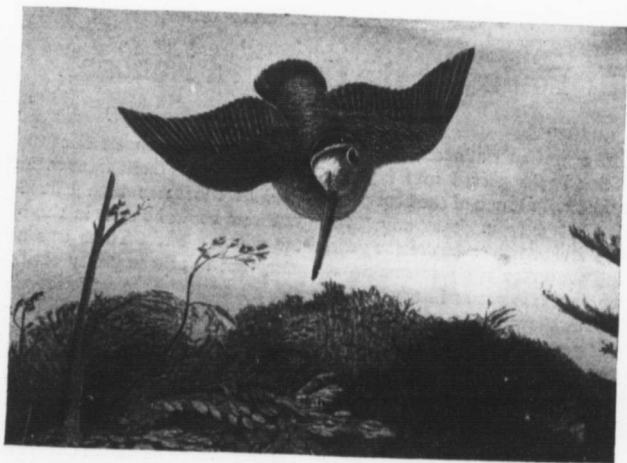
were the two strongest classes. While birds of special merit were required to win, at the same time considerable variation could be seen in the type of the winning birds. There was a large entry list in all the utility classes, although some of the varieties showed a falling off in numbers while others showed a gain. This was the case in Buff and Black Orpingtons, the former showing a decrease while the latter had an increase. Rocks, Wyandottes and Rhode Island Reds had a very full entry list. Some of the breeders pay more attention to utility points than others but there still remains considerable room for improvement in perfecting a bird in utility as well as in fancy qualities. The majority of breeders could quite profitably divert their skill as breeders towards the development

of the utility side of their breed for a few years. Breeds would thus spring into popularity and the industry as a whole would receive a new and greater stimulus.

In Minorcas, Hamburgs, and the other lighter breeds there was a good display. The ornamental classes, pigeons, and pet stock were also well filled. There was about the usual exhibit of ducks, geese and turkeys. The most noticeable feature of this display

was the increasing popularity of the most noticeable feature of this display Indian Runner ducks.

Two Canadian and three American judges placed the awards. The way the ribbons were placed gave general satisfaction. In a few cases considerable complaint was heard which, in our opinion, was justified. These placings were so far out that work of the judge could be honestly and fairly criticized.



THE O. A. C. REVIEW

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E. BRADT, Experimental.

W. M. AIKENHEAD, Horticulture.

J. H. FAY, Poultry.

C. W. STANLEY, College Life.

H. M. McELROY, Athletics.

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G. J. JENKINS, Assistant Business Manager.

Editorial

Vacation days are over. Colleges throughout the land are re-opening their portals to receive the ever-increasing stream of students. As we

The College Year

again, (or for the first time) enter the doors of our Alma Mater, we do so, anticipating another year of effort and enjoyment, and with resolutions for greater achievement in class work. It is well that we enter in this way. We come here to prepare ourselves for a great future and our life's work. Soon, however, the fascinations of the campus, the football struggles, the track, the city and last but by no means least—the fair sex—break down many of our resolutions, time flits merrily on, and examination time finds many of us unprepared. This has been, and must ever be, the experience of—yea—many students. 'Tis true our greatest lessons come through actual experience but to a certain extent we make our own experience. We are, as a student body on the eve of a

great year in the history of the O. A. C. Who of us then can afford to be counted among the failures? The aim of every student should be to get as much as possible, not only out of football, and the other attractions of a college career, but from his work. Let us not ignore any of the requisites to success, but one and all apply ourselves diligently so that exams, for us will, once and for all time "have lost all terror and power to alarm."

For some time past the members of The Review staff have been considering the advisability

Review Competitions

of holding competitions within the student body with the idea in view of stimulating a deeper interest in our College Magazine. We are pleased at this time to be able to state that this has now taken a definite shape, and we are hopeful of great results. The competition is divided into four departments, and liberal cash prizes are offered in each.

The four divisions are: Story, Poetry, Three Cartoons, and Three Pictures. As an incentive we have decided to use all the first prize material in our special Christmas number, thus making it largely local. The competition is open to the Macdonald students as well as the O. A. C. students. A notice bearing all details is in The Review bulletin board, study it carefully, note the conditions, enter the struggle, make it a success and make the Christmas number your own.

Governments may come, and governments may go, but Canada will continue to flourish. The

The General Election

recent election demonstrates but one fact—that the people really believe in their present prosperity, and will tolerate no radical change in their fiscal policy, and still less do they deserve any agreement which can be made to appear to encroach, ever so slightly, upon our perfect autonomy in all things, even if such be only a trade arrangement.

The election was not a great Conservative victory. The election was not a great Liberal defeat. The election was practically a referendum on Reciprocity, and the verdict of the people was quite emphatic.

It is sad, that it seems impossible for those in the political arena, to refrain from tactics which are dangerous to the well-being of our country, morally and socially. The efforts to put farmer against manufacturer, east against west, race against race, creed against creed which were indulged in by some politicians and the press of both parties, cannot be too strongly condemned. It is such political madness that hinders Canada's realization of true nationhood within the free Empire,

which is the goal of all patriotic Canadians, and the aim, we firmly believe, of both our great political parties.

Irrespective of party we can all honor the great Canadian statesman who steps out from office, and with equal warmth can we welcome Mr. R. L. Borden, as one who will always maintain the high ideals of British and Canadian statesmanship.

During the next few weeks hardly any department of college life will be

Is a Change Needed?

more in the public eye than the various branches of athletics. And this is surely well, both for the individuals engaged in the sports and for the healthy development of college spirit. No fellow can hope to become a broad man nor a strong man who neglects his physical being; for the moral, the mental, and the physical parts of man are so finely balanced that not one part may be neglected. Hence it is the duty of each one of us this coming college year to take systematic exercise, and in our large calendar of sports throughout the year every one can find a game or a sport suited to his peculiar physical condition and nervous temperament.

But important though physical training is and dear though sporting competition may be, a word of warning, we feel, is needed, to at least a few. It must not be forgotten that the prime motive of college life is, or should be, to study, and that this institution is attended for the purpose of broadening the mind. If it is possible for a fellow to excel in athletics, it is truly to his credit, but to be a success he must excel in his studies as well. Too often we see our men neglecting school work for sport. Although they may become noted athletes, and popu-

lar men with the student body, does that ease the sting of defeat—real defeat—when the examination report comes home reading a failure? And does it tend to promote the popularity of sport in his neighborhood and in his home where, perhaps, the old folks have pinched and scraped to make possible for him the advantages of a college education? We think not. Moreover we consider it unfair to force our athletes who do study to compete on equal terms with those who do not. Some rule should be framed, if possible, preventing a man from winning a grand championship unless he attains a certain percentage in his studies. Or if this is a too radical measure our athletic association might consider the advisability of offering a special prize to the fellow who makes, say a 75% average in both his studies and his sports, or to the one coming highest above this standard. If such a system were inaugurated it would bring sport and study together in a way they are not now. We believe that the situation demands the thought and attention of the student body in general and of the athletic executive in particular

Although this to many of us is a threadbare subject, we feel justified in bringing it to the attention of the new Macdonald students, and to the Freshman

Patronizing Advertisers

class, which forms such a large percentage of our entire student body. The financial responsibility of the production of our College magazine is placed upon the few who from year to year compose the "Review Staff." Upon our advertisers are these men in turn dependent to enable them to pilot the bark safely over the tides of

publication, and other expenses, and finally land on solid ground. "The Review" has always discriminated carefully in regard to its advertisers, and as a result we have a large list of reliable advertisers.

Then it is assuredly in the best interests of every one to patronize our advertisers. Give them a trial, tell them you saw their "ad." in your College paper, and by so doing you will not only help yourself but you will greatly lighten the work of the Business Manager, and you will then be doing your part.

During the recent session of Parliament, important changes were made in the Seed Control

Changes in the Seed Control Act

Act respecting the sale of clover and timothy seed. Under the old Act the inspector sometimes found it difficult to prove violations though misrepresentations were being made. A dealer might offer red clover seed, containing as many as 92 noxious weed seeds per ounce and an unlimited number of other weed seeds such as Foxtail, represent it as his best grade and charge nearly as much as his competitor asked for No. 1. He would not mark it No. 1, but he might state verbally that it was No. 1 or just as good. This has often been done, with the result that farmers as well as retail merchants who really wanted to buy pure seed have got badly contaminated seed and paid high prices for it. Under the new Act such misrepresentations will be impossible and both farmers and retail merchants will be able to buy their seed more intelligently. Four grades are fixed by the Act for red clover, alsike, alfalfa and timothy seed, and all seed sold for

seeding purposes by seedsmen must be plainly labelled with the grade. Any seed not grading No. 3, which is a higher standard than the old prohibitive line of five noxious weed seeds per thousand of good seed, is prohibited from sale. The following are the standards for freedom from weed

	Red Clover, Alfalfa, Timothy.		Alsike.	
	Noxious weed seeds per oz.	All weed seeds per oz.	Noxious weed seeds per oz.	All weed seeds per oz.
Extra No. 1..	..	30	..	30
No. 1..	5	100	10	100
No. 2..	20	200	40	200
No. 3..	80	400	160	400

In addition to the standards for freedom from weed seeds, standards for purity in other respects and general appearance are fitted for Extra No. 1, No. 1 and No. 2. Double the number of noxious weed seeds are allowed in alsike on account of the greater difficulty in cleaning this seed. Farmers and seed dealers should have their seed tested and graded before offering it for sale. Samples will be carried free through the mails and tested without charge if addressed to the Seed Commissioner, Department of Agriculture, Ottawa.

OCTOBER.

Like gallant courtiers, the forest trees,
 Flaunt in their crimson robes with broidered gold;
 And, like a king in royal purple's fold,
 The oak flings largess to the beggar breeze,
 Forever burning, ever unconsumed,
 Like the strange portant of the prophet's bush,
 The autumn flames amid a sacred hush;
 The forest glory never brighter bloomed.
 Upon the lulled and drowsy atmosphere,
 Fall faint and low the far-off muffled stroke
 Of woodman's axe, the school boy's ringing cheer,
 The watch-dog's bay, and crash of falling oak;
 And gleam the apples through the orchard trees,
 Like golden fruit of the Hesperides.

—Wm. Henry Withrow.



THE old scenes of reopening day were again presented this year and to all but the new students they afforded a time of general rejoicing, for nothing pleases college students more than having an opportunity to again clasp the hands of their old class mates, fellow students and friends, after miles of land or sea or both have separated them during the five months of vacation.

The prospective members of Class '15 were decidedly more timid than those of the more experienced classes, and hung around in groups, discussing their respective home-towns, reciprocity, rumors of the coming initiation and their chances of success against their war-like adversaries.

As usual the residence during vacation was occupied by Normalites from all parts of the province, who came to the O. A. College to study Agriculture, Horticulture and Mechanical Arts in the most famous institution of its kind on "terra firma." This course is becoming more popular year by year as people realize more fully that agriculture is a science and must be diligently investigated, if the best results are to be obtained.

It has been said that there is no rest for the wicked. Be that as it may, the members of the faculty were busily en-

gaged in lecture work, in the office or laboratory with research and experimental work, answering questions and broad-casting knowledge generally for the benefit of the June excursionists or in further pursuing their own particular course of studies.

The Student Booth.

As in former years the students operated their booth during the June excursions and those in charge were again able to report a neat surplus over operating expense.

Drainage Surveys.

The Physical Department took advantage of the increased Government grant and Professor W. H. Day had a large staff of men engaged at drainage surveying and draughting. These men visited nearly every district in the province, and they report an ever increasing interest in both the actual surveying and in the demonstrations given after the surveying was completed.

Short Course in Apiculture.

During the month of May a Short Course in Apiculture was held at the College under the supervision of Mr. Morley Pettit, Provincial Apiarist. Considering the fact that this was the first Bee-Course ever given here, the attendance of forty-three must be very gratifying to those interested.

Changes in Staff.

Comparatively few changes were made in the College Staff for the ensuing year. Mr. S. H. Gandier, B.S.A., a graduate of 1911, succeeds Mr. J. B. Fairbairn as secretary to the President. "Cap." hails from the town of Lion's Head, on the shores of Georgian Bay. He has had a very brilliant college career, winning among other things the Governor General's medal in his second year. He has been prominent in athletic and literary circles. "Cap." is a popular, obliging young man and will make an efficient secretary. Mr. Fairbairn has retired, owing to ill-health, and has gone into fruit farming in the Niagara Peninsula.

The appointment of Mr. S. H. Hopkins to the position of Dean of Residence, has come as a very welcome surprise to his classmates, and many student friends. The successor of Mr. Unwin must necessarily have been a man of large capabilities, and Dr. Creelman can congratulate himself upon having such a man as Mr. Hopkins available.

Mr. Hopkins is an Englishman, claiming Berry, Lancashire, as his birth place. His preparatory training was taken at Ashville College, Harrogate, where he secured his junior Cambridge. He then took up commercial work in Liverpool, but the close confines of an office did not offer scope enough for his well-trained faculties.

Mr. Hopkins came to this continent in 1906. His love of nature, and farm life prompted him to take up practical agriculture, which he pursued for three years, both in the Western States and Western Canada.

He entered this College two years ago, as a member of class 1913. His superior training, both academically and practically, at once marked him as

a leader. He has twice lead his year, and last spring carried off the Governor General's medal.

As a student Mr. Hopkins won the confidence and respect of all his fellow students, and class mates, and in his new, and somewhat trying position, he may be assured of their loyalty and support.



S. H. HOPKINS.

Mr. J. Spry, B.S.A., another graduate of '11, succeeds Mr. W. R. Reek, as Demonstrator in Physics. Mr. Spry has made a careful study of the drainage problem, and will, no doubt, prove a worthy successor to Mr. Reek, who has resigned his position to take that of Secretary to C. C. James, Esq., Deputy Minister of Agriculture for Ontario.

Another graduate of '11 has been added to the Staff in the person of M. C. Herner, B.S.A., who has been appointed Demonstrator in Poultry Husbandry. As every one knows Mr.

Herner is an ardent poultry enthusiast, and anything he can't tell in connection with the poultry business isn't worth listening to. He was a member of the College's First Poultry Judging Team which made such a creditable showing at the great poultry show held in Boston last January.

Still another member and graduate of Class '11, remains at the old O. A. College, in the person of Mr. J. W. Baker. "Jack" has received the appointment of assistant in the Entomological Department and will also be right-hand man in the suppression of all unruly Freshmen and more boisterous Sophomores.

The Review extends a hearty welcome to the new members of the Staff, and wishes them every success in their work.

College Organizations.

Unless this year's quota of new students is considerably different from that of previous years, the officers of the various College organizations will have trouble in getting a number of them to join these societies.

The societies exist for the benefit of the students, and like everything else in this world, it takes money to operate them successfully. Very few students are so financially embarrassed that they cannot spare the membership fee for each society.

The Freshmen are the only students to whom a word of admonition should have to be given, but unfortunately some members of the other years are adverse to joining the societies on the pretext that they are not worth the money. This is a mistaken idea for anyone who attends the Lits. and Y. M. C. A. meetings must be convinced that he is more than amply repaid for the expenditure of his time and money. In fact, the benefits derived cannot be

estimated in dollars and cents. Of course no one even doubts the great value given for the money by the Students' Publishing Association. They rather marvel at getting so much for so little.

The Literary Society has for its object the development and improvement of its members along literary lines by endeavoring to instill a love for literary and musical selections as well as seeking to enliven the social functions of the College by arranging those pleasant "At Homes" that are periodically held in Macdonald Hall.

It is a lamentable fact that the agriculturists, as a rule, are poor public speakers. If you have any ambition to raise the standard it is essential that you seize your opportunities and speak frequently in public. No one will be more surprised than yourself at the marked improvement shown in your platform ability.

To join the society and "get busy" should be every student's desire. The Maple Leaf Society for Freshmen is divided into A and B divisions, and the names of the members of the respective divisions are posted on the bulletin board in due time. Watch for them.

In addition to the regular meetings the Literary Society holds annual Oratorical and Public Speaking contests. At these prizes that are well worth an earnest effort to secure, are given.

The Young Men's Christian Association.

The Y. M. C. A. is an undenominational organization. Its object is to cultivate us morally and help us to deal fairly with the deepest problems of life, if we desire to be a true man and make the most of our sojourn here.

It is the yearning within human beings for the spiritual and religious that

has caused the advance of civilization, without it man would be little better than animals. At the meetings on Thursday evenings, practical talks on practical subjects are given by men who have succeeded in rising above the rank and file of life. Come and hear them.

Besides this regular Thursday evening meetings in Massey Hall, the Association holds Bible study and Mission classes on Sundays.

The Y. M. C. A. is a world-wide association of great strength, and by joining this you belong to an association whose influence is felt all over the world.

The Philharmonic Society.

The Philharmonic is not a new society, but this is the first year that it has been placed on an equal basis with the other societies.

In former years it seemed to be aloof from the student body, but now that it has financial support other than the proceeds of the annual Philharmonic concert, its presence will be more felt.

Under its guidance will be the formation and management of a Rooters' Club, to enliven football and other games, the Brass Band, the Choral Club, the Chapel Choir, and the College Orchestra.

The Rooters' Club is open to everybody. The Brass Band, Choral Club, Chapel Choir and Orchestra to those of musical ability. A cordial invitation is extended to all those interested in singing or playing.

The O. A. College Students' Publishing Association is a worthy organization. It now confines its attention to publishing the Review, but its work is bound to grow, and in a short time it expects to own and operate its own printing press, and also sell text books and stationary. It requires the hearty

co-operation of every student in order to bring this about.

It is the intention of the students to have a general day for elections. On this day all the officers of the College Societies will be elected. This is the method pursued by the 'Varsity students and reports show that the enthusiasm on election day far exceeds anything seen in our College parlor in the past.

By adopting this method of procedure it is hoped that the officers of every society will be representative of the whole student body or of the year they are intended to represent.

The Initiation.

The annual initiation which was held on the campus on the evening of September 22nd, proved to be a dismal failure from the standpoint of both the spectators and Freshmen. The Sophs. also were very much chagrined for, although they captured the flag, they wanted an opportunity to show their real prowess, and all the strategical movements which they had planned to carry out.

Shortly after seven o'clock the noble band of Freshmen to the number of one hundred and forty appeared on the campus in full war-paint, and as no signs of the enemy were visible they marched around for the greater part of an hour singing war-like songs and trying to persuade themselves that the Sophs' were easy picking. When they had exhausted their supply they formed in a compact body around the pole from which hung the flag they were to defend and waited.

As the evening wore on and darkness encompassed them, their fighting spirit evidently was fast melting away, for one Freshman was heard to say, "O why did I leave Dear Grandma."

Suddenly like a bolt from a blue sky a division of the Sophomore brigade swooped down on the defenders and began playing upon them with a stream of water from the fire hose. The cold water effectively dampened any militant spirits left and when two more columns of Sophs. charged, the flag was easily secured. As the standard fell the victors burst into lusty cheers and carried Kedey, who tore down the flag, triumphantly to the residence. As soon as the Freshmen realized what had happened they retired to their rooms, or to the bath tubs, and removed all visible signs of the fray.

Y. M. C. A. Reception.

The first week of the College term has its special features. Not the least of these is the reception to the Freshmen given by the Young Men's Christian Association. Following closely the warm reception with which the Sophomores welcome the new comers, it is a very appropriate function. It has come to be the occasion where the "hatchet" is buried.

This year it was a good-natured crowd that assembled in the gymnasium on Saturday evening, September 23rd. We were fortunate in having with us Mr. Charles Bishop, Canadian Student Secretary of the Association. Mr. Bishop spoke briefly but effec-

tively of the work and objective of the Young Men's Christian Association in College life. Dr. Creelman gave out some timely words of counsel, to the Freshmen, urging them to support and be helped by the College organizations. Mr. Black, as pianist, was very much appreciated. A pillow fight by two of the Sophomores created much amusement. After the short program, refreshments were served. The Philharmonic Society then took charge of the gathering and we spent a pleasant half hour singing College songs, the new song book being used for the first time.

Just a word in connection with our Bible study this year: Professor Reynolds has charge of the Normal class, which meets in the English class-room every Wednesday evening at 7 o'clock. The course of study has to do with the social teachings of Jesus. Under Professor Reynold's leadership this course will be very profitable. We welcome you to the classes.

In Mission study we are using John R. Mott's great book, the Decisive Hour of Christian Missions. There will be a class meeting near your room. Get interested in this study of Missions. It is one of the greatest problems in the world to-day.



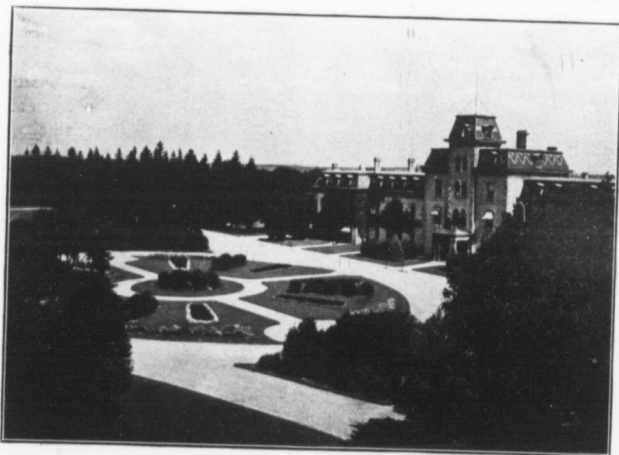
Alumni

To Our Old Boys:

The success of the Alumni Department of this paper depends largely on the interest which the Old Boys of the O. A. College display for their Alma Mater. This department is for the purpose of keeping graduates or associates in touch with one another and to perform its mission successfully, the editor must have the hearty co-operation of all. It is impossible for the

study at their Alma Mater, go forth into this wicked world, full of strength and agricultural knowledge and prepared to raise our standard of agriculture either through teaching or by actual practice.

On Thursday evening, May 27th, Class '11 held their Graduation Dinner, and first Class Reunion. Although taking place at a time of the year more or less difficult for the associate



OUR ALMA MATER.

editor to write personal letters of enquiry, but if our "Old Boys" will write to us from time to time and send photos, which they think may be interesting, they will help us greatly in our efforts to make the Alumni Department a success.

Class '11 Banquet and Reunion.

College days cannot last forever and every year sees another class of men, who have spent four pleasant years of

men to be present, many who found it impossible to attend, sent messages of regret and also of good cheer to their former College chums.

Among those present were: Messrs. D. A. Andson, of Lucknow; L. R. Martin, of Jordan Harbor; E. M. Freek, of Barrie; L. Harley, Harley; J. S. Howell, of Jerseyville; E. Bradt, York, and C. F. Howard, of Hagersville.

A most sumptuous repast was provided by mine host, Yeates of The Kandy Kitchen, and after duly satisfying the cravings of the inner man, chairs were pushed back and cigars lighted. A short program was then rendered, consisting of recitations by E. A. Howes, and speeches by members of the graduating class, as well as by some of the associate men. Class officers were then appointed to arrange for later reunions, and with the singing of Auld Lang Syne, the members of Class '11 were dispersed into a broader field of labor, but still holding pleasant thoughts of the College life they were leaving behind.

E. F. White, B.S.A., after graduating from College went into the printing and publishing business in Cincinnati, Ohio. Last year he represented Cincinnati at the International Cost Congress, held at St. Louis, Mo. Recently he has donated much time and labor in promoting education in the science of cost finding and business systems, and in recognition of his services, he was presented with a magnificent hall clock by the Ben Franklin Club of Cincinnati, at a banquet, recently. This club represents over one hundred printing and publishing concerns, so from this fact we can judge the great popularity, Mr. White has achieved in his chosen business.

P. E. Angle, of Fork's Road, Ont., entered the O. A. College with the class of '09. After graduating he went to Simcoe as District Representative for Norfolk County, and did good work in improving agricultural conditions there. He also taught elementary agriculture to a class in the Simcoe High School, and held a short course for farmers and their sons during the win-

ter. After holding his position for about a year, he resigned and accepted a position as manager of a syndicate which is buying up a large tract of land east of Simcoe and planting it out with fruit trees, mainly apples.

Another man has given up his position at the O. A. College to enter into the alluring business of fruit growing. This time it was J. B. Fairbairn, the popular registrar of the College for the last two years. In the spring of 1911 he resigned his position and moved to his new field of labor, a little east of Beamsville, Ont. The Review wishes him every success.

E. F. Coke graduated from College with the class of '09, and obtained the position of agricultural editor of The Central Canada Citizen, Ottawa. A year or so later he accepted a similar position with the Winnipeg Free Press, but has recently given up this position to superintend the Correspondence School of Scientific Farming. Mr. Coke, who is also an extensive farmer in Saskatchewan, has been identified with agriculture in the three western provinces for some years. He is an intensely practical farmer, much more of a farmer than a Collegè man, and his belief in scientific farming just goes to the extent, that it will help the farmer to increase his profits, without impairing the fertility of his soil. We are sure that the directors of the correspondence school, in securing the services of Mr. Coke, have obtained a good, all-round practical man.

Herbert Groh came to the O. A. College from Preston, Ont., and graduated in the year '08. After graduating he obtained a position at the Central Experimental Farm, Ottawa, as Assistant Botanist. However, the practical side

of farming had more attractions for him, so he severed his connection with the Experimental Farm about April 15th, last, and has since been working his own farm.

G. V. Cooke, of class '13, thought fruit growing would be more agreeable and profitable than College life, so he purchased a fruit farm of thirty-six acres near Beamsville. He will there put into practice, some of the numerous theories which he learned at the O. A. College.

Thomas Baker Rivett was raised up to manhood among the banana bunches of sunny Jamaica and entered the O. A. College with the class of '05. To his classmates he was known as "Rusty," this epitaph being derived from the peculiar color of his now fastly disappearing locks on the top of his cranium. After graduating with his class he shaved off his moustache in order to preserve his youth and obtained a position with the Horticultural Department of the State of Alabama. He held that position a year, when feeling that his efforts were being wasted, he resigned and accepted a similar position with the Ontario Government. He did good work in his new office and soon became recognized as an authority on fruit, especially peaches, the pink cheeked variety receiving much of his attention, although no definite results have been obtained as yet.

"Rusty" stayed with the Ontario Government for a few years, when feeling that he could better his position, he resigned and formed the Niagara Land and Fruit Company, whose aim was to develop some 1,300 odd acres in the vicinity of Niagara-on-the-Lake. Here he is doing wonders, transforming old worn-out dirty farms into ideal

fruit ranches. This year he planted 67,000 fruit trees and a tomato patch of 90,000 plants. In his practical work he uses scientific theories as much as possible and on his farm, is found all modern machinery and in his bachelor's home, all modern conveniences. Here's luck to him in his good work.

G. H. Carpenter hailed from Fruitland, Ont., and entered the O. A. College with the class of '05. At College he took an active interest in sports, being an ardent tennis player, and a rugby enthusiast, having played on some of the College gridiron teams. He graduated in 1905 and soon afterwards accepted a position with The Farm and Dairy. He held this position for a year or so and then resigned, to take up practical farm work on the old homestead.



G. H. CARPENTER.

There was great rejoicing in Fulton, Ont., when there appeared amongst his father's flock of pure-bred sheep, a lamb destined not for mutton but for fame in the agricultural world. That lamb was W. D. Jackson. As his family contains one of the best known sheep-breeders and judges in Ontario or, we might say, America, "W. D." tended naturally to scientific agriculture and so entered the O. A. College with the class of '09. After graduating, he was at work on the Orchard Survey of the Niagara District for the summer, and then obtained a position with the Ontario Department of Agriculture, as District Representative for

Carleton County. He is now situated at Carp, where we hear he is doing very good work.

Matters Matrimonial.

"I have led her home, my love, my only friend,

There is none like her, none;
And never yet so warmly ran my blood,
And sweetly on and on."

Such was the experience of Gordon McKillican, class '11, at high noon on Wednesday, August 10th, and the girl he led home was Miss Katie Florence, daughter of Mr. and Mrs. Jcs. Cass, of Cassburn, Ontario.

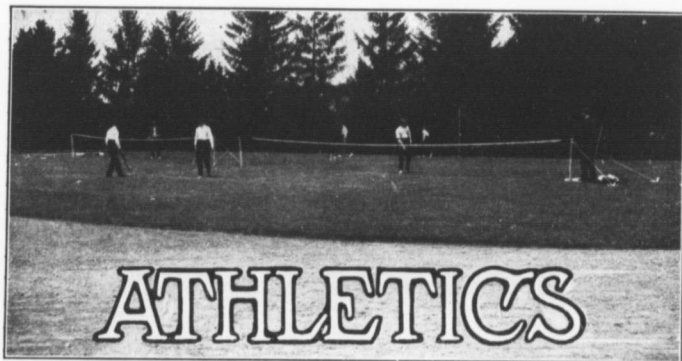
The Review, representing the entire student body, and the Alumni, including class '11, extend to Mr. and Mrs. McKillican the very best wishes for a long continuation of such blissful experience. Gordon will reside in future on the parental homestead at St. Elmo, Ontario.

Obituary.

Those who attended the College during the years from '06 to '08 will regret to learn of the death of Mr. John Hawks Arnold, associate '08, which occurred in St. Vincent de Paul Hospital, Brockville, Ontario, on Friday, August 11th, 1911. The following extract quoted from the "Rideau Record," of Smiths Falls, is a lasting tribute to a useful life. "Jack" was just in the prime of life in his twenty-ninth year, an exemplary young man, a faithful worker in the Methodist Church, in the Epworth League and Superintendent of the Sabbath School. His untimely death has cast a gloom over the whole community."

The deepest sympathy of the O. A. College Review and of class '08 is extended to Mr. and Mrs. John B. Arnold, of Easton's Corners, in this, their sad bereavement.





Pole Vaulting.

By E. B. Archibald, champion of Canada.

Few athletic programs are considered complete these days, without that most spectacular of all events, the pole vault. And few events require the skill and careful preparation which this event demands.

While the sprinter concerns himself with the study of his stride, his start, and development of speed, and the jumper studies the development of those muscles which have to do with his spring and balance. The pole vaulter must combine most of these, and, in addition, he must have strength of arm and back to serve him in his flight after he has left the ground.

The average man in watching this event does not comprehend at the time, what the performer is called upon to do, from the time he starts his run until he lands on the ground on the other side of the bar. Consider first that the contestant must be strong enough to carry a pole sufficiently heavy to bear his weight, and at the same time run at a speed which will suffice to carry him to a perpendicular position, and that he must grasp the

pole at a point, which will bring him to the desired height, and balance it as he runs. As the pole is straightening up to the vertical position the performer must by the strength of his arm and back muscles, lift his whole weight, and at the psychological moment push out from the pole, letting go his hold and pushing the pole away from him as his body clears the bar and before the pole touches the cross-bar. Nor is the event completed here, for if the competitor should relax at this moment he would only succeed to vault no more, as a drop of eleven or twelve feet would be sufficient to end his career if the vaulter should alight in the position his body is when he tops the bar. It is at this point that his best work is done, and his perfectly trained and disciplined muscles co-ordinate for his recovery, and the successful vaulter lands gracefully in the pit.

A Few Hints for Training.

Speed—Practice sprinting, and try to gain full speed in as short a time as possible, because the quicker the performer gains full speed, the shorter time he has to carry his pole.

Spring—To develop spring, practice

a little high jumping. Not too much, this can easily be overdone. And then by hopping on the leg you jump off of about 10 or 15 times before going to bed.

The Lift—The lift is the development of arm, shoulder, back and stomach muscles. The most successful exercise out-side of vaulting is the horizontal bar, and more especially the pulling exercises.

Now a few general precautions, and then I am through. When training always stop when you feel like going on, thus conserving a little energy day by day until the day of the competition, then use it all, and lastly always have your nerve with you.

Football—Our Prospects.

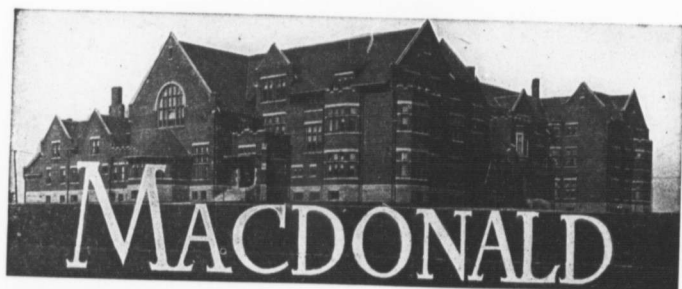
The time is at hand when the campus is covered with football players eager to get into the game. Besides these

will be seen many lovers of the game, sizing up the team and awaiting impatiently for the first game. Their reward will be great, for College will have a royal chance to win the championship this season. Many new players of no small repute will don the College uniform as well as a goodly number of the old guard. The boys will be given every advantage in making the team a success. With the assistance of a good coach and a training table the players will be kept in the pink of condition.

With plenty of encouragement from the spectators, which helps to win many games, the team will be hard to beat. Therefore I appeal to all—yes, Macdonald queens and boys of O. A. College to make yourselves heard with cheer upon cheer for the defenders of the Red and Blue. Boog.



A SUMMER SCENE.



To the Freshettes.

We welcome you to the halls and class rooms which were so new and strange to us but one short year ago. We welcome you to our joys and sorrows, our work and our play. Have a share in all of it, even in our state correspondence—the billets doux.

You are sure to like Macdonald Hall—everyone does—even the boys across the campus are fond of the place, and one was once known to seek a room in the building.

The D. S. 4, D. A. 1 and Sci. 3 may prove puzzling at first, but the abbreviations soon unravel themselves. Ask a senior who will be only too glad to tell you—if she can.

Re the joining of societies, etc., you may fancy that we are out for the money only, during the first week, but we want you—not only your name on our books and your money in our treasury—we want you to join the various organizations, but that is not enough—we want your help.

There is one thing which will be more or less common at Macdonald during the first month, and possibly with some of us longer. I refer to "Heimweh," that distressing but never fatal disease. When you have it remember that some one else may be "more so" than you are yourself. Do

something for the other girl—a walk, a talk, the lending of a book, and you will find the sunshine brighter yourself.

Remember that we are all anxious to meet you. In this year you will find many golden opportunities for making friends. Seize upon them, but always let us remember to be unselfish in our loves and to scatter our affections. "If you would have friends be one," and is it not Ruskin who says, "It is a good and safe rule to sojourn in a place as if you meant to spend your life there, never omitting an opportunity of doing a kindness or speaking a true word or making a friend."

I. S.

Summer Vacation of a Homemaker.

School is over and with feelings of mingled joy and regret the now "experienced Homemaker" packs her trunks and takes the first train home.

An uncontrollable gladness fills her heart as she is welcomed by the devoted family. This welcome is prolonged for several days and for a short time the homemaker experiences the pleasures of an honored guest.

But now she must go around the "home" which she is to "make" on a tour of inspection. Of course she begins at the kitchen—what a shock greets her here. The maid is actually cleaning the windows without a newspaper under her pail! Now is the

time to quote house practice cards and they are produced. Many explanations and directions follow. Alas! There is the meat still lying in the paper in which it was delivered, exposed to the heat and flies. Flies! Imagine! Little does the menial reck that one fly now means a million by October, but the Homemaker is only too pleased to enlighten her on the life history of these household pests.

Now let us follow the Homemaker on her tour. "Oh, those library curtains, they must come down, for we

fixing up begins. Now the maid leaves. This unforeseen catastrophe is surely enough to dishearten any ordinary mortal, but not the Homemaker. She looks up her notes and rising to the occasion makes out her plan for housekeeping. The family must all rise at seven o'clock—what matter if she hear sleepy mutterings about being more of a home-breaker than homemaker. Even Abraham Lincoln had to battle storms of abuse before he mastered the situation, and so with our Homemaker.



MAC. GIRLS AT PLAY.

can't have red curtains with buff walls. We'll get a soft russet shade which will harmonize beautifully." Now for the back yard. That old picket fence must be taken away immediately as it is neither useful or ornamental, and those cans must be removed before it rains or we'll have thousands of mosquitoes. How careless to have Syringa growing near the house; anyone must know that Buffalo moths are more numerous on it than blossoms.

Everywhere there is room for improvement, so the tearing down and

Now for the "division of labor" and the "standard of living." Of course someone must oversee and direct and why not the one who has been trained to do so? The Homemaker again. Here follow cottage puddings with chocolate sauce, the lemon mists and orange vapors, mysterious souffles and floating islands. No more waste or scraps. The left-overs are turned into delicious confections, so what does it matter if more have to be bought originally so that there will be left-overs to work with?

Then comes the wrestling with ac-

counts. Such reckless extravagance as is discovered. Instead of using kerosene and bathbrick they have been buying Dutch cleanser and paying for advertising and package as well as contents, and home-made soap is a thing unthought of. This must stop; another reformation is on foot and the family fortunes will be retrieved.

Thus in this delightful manner the summer passes and from attic to cellar (don't forget the cellar) our industrious worker finds places for improvement and lives up to the "standard"

But as the summer wanes and the evenings become shorter and cooler those fortunate girls who have another year of school life stretching before them, to whom "Macdonald" suggests days of work intermingled with moments of play, in the Institute and evenings of merriment intermingled with moments of work, in the Hall, begin to wish for their second opening day and the new girls are looking eagerly forward to their first.

How well we remember our first opening day—the long drive up from



PLANTING CLASS TREE, GRADUATING CLASS, 1911.

which for a whole year she has never been allowed to forget.

Unfortunately these blessings do not remain long unclaimed.

E. M.

D. W.

The Opening Day.

With what joy and excitement the trunks are packed during the last few days of June, and thoughts of home make even the Homemaker smile through her tears as she parts with her friends of the past year—those who have been so close in work and play, but who cannot look forward to meeting again next "opening day."

the station through the unfamiliar streets and then the first view of the Institute and Hall. We trembled as we read the card re visitors and hesitated, wondering whether we were visitors or not.

Then followed the weary wait in the library when we balanced ourselves circumspectly on the edges of our chairs and cast covert glances at each other. Would we ever become acquainted, and distinguished one from another. Occasionally a senior—she must have been one from the confident way she walked up stairs with-

out being invited—would meet some girl she knew and they would go off arm in arm with heads together.

At last our turn came to receive our keys and how proud we felt as we locked the door on our precious belongings and jingling our keys, started out to find the Institute to register. Here there ensued another wait, but not as formal as the last, for as the

girls stood around the corridors they chatted in whispers. What is your name? How old are you? and Where are you from? being the popular questions.

After we were given an opportunity of parting with our cheques we returned to the Hall to unpack our trunks and become acquainted with new friends and a new life.

Much Ado About Nothing

Returning from a fishing trip a little boy met a man who inquired what did you catch? The boy replied, "I haven't been home yet.

∩ ∩

E.—Speaking of antique goods, ever hear of a shepherd's crook?

D.—No, but I've heard of a shepherd's pie.

∩ ∩

She—That was a lovely gorge up the mountain.

He—You bet! The best meal I ever had.

Adam Beck (to child in street car)—
What is your name, little man?

Small Boy's Mother—Adam Beck Johnson, sir, but we call him Hydro for short.

∩ ∩

Thine eyes are bright,
Thy teeth are white,
Thy feet are simply out of sight,
Thy lips are sweet,
Thy dress is neat,
Thou'rt altogether hard to beat,
But best of all, thy pies and cakes
Are such as mother used to make.





Smile. Freshie, Smile.

When you come down here to Guelph,
Remember everybody but forget your-
self,

And remember that tho' you have left
the farm,

If you are meek you'll not come to
harm,

So take off your hat and stay awhile,
Smile, Freshie, smile.

When some night your dreams of
home are broken,

And you are roughly and rudely
awoken,

With a request to stand on the table,
And sing a song or tell a fable,
Do not swear or in your heart hold
guile,

Smile, Freshie, smile.

When you get to know the boys,
You'll find that Freshmen have few
joys,

But after you've been to Macdonald
Hall,

You'll think life isn't so bad after all,
Keep out of the way, you'll be wise
after a while,

Smile, Freshie, smile.

When things don't seem to come your
way,

And you have board and carfare to
pay,

While for fines and fees you are as-
sessed,

And you are financially heavily
pressed,

Cheer up! To be broke is all the style,
Smile, Freshie, smile.

When four years have been and
passed,

And among the graduates you are
classed,

When P—y takes you by the hand,
And smiling directs you to the prom-
ised land,

Just look pleasant and sweetly smile,
Smile, Freshie, smile.

M. F. M.

~ ~
Hurst (to clerk at Russell House,
St. Catherines)—I've eaten my supper
and will be away before breakfast.
What is your lowest price for a room
to sleep in?

Clerk—One dollar, if you leave be-
fore six o'clock tomorrow morning.

Hurst (producing a battered fifty-cent piece)—Wouldn't half a dollar make it right? You see I'm all excited, travelling, and I don't expect to sleep more than half the time I'm in there.

Only two injuries to Freshmen were reported after the initiation fight. One hero, seeing several of his comrades surrounded by Sophomores, broke his leg running for assistance, while another, with equal self-sacrifice, seriously injured his vocal organs calling for help.

One day last summer Moorehouse boasted that he could build a load of hay while three of his men pitched on. All went well for a time, but gradually the load began to incline from the vertical plane. Chinky climbed down.

"What are you coming down for?" they asked.

"More hay!" he replied.

Tennyson in Norse.

Joyfully, joyfully,
 Joyfully onward,
 In dis har walley of death,
 Rode the sax hundred,
 It ban a cinch, ay tink,
 Some geezer blundered,
 Hustle! you Light Brigade,
 Jump! Maester Olson said;
 Den in the walley of death
 Go the sax hundred.

Cannon on right of dem,
 Cannon on left of dem,
 Cannon on top of dem,
 Wolleyed and t'undered,
 Smashed with dis shot and shal,
 Dey ant so wery val,
 Most of dem katching hal,
 Nearly sax hundred.

Yes, all dem sabres bare,
 Flash purty gude in air,
 Each feller feel his hair,
 Standing—no wonder,
 Yudas! It an't bad yob,
 For any coward slab
 Fighting dis Russian mob
 Ay tenk ay vudn't stand,
 General's blunder.

Cannon on right of dem,
 Cannon on top of dem,
 Cannon behind dem, tu,
 Wolleyed and t'undered,
 Finally say Captain Grenk,
 Ve got enuc, ty tenk,
 Let's go and getting drenk,
 Bout twenty-sax com back,
 Out of sax hundred.

Ven skoldeir glory fade,
 It ban good charge dey made,
 Every von wondered,
 Every von feeling blue,
 Cause dey ban brave old crew
 Yolly gude fellers, too,
 Dis har sax hundred.

Father (sternly)—So you've failed again in your examinations? How do you explain that?

B-y—Because they went and asked me just the same questions.

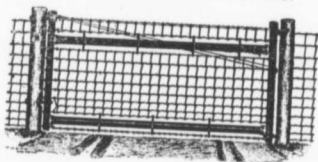
The Class of Fifteen have been greatly complimented upon the Napoleonic manner in which they retrieved their defeat at the flag pole. With scarcely the loss of a minute they rushed to the residence, fiercely attacked the door of store room on Mill Street, broke the panel, entered the breach, and looted the room. Such a case of dogged and unyielding bravery is unparalleled in the history of the institution.

Who Left The Gate Open?

The hired man, stranger, your own boy, your wife, or perhaps yourself.

WHY?

Because it was so hard to open and shut. Use the CLAY GATE and a small boy can handle it with ease.



Write for particulars of our Sixty-Day Free Trial Offer to

CANADIAN GATE COMPANY, Ltd.
GUELPH, - - - ONT.

The effect of the application of water to the Freshmen before the rush to the pole was very noticeable. Their anxiety to avoid the cleansing stream was very disorganizing to their previously unbreakable ranks. Hardell, in his "Explorations in Australasia," remarks on a similar repugnance to water exhibited by the Aborigines of Australia.

A member of the Faculty recently attended exercises in a kindergarten in Guelph. "Have any of you ever seen an elephant's skin?" he asked the youngsters.

"I have," shouted one little fellow.

"Where?" asked Prof. —, impressed with the youngster's earnestness.

"On the elephant," he answered.

A stately and venerable professor one morning, being unable to attend to his class owing to a cold, wrote on the blackboard:

"Dr. Dash, through indisposition, is unable to attend to his classes today."

The students erased one letter in this notice, making it read:

"Dr. Dash, through indisposition, is unable to attend to his lasses today."

But it happened that a few minutes later the professor returned for some papers he had forgotten. Amid a roar of laughter he detected the change in his notice, and, approaching the blackboard, calmly erased one letter in his turn.

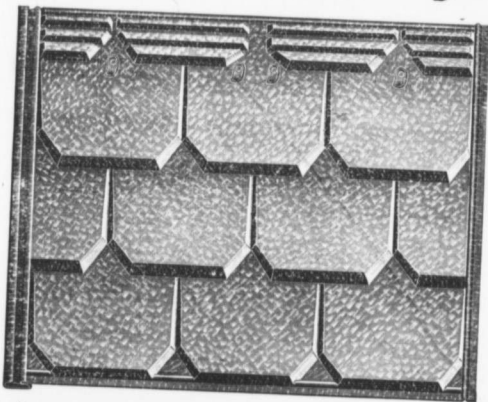
Now the notice read:

"Dr. Dash, through indisposition, is unable to attend to his asses today."

—Ex.



EASTLAKE Steel Shingles



THE above cut is an exact reproduction of the famous "Eastlake" Steel Shingle as manufactured and sold by us in Canada for over a quarter of a century. "Eastlake" Steel Shingles laid on roofs twenty-five years ago are in perfect condition to-day, and from all appearances are good for another twenty-five years. Their durability is practically unlimited.

We guarantee them absolutely watertight, when laid according to our instructions, on any roof down to quarter-pitch, and they are the easiest and quickest-laid shingle yet devised.

Nothing but the very best material is used in the manufacture of the "Eastlake," which, combined with perfect construction on accurate machinery, produces a shingle positively **unequaled for durability and watertight qualities** by any other form of roofing sold at anything approaching its price.

Catalogue and Price List sent on request.

The Metallic Roofing Co. Ltd.

COR. KING AND DUFFERIN STS.

TORONTO, CAN.

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THE SIGN OF GOOD CLOTHES.

Clothes that are built to give comfort. Correct and distinctive in style. Our garments will do the right thing by your appearance—every time—all the time.

"T. & D." Suits, \$10 to \$25.

"T. & D." Overcoats, \$8.50 to \$25.

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ERNEST A. HALES,
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Sells the Best Meats
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Will find the biggest Book Store
in Guelph on Upper Wyndham
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The ONLY Place

That carries the full stock of all
Text Books required at the Col-
lege and Macdonald Institute.

C. L. Nelles

PHONE 45

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THE ROYAL BANK OF CANADA

Capital Paid up	-	-	-	\$6,200,000.00
Reserves	-	-	-	\$7,200,000.00
Total Assets	-	-	-	\$100,000,000.00

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Travellers' Letters of Credit and Money Orders or Drafts issued payable in any part of the world. Remittance Drafts cashed at ruling rates. Savings Bank Accounts carried for Students and Staff (interest allowed).

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A fence of this kind only 16c to 23c per running foot. Shipped in rolls. Anyone can put it on the posts without special tools. We were the originators of this fence. Have sold hundreds of miles for enclosing parks, lawns, gardens, cemeteries, churches, station grounds, etc., etc. Supplied in any lengths desired, and painted either white or green. Also, Farm Fences and Gates, Netting, Baskets, Mats, Fence Tools, etc., etc. Ask for our 1911 catalog, the most complete fence catalog ever published.

The Page Wire Fence Co., Ltd., Walkerville, Ont.

Branches—Toronto, Cor. King and Atlantic Ave. Montreal, 505-517 Notre Dame St., W. St. John, 37 Dock St. The largest fence and gate manufacturers in Canada, 506



ABSORBINE
 Will reduce inflamed, strained, swollen Tendons, Ligaments, Muscles or Bruises, Cure the Lameness and stop pain from a Splint, Side Bone or Bone Spavin. No blister, no hair gone. Horse can be used. \$2 a bottle delivered. Describe your case for special instructions and Book 2 Free.
ABSORBINE, J.C., the liniment for mankind. Reduces strained, torn ligaments, enlarged glands, sores or muscles—heals ulcers—allays pain. Price \$1.00 a bottle at dealers or delivered.
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Morrison, Ont., Nov. 14th, 1907.

Dear Sir,—I think ABSORBINE the best remedy I ever used. Have a fine yearling carriage colt that got a Bog Spavin a few days before Guelph show. I used Absorbine as directed from four to six times a day rubbing it in well, and inside of a week you could not tell which leg was hurt. She carried the red ribbon at Guelph, and at four other shows after the cure.

Whenever I hear a neighbor having trouble with his stock I hand him one of your pamphlets or advise him to get ABSORBINE, and quite a number are now using it around here.

Respectfully yours,

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Getting Civilized—In answer to the question "What are the five great races of mankind?" a Chinese student replied, "The 100 yards, the hurdles, the quarter-mile, the mile, and the three-miles.—Ex.

1st Guelph Citizen (Aug., 1911)—Want to go to the ball game tomorrow?

2nd Guelph Citizen—No, I'd rather go to the matinee. I'm sure of a happy ending there.

Solomon (to fair Macdonald girl, at the last prom. in spring)—Did you ever love anyone before you met me?

Fair One C—No, nor since.

D. M. FOSTER, L.D.S., D.D.S.
 DENTIST.

Cor. Wyndham and MacDonnell Streets.
 Telephone 14. Over Dominion Bank.

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Bacon, Oysters, Fancy Biscuits, Olives, Pickles, Chocolates, etc.

J. A. McCrea & Son.

R. H. McPHERSON,
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Hair Cut, 20c; Shave, 15c. Close 8 p.m.

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THE GUELPH OIL CLOTHING
 COMPANY, Limited,

Manufacturers Oiled Clothing, Tarpaulins, Tents, Awnings, Stack and Binder Covers.

SUEY WAH.

Hoop la! Come to the Big Laundry. Expert workmen. Hand work only. College calls made Monday, Wednesday and Friday.

16 Wilson St., GUELPH.

JAMES H. SMITH

Opposite Traders' Bank.
 Molasses Taffy, Walnut Cream and Maple Cream. Best in the City.
 Fresh Every Day.

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CANDIES, CIGARETTES,
 TOBACCO, Etc., Etc., Etc.
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 TOBACCONISTS

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Street Cars every 15 minutes. Three chairs.
No waiting.

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Teacher of Singing,

Pupil of Van der Linde of New York,
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Phone, Studio 625.

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You are invited to make our store your
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SHERIDAN & O'CONNOR,

Tobacconists,
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Regal Shoes
For Men.

Sorosis Shoes
For Women.

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Headquarters for a first-class
shave and hair cut or shoe shine.

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FOR FIRST-CLASS WORK TRY

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Hand Laundry**

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Latest Machinery — no frayed or
cracked edges to your linen when we
do your work.

We call for and Deliver Promptly.

**Our Business is
MEN'S WEAR**

Young Men, come here for up-to-date Cloth-
ing, Hats, Caps and Furnishings.

Oak Hall Clothing is sold in 2,000 stores in
Canada. Come on in!

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Regular Meals and Lunches, Dinners 25c.
Meal tickets arranged for.

Fish and Chops.

Open from 5:30 a.m. until 12 Midnight.

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Manufacturers of

HIGH-CLASS CARBONATED BEVERAGES

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A. REINHART
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Gymnasium Shoes, Football Boots, Slippers and Rubbers.

The most complete and largest stock of Fine Fall and Winter Footwear in the city.



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BROADFOOT'S

(RED CROSS PHARMACY) FOR DRUGS AND SUNDRIES,

Patterson's Chocolates, Nyal's Family Remedies, Toilet Articles.

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Call on us when you want choice flowers, Roses, Carnations, Valley, Violets and all flowers in season.

We handle "Dale's" flowers.

Phone orders receive careful attention.

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Violets, Valley, Roses, Carnations, Mums,
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Entomological Supplies,

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The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bites or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars.

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Phone 350

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BOTANICAL, ENTOMOLOGICAL, NATURE STUDY, EXPERIMENTAL and MANUAL TRAINING, DRAWING MATERIALS and OUTFITS, NOTE BOOKS, FILLERS, INKS, PENCILS, FOUNTAIN PENS.

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Say boys, Patronize the Young Music Dealer,

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Pianos, Organs, All Kinds of Phonograph
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We appreciate your business. We need
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We like to make clothes for the particular man. Anyone can suit the fellow who is easily satisfied, but it takes good workmanship, honest materials and the best of tailoring experience and ability to suit the really careful dresser. Ask the particular man what he thinks of the last suit or overcoat we made for him. It is likely he will tell you they are the best he ever had, even for double the price. Suits and overcoats \$18.00 to \$30.00.

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Look !! Look !!

Suits Pressed	50c
Suits Cleaned and Pressed	75c
Pants Pressed	15c
Velvet Collars	75c to \$1.25
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Work done by practical tailors.

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It will be to your disadvantage not to be on
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**R. S. CULL & CO.**

The House of Better Clothes.

We Have Them

Shoes for street wear.
Shoes for evening wear
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Wauk-On Shoe
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China is always appreciated; so is Cut Glass and Pottery, Brassware is especially attractive.

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For Students. At Students' Prices

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Crayons—Crayograph, 10c pkg.

Complete Catalogue mailed on request.



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Of course not! Yet how careless you are in your treatment of those million dollar eyes.

When eyes smart, pain and begin to water, when they feel hot and heavy, beware of

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Don't Delay, Consult

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The best place to get
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Daily Delivery
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Novelty Goods in College Colors

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The leading Dry Goods and Men's
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Every yard of Blue Serge we handle comes to us direct from England's best Blue Serge makers. Every inch is guaranteed.

Ask to see our Special Blue Serge Suit, made-to-order, \$20. Every suit we make Looks Right, Fits Right, Feels Right and Wears Right.

Step in some time and see our large stock of "classy" patterns.

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Shaving Outfit

HERE !!

- Gillette Safety Razor, each - \$5.00
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- Ever Ready Safety Razor, each - \$1.00
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- Pocket Cutlery.

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R. E. NELSON

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For your up-to-date Hats and Furnishings.

I make a specialty of men ordered clothing, and guarantee perfect satisfaction to all.

Prices Reasonable

All my goods marked in plain figures, and only one price.

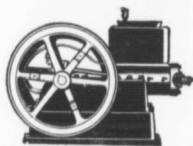
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Men's Furnisher, Hatter and Merchant Tailor.

A Feeling of Security

Of absolute Reliability and Power is
Enjoyed by Every Owner of a

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"GOES LIKE SIXTY."

A mechanical masterpiece of the highest type, with our improved simple methods of cooling, governing and sparking. Positively guaranteed, biggest value. All sizes. Save money. Ask for catalogue and prices.

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**HIGH GRADE BOOTS, SHOES,
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Our display of Footwear is now at its best. Shoe Goodness at moderate prices, and Shoe Elegance and Luxury are both in evidence.

The High Knob Toe, Short Vamp, High Heels and Arches, the New Tips and Perforations, and other New Features are here for the College Students. This is the store for the young people.

See our Window Display.

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Manager.

J. E. SCHMIDT,
Proprietor.

OURS IS A
Sanitary Laundry

Disease germs find no resting place here.

Cleanliness in every detail is a rule rigidly enforced.

Every precaution is taken to insure our patrons the very best service in our power.

Our drivers are at the O. A. C. Monday, Wednesday and Friday mornings.

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Steam Laundry**

Phone 95. **G. P. McARTHUR, Mgr.**

Windmills! Central Book Store



Towers girded every five feet apart and double braced.

Grain Grinders.

Pumps.

Tanks.

Gas and Gasoline

Engines.

Concrete Mixers.

Write for

Catalogues.

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Limited

BRANTFORD, CANADA.

53 WYNDHAM ST.,
Opposite where the Street Cars cross.

The Place to Buy
TEXT BOOKS, BLANK BOOKS,
STATIONERY, PENS, INKS,
PENCILS, Etc., Etc.

See our Special O. A. C. and Macdonald Hall Note Paper and Envelopes

C. Anderson & Co.

Phone 256.

Guelph Radial Ry. Co.

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Cars leave St. George's Sq. for Elora Rd., Suffolk, Waterloo Avenue and O. A. College as follows:

A.M.		
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	
P.M.		
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.



UNDERWOOD

The Underwood is used more extensively in Canada than all other makes of typewriters combined.

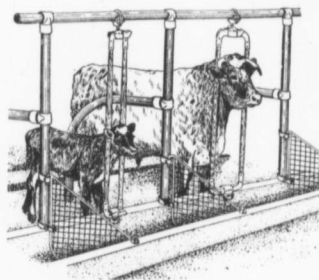
550 Underwoods are sold every day. The Underwood is the 'aristocrat' of the typewriter world.

United Typewriter Co. Ltd.

EVERYWHERE IN CANADA.

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Stable Your Cattle the Superior Way



THE SUPERIOR—The only stanchion made that will adjust to tie from your small-calf to your largest export steer.

Our book on stable equipment gives the most modern, practical business getting ideas of the leading Stock and Dairy men of to-day. It is free. Write for it to-day to

The Superior Barn Equipment Company
FERGUS, CANADA

The Superior Way of stabling cattle is the only way that will reduce the stable labor, time and money problem to a minimum.

1st. They cost no more than the old method of stabling your cattle, and will out-wear three of the old style.

2nd. You can tie ten head of stock while you would be tying one the old way, and you run no risk of getting your ribs broken or injury in any way.

3rd. You cut the feeding and cleaning out work in two.

4th. Your cattle have the maximum of freedom consistent with cleanliness.

5th. The Superior Way makes stable drudgery a pleasure.

You can Increase the Flow of Milk

keep your cows healthier and save much time and labor by installing the low cost, high quality



WOODWARD WATER BASINS.

Provide stock with a constant supply of fresh water, always uniform in temperature.

ONTARIO WIND ENGINE & PUMP CO.
Limited.

WINNIPEG TORONTO CALGARY

SWEATER COATS and SWEATERS

In all Styles and Colors

JERSEY HOSE AND ATHLETIC SUITS

Made in Club Colors to order, with special club insignia.

Designs submitted.

Get our Catalogue and Prices.

Scott Knitting Company

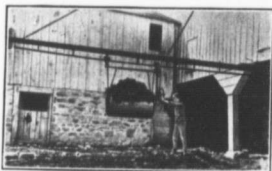
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PHONE MAIN 4440.

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It Will Pay You To Investigate

Carefully the merits of different makes of Litter Carriers before buying an outfit



DON'T BE SATISFIED with any style of litter carrier that is offered to you. If possible, see different makes in operation and compare them. Should you be unable to do this, we will be pleased to send you our new catalogue, which describes and illustrates the BT Litter Carrier. By reading this carefully you will get complete information and we know you will be pleased with our outfit.

The BT. LITTER CARRIER will stand your most careful inspection. It is simple in construction and is built to last a lifetime. We use double purchase in lifting and have a straight sprocket-chain connection for lifting, with which it is possible to attain an efficiency of from 70% to 80%. Most firms use a worm gear lift, and with them from 50% to 60% of the energy of the operator is lost in friction. Is it any wonder that the BT. Litter Carrier elevates easier and quicker than others?

Send us a sketch showing the layout of your stables, with measurements thereon, and let us know where you wish the litter carrier to run. We will then be pleased to give you an estimate as to the cost of installing and send complete information.

Now is the time when a litter carrier is most useful and you should get information and prices at once. Our catalogue is free and will be mailed to anyone interested on request. Write us to-day.

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We also manufacture Steel Stalls Stanchions and Hay Tools.

Vanco

LEAD ARSENATE

is better in every way, than any other spray for worm, codling moth, potato bugs, asparagus beetle and other leaf-eating insects. **Vanco** sprays easier, sticks to the leaves better, does not burn the foliage, and always kills the insects. Contains guaranteed



amount of arsenic oxide—of uniform strength and highest quality. It is made in Canada. This means no duty to pay, lowest prices, lower freight from a Home industry. Our book on Spraying is free. Write for a copy **Fertilizers**—We also sell Nitrate of Soda, Nitrate of Potash, Sulphate of Potash and Acid Phosphate.

Chemical Laboratories Limited

120-130 Van Horne Street, TORONTO.

The People's Store

Is headquarters for Men's High Class Ready-to-wear Clothing; also made to measure

CLOTHING.

Have also a big assortment of gent's furnishings in all the up-to-the-minute styles.

We specially solicit the patronage of the O. A. C. boys and faculty.

Prices Moderate.

COLE BROS. & SCOTT

29-31 Lower Wyndham St.,
GUELPH, ONTARIO.

DO YOU REQUIRE FEEDS?

Every stock owned should use care in selecting the feed he is going to use, but every feeder cannot afford to experiment with the many feeds on the market to-day to find out just what feed is best. Why not then benefit by the results secured by those who have had the time to give our feeds extensive tests.

**SCHUMACHER
FEED
BANNER FEED
VICTOR FEED**



The Ontario Agricultural College, Guelph, The Experimental Farm, Ottawa, The Macdonald College, St. Anne de Bellevue, Que., are all heavy users of our feeds. The leading breeders of dairy cattle are also users of our feeds. We had to make special provision to have our feeds delivered to the Toronto and Ottawa Exhibitions as some of the exhibitors would use no other kind to keep their stock in prize winning shape. After all it is the real solid results that count, and if you are in your business to make the most out of it, you cannot afford to pass our feeds.

ASK YOUR DEALER—INSIST ON OUR FEED
You will be satisfied.

THE QUAKER OATS CO., PETERBORO, ONT.

SOMETHING BETTER than a Wheelbarrow



Louden's Litter Carrier has a box 48 in. long, 24 in. wide, and 22 in. deep made of heavy galvanized steel without a particle of wood about it. The edges and corners throughout are re-inforced and strengthened with angle iron.

The hoisting gear is simple and very easily operated. The box is raised and lowered by means of an endless chain working on a screw gear. By pulling the chain one way the box is raised, while by pulling in the opposite direction it is lowered.

The dumping device is perfect. There is a latch at each end of the box, the two being connected by a rod, and released simultaneously when unloading. When righting the carrier after dumping there is no possibility of its going right over again, or swaying backward and forward several times before locking. A light touch with fork or shovel will return it to its proper position.

For free catalogue and full particulars write

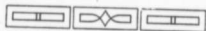
Louden Machinery Co., GUELPH, ONT.,
Cow Stalls, and Stanchions, Bull and Calf Pens, Steel Mangers and Manger Partitions,
Water Bowls, etc.

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

The Kemp Manure Spreader



Equipped with the Graded, Reversible, Self-sharpening Flat-tooth Cylinder. One-third lighter in draft than any other spreader. Let us send you a booklet about it, free. Write to-day.



The W. I. Kemp Company
 STRATFORD, ONTARIO LIMITED

**DON'T PUT MONEY
 IN A LETTER!**

Letters are frequently lost or mislaid. The proper way to remit money is by

**DOMINION
 EXPRESS**

**MONEY ORDERS
 AND FOREIGN
 DRAFTS**

They are issued in the currency of the country on which drawn, and are payable in all parts of the world. If lost or delayed in the mails, a prompt refund is arranged or new order issued without further charge. Travellers' Cheques, issued in denominations of \$10, \$20, \$50, \$100 and \$200, the handiest way of carrying funds. Foreign Money Bought and Sold. Money transferred to all parts of the world by Telegraph and Cable.

AGENCIES THROUGHOUT CANADA.

Dominion Express Company.

General Offices: Toronto, Ontario.

**Economy
 Convenience
 Safety**



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. We make a specialty of Dress Suits for young Men. Ask about our Clothes.

R. W. WATERHOUSE

Tailors to men who know, - - - - - Ingersoll, Ontario.
Drop a card stating what you want and I will call and see you.

For Policyholders Only

During the past five years the

Mutual Life of Canada

Has earned in profits for its policyholders

\$2,262,158

Being 23.43 per cent. of the premiums received for that period.

PROFITS EARNED IN:

1906	1907	1908	1909	1910
\$335,325	\$381,146	\$428,682	\$501,922	\$615,083

PROFITS EARNED IN PER CENT. OF PREMIUMS RECEIVED:

1906	1907	1908	1909	1910
20.9%	21.99%	23.36%	24.49%	27.39%

GEORGE CHAPMAN, District Manager,

Office 8 Douglas Street, - - - - - GUELPH, ONT.

College Athletic Outfitter

Tennis Balls

Tennis Rackets

O. A. C. Seal
Pendants



Rugby Outfits

Gymnasium
Outfits

Sweaters

Sweater Coats

J. BROTHERTON, ⁵⁵⁰ Yonge, Street Toronto, Ont.
SEND FOR CATALOGUE



\$2.00 to
\$5.00.

for Ladies
and Gents.

To those who want the pick of the finest looking, best wearing shoes produced this season we say come early, the fall styles are in.

W. C. GOETZ

Opp. Ryan's. Shoes that Satisfy.

☐ All works of taste must bear a price in proportion to the skill, taste, time, expense, and risk attending their manufacture. Those things called dear are, when justly estimated, the cheapest; they are attended with much less profit to the artist than those which everybody calls cheap. ☐ Beautiful forms and compositions are not made by chance nor can they ever in any material be made at small expense.
—Ruskin

Advertiser Job Print
LONDON, ONTARIO

175 — Long Distance Telephone — 175

Sporting Goods for O. A. C. Students

"RUGBY"

For years we have supplied O. A. C. students with the best sporting and athletic goods obtainable in Canada. For the Rugby season we are showing an extra fine line of Clothing, Pads and Boots.

Our 1911 RUGBY Boot at \$3.50 is the greatest value ever offered. "Yale" cleats, solid toe—Toe will not spread over sole—extra light.

Send for special Rugby Catalog.

O. A. C. PENNANTS AND CUSHIONS

Every student needs College Pennants and Cushions. We have the largest assortment in Canada.

SEAL PENNANT, size 15x34 inches, with the official college seal, price, \$1.00.

SEAL CUSHION, size 24x24 inches, with the official college seal, price, \$2.00.

PLAIN PENNANTS, in official college colors, size 11x32 inches, price, 50c.
size 7x18 inches, price, 25c.

Special Monogram Pennant, size 11x30 inches, price, 75c.

Send for our complete Catalog of Athletic and Sporting Goods.

Harold A. Wilson Company, Limited,

297-299 Yonge St., Toronto.

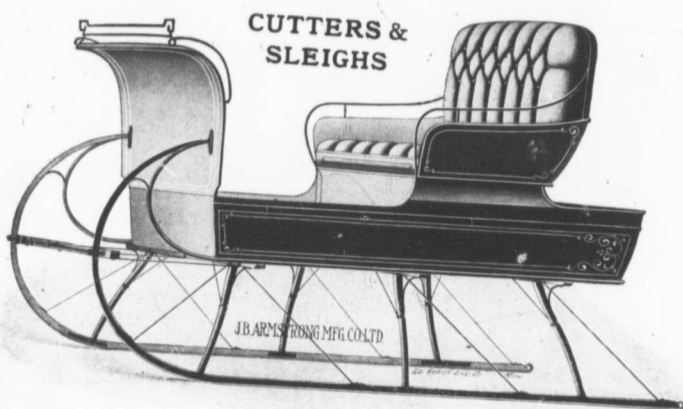


Students will make no mistake if they make the Golden Fleece headquarters for Men's Furnishing. Fine tailoring our specialty. The very newest things in Golf and Hockey Coats. Best qualities of underwear, including Dr. Diemel, Dr. Jager, Stanfield's, Woolsley's and other makes. A beautiful line ready to wear Ulsters, real waterproof coats. All are invited to look through at

KELEHER & HENDLEY

Macdonald Hall ladies will find our furs stock up to the minute; also Golf Coats.

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



A variety of styles in paneling and decoration. Catalogue and prices on application.

THE J. B. ARMSTRONG MFG. CO., LTD.
GUELPH, ONTARIO.

We Make Our Own Candy

Chocolates, Bon-Bons, Caramels,
and all the Choicest of Sweetmeats.

COME IN AND ENJOY OUR
Hot Sodas and Hot Chocolates

THEY ARE DELICIOUS.

THE KANDY KITCHEN

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

ONTARIO PROVINCIAL

WINTER FAIR

will be held at

GUELPH, ONT., DECEMBER 11th to 15th, 1911

Large classifications for

HORSES
BEEF and DAIRY CATTLE
SHEEP, SWINE, SEEDS, POULTRY

\$16,000.00 IN PRIZES

The attention of O. A. C. students is especially directed to the Judging Competition. There are classes for the judging of Horses, Beef Cattle, Dairy Cattle, Sheep and Swine. Fifty prizes are offered, totaling \$275.00.

PRACTICAL LECTURES

will be given each day on subjects relating to live stock, poultry and seed grain.

For prize list or programme of lectures apply to

JOHN BRIGHT, President,
Myrtle Sta., Ont.

A. P. WESTERVELT, Secretary,
Parliament Bldgs., Toronto.

Smart Clothes for College Men

Young men, by their critical and exacting tastes in dress, are doing a good deal to maintain high standards of style in clothes.

The clothes we sell are designed especially for young men—college men, young business men—and produced to meet the demands of such weavers; not freakish or extreme, but made for the youthful, athletic figure.

These clothes are the famous 20th Century Brand, and we unhesitatingly place "20th Century Brand" at the head of the list for style, for fit, for tailoring quality, and for wearing quality.

You are cordially invited to inspect the new fall models now on display.

SPECIAL MEASURE CLOTHES,

made to your own special measure, and delivered in five days—by the 20th Century tailors. We have a full range of samples and you will do well to look them over before you buy.

Everything for the College Man—Clothes, Hats, Gloves, Neckwear, Shirts, etc.—also O. A. C. and Macdonald Hall Pennants.

D. E. MacDONALD & BROS.

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

Griffin's Theatre Royal

GUELPH'S BIG Amusement Resort



PRESENTING HIGH CLASS OPERA COMEDY AND
DRAMATIC PRODUCTIONS.

Only the very best shows coming to Canada are seen at Griffin's. Same attractions that play the Princess and Royal Alexandria Theatres, Toronto, and at same prices—quite frequently at lower prices—a high class motion picture and vaudeville programme is run every evening at 8 o'clock.

ALL SEATS 10 CENTS.



When in Guelph there is no more pleasant place to spend the evening. Always a good show. Remember the place.

GRIFFIN'S The Big Theatre

JOHN C. GREEN, Manager.

**a \$3,000
Stock Book
Free**

Contains 183 Large Engravings.

This book cost us over \$3,000 to produce. The cover is a beautiful live stock picture, lithographed in colors. The book contains 160 pages, size 6 1/2 x 9 1/2, gives history, description and illustration of the various breeds of horses, cattle, sheep, hogs and poultry. Many stockmen say if they could not get another. The finely illustrated veterinary department will save you hundreds of dollars, as it treats of all the ordinary diseases to which stock are subject and tells you how to cure them.

MAILED FREE. POSTAGE PREPAID.

Write for it at once and answer the following questions:

- 1st—Name the paper you saw this offer in.
- 2nd—How many head of stock do you own?

ADDRESS AT ONCE

International Stock Food Co.

TORONTO, CANADA,

Sole Manufacturers of

INTERNATIONAL STOCK FOOD

THREE FEEDS FOR 1 CENT

INTERNATIONAL STOCK FOOD, 3 FEEDS FOR ONE CENT, is a purely vegetable MEDICINAL preparation composed of roots, herbs, seeds, barks, etc. It is equally good and very profitable to use with horses, colts, cattle, cows, calves, hogs, pigs, sheep or lambs, because it purifies the blood, tones up and permanently strengthens the entire system, keeps them healthy and generally aids digestion and assimilation, so that each animal obtains more nutrition from the grain eaten. In this way it will save you grain and **MAKE YOU LARGE CASH PROFITS**. You don't spend money when you feed **International Stock Food**. You save money because the **GRAIN SAVED** will pay much more than the cost of the **International Stock Food**. Refuse all substitutes and get paying results by using only the genuine **International Stock Food**.

THREE FEEDS FOR 1 CENT

Dan Patch Mailed Free

When you write for Stock Book mentioned above ask for a picture of Dan Patch 1:55, and it will be included free of charge.

International Stock Food Co.

TORONTO, CANADA.

College Days

Will be made happy if you own a Camera. Remember the folks at home will enjoy the pictures you take, as well as you will in after years, when you will never tire of using them to recall the friends and scenes of your O. A. C. days.

Remember that our stock of Cameras and Supplies is the largest in Western Ontario, also that the Photographic Department of this store is second to none in Developing, Printing, Mounting and Enlarging Work. Get your Drugs, Stationery and Toilet Articles at

Petrie's Drug Store

WINDSOR DAIRY SALT

Every farmer's daughter and
every farmer's wife knows



They all use it—for making delicious butter for their own table. They found out years ago that Windsor Butter Salt dissolves quicker, works in easier, and helps butter to keep better.

Windsor Salt is absolutely pure and every grain is a perfect crystal. 42

If you want to get "top" prices for your butter, use Windsor Butter Salt.

The Royal Military College of Canada



THERE are few national institutions of more value and interest to the country than the Royal Military College of Canada. Notwithstanding this, its object and the work it is accomplishing are not sufficiently understood by the general public.

The College is a Government institution, designed primarily for the purpose of giving instruction in all branches of military science to cadets and officers of the Canadian Militia. In fact it corresponds to Woolwich and Sandhurst.

The Commandant and military instructors are all officers on the active list of the Imperial army, lent for the purpose, and there is in addition a complete staff of professors for the civil subjects which form such an important part of the College course. Medical attendance is also provided.

Whilst the College is organized on a strictly military basis the cadets receive a practical and scientific training in subjects essential to a sound modern education.

The course includes a thorough grounding in Mathematics, Civil Engineering, Surveying, Physics, Chemistry, French and English.

The strict discipline maintained at the College is one of the most valuable features of the course, and, in addition, the constant practice of gymnastics, drills and outdoor

exercises of all kinds, ensures health and excellent physical condition.

Commissions in all branches of the Imperial service and Canadian Permanent Force are offered annually.

The diploma of graduation, is considered by the authorities conducting the examination for Dominion Land Surveyor to be equivalent to a university degree, and by the Regulations of the Law Society of Ontario, it obtains the same exemptions as a B. A. degree.

The length of the course is three years, in three terms of 9½ months each.

The total cost of the course, including board, uniform, instructional material, and all extras, is about \$800.

The annual competitive examination for admission to the College, takes place in May of each year, at the headquarters of the several military districts.

For full particulars regarding this examination and for any other information, application should be made to the Secretary of the Militia Council, Ottawa, Ont.; or to the Commandant, Royal Military College, Kingston, Ont.

H.Q. 94—5.

9—09.

You Can Save Money

by means of a life insurance policy.

Life insurance would create for you an immediate estate at small cost. It would provide security for the person paying your way through college. We are the only old-established Company under the Supervision of the Dominion Government which offers

TOTAL ABSTAINERS

the special rates and plans which they deserve. Consult us before placing your insurance.

W. E. BROLEY, General Agent, ELORA.

The Manufacturers Life Insurance Company

HEAD OFFICE, - - - - - TORONTO, CANADA.

What Do You Read?

TRY THESE!

The Evolution of the Prairie Provinces, 75c.

By W. S. Herrington,

Author, "Heroines of Canadian History."

Their Heart's Desire, \$1.00

By Frances F. Perry

Illustrated by Harrison Fisher
As sweet and tender a little love
story as this is rarely written.

A Weaver of Dreams, \$1.50 net

By Myrtle Reed

Author, "Lavender and Old Lace"

Master Christopher, \$1.25

By Mrs. Henry De La Pasteur

Author, "Lonely Lady of Gros-
venor Square."

On Western Trails in the Early
Seventies, \$1.25

By John McDougall

The Broad Highway, \$1.50

By Jeffery Farnol

The Claw, \$1.25

By Cynthia Stockley

Author, "Poppy"

The Long Roll, \$1.50

By Mary Johnston

Author, "To Have and to Hold"

Post Paid at above prices. For sale at all booksellers.

WM. BRIGGS, Publisher, :: 29-37 Richmond St., West, TORONTO

Official Calendar of the Department of Education for the year 1911

October:

2. Night Schools open (Session 1911-1912). (Begin on 1st October.)
14. Trustees' Report on purchases for Public School Libraries, to Inspectors, due. (On or before 15th October.)

November:

1. Inspectors' Report 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.)

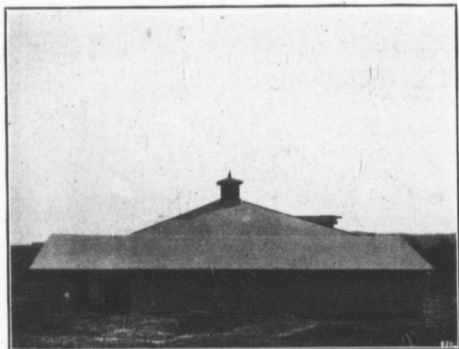
December:

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 assessment, 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.)
11. Model School Final Examination begins. (Subject to appointment.)
12. 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 nomination of Trustees. (Before 2nd Wednesday in December.)

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.)
Model Schools close.
22. High Schools, first term, and Normal, Public and Separate Schools close. (End 22nd December.)
25. Christmas Day (Monday).
New Schools, alterations of School boundaries and consolidated Schools go into operation or take effect. (Not to take effect before 25th December.)
27. Annual meetings of supporters of Public and Separate Schools. (Last Wednesday in December, or day following if a holiday.)
31. High School Treasurers to receive all moneys collected for permanent improvements. (On or before 31st December.)
Protestant Separate School Trustees to transmit to County Inspectors names and attendance during the last preceding six months. (On or before 31st December.)
Auditors' Reports of cities, towns and incorporated villages to be published by Trustees. (At end of year.)

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



ASBESTOS CEMENT SHINGLES.

We illustrate herewith the rear of the concrete barn and shed as shown in the last issue.

Note the small pitch. Wooden Shingles would rot and Slate would crack and break on such a slight porch, while the durability and flexibility of the Asbestos-Cement Shingles is proof against both moisture and frost.

For further information and details address

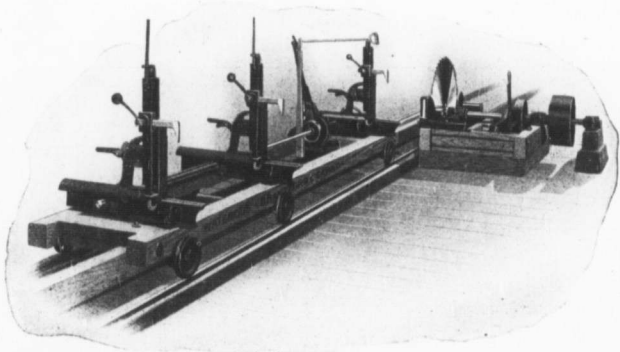
THE ASBESTOS MANUFACTURING CO., LTD. ,

705 Eastern Townships Bank Building,
Montreal, Canada.

Factory at Lachine.

WATEROUS PORTABLE SAWMILLS

LIGHT, COMPACT, DURABLE.



In sizes that will cut 2,000 to 8,000 ft. per day. Let us send you Catalogue No. 100. Write for it to-day. A postcard will do.

The WATEROUS ENGINE WORKS CO., Ltd., Brantford, Canada

Get the plow that pays for itself in a season!

Hitch three ordinary horses to a Crown Gang Plow, and do as much plowing in a day, on any soil, as ever you had done with two plows, two men, and FOUR horses. Figure what that actually saves you in the course of a Spring plowing, and you will know why we say the Crown pays for itself in a season.

It turns a perfect furrow

Your land will be better plowed—evener furrows, of uniform depth and cut, once you use the

Frost & Wood

CROWN GANG PLOW

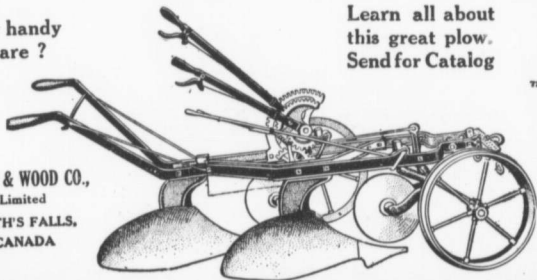
Hundreds of your fellow-farmers have found that this perfected two-furrow walking plow not only earns its cost—and more—in a season but goes on earning it year after year. For the actual saving mounts up to big figures long before the Crown Gang needs a single repair.

Everything about it is handy, practical, and lasting. The levers are placed just where they are handiest to operate. The wheels have dust-proof axle boxes, with easy-running ROLLER bearings. The shares have just the suck that makes perfect furrows and keeps the plow steady.

Notice how handy the levers are?

Learn all about this great plow. Send for Catalog

FROST & WOOD CO.,
Limited
SMITH'S FALLS,
CANADA



**FARM****POWER**

THIS is the title of a Catalogue just issued dealing with OLDS GASOLINE ENGINES and the many uses to which they can be put on any ordinary farm. The book is profusely illustrated and is well worth reading. If your nearest Massey-Harris Agent hasn't a copy, write to the nearest branch as shown below.

The Olds Engines

Have come to be recognized as the standard of efficiency and economy wherever used, and you will make no mistake in deciding on this engine for your source of power on the farm.

**MADE FROM 1½ HORSE POWER UP.
STATIONARY, SEMI-PORTABLE or PORTABLE.**

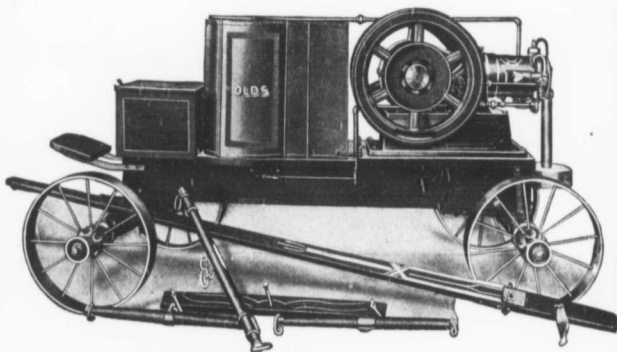
MASSEY-HARRIS CO., Limited,

TORONTO
CALGARY

MONTREAL
REGINA

MONCTON
SASKATOON

WINNIPEG
EDMONTON



An Interesting Incident at the Exposition

DE LAVAL'S FRIENDS LOYAL

AMONG the many visitors to our booth at the Exposition was a lady who wanted our representative to show her a DE LAVAL. He took the separator apart for her and she seemed surprised at its simplicity and especially at the short time it took to take the machine apart and put it together again. ¶ "Why," said she, "I've got a separator in on trial and their agent told me that the DE LAVAL was complicated, and that it was hard to wash and that the discs would soon rust." ¶ Just then a lady close by spoke up and said, "Why, it's no such thing. I've had a DE LAVAL for eight years and I've never had a bit of trouble with it. It's just as good now as it was when I bought it, and besides it will skim cold milk, and that's what the machine you've got won't do, or any other that I know of, for that matter." ¶ By that time a dozen or more had gathered round and no less than seven people spoke up and said that they owned DE LAVAL separators and that they were giving splendid satisfaction. ¶ There was one man in the crowd whom the lady looking at the DE LAVAL knew, and she turned to him and asked, "You've got a machine like the one I'm trying out. Isn't it alright?" "Well," he admitted, "it's certainly better than skimming by hand, but it's mussy and gets milk on the floor; it's hard to turn, and if I were going to buy a new separator to-day it would be a DE LAVAL. I know more about cream separators now than I did two years ago. My brother has a DE LAVAL and he has tried them all and says the DE LAVAL is the best."

Our salesman didn't have a chance to talk the merits of the DE LAVAL. Our good friends in the crowd persuaded the lady that she ought to give the DE LAVAL a trial before she made any choice, and before she left the hall she gave an order to have a DE LAVAL sent out to her house, and after a ten days' trial she bought the DE LAVAL.

There is a moral to this story: Don't buy a cream separator until you have given the DE LAVAL a trial. It costs you nothing to try it.

The More You Come to Know about CREAM SEPARATORS the More apt You Will be to Buy a DE LAVAL.

De Laval Separator Company

172-177 WILLIAM STREET, :: :: :: MONTREAL.