

THE O. A. C. REVIEW

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

VOL. XXXII.

FEBRUARY, 1920

No. 6

Reminiscences of Scotland.

By J. P. S. NETHERCOTT, B. A.

OF the thousands of men who went overseas with the Canadian Expeditionary Force, there are very few who have returned to Canada without having paid a visit to "Bonnie auld Scotland," the land of the heather and the bagpipes. In fact, the majority of them speak so freely of the Highlands, the Trossachs, Edinburgh and Princes street that one is inclined to think that they are as familiar with these places as they are with their native towns and villages. I venture to say that in the years to come, when the sifting process of Time has caused many of the incidents of the past few years to fall into oblivion, the boys will still be telling their friends of the many delightful experiences "beyond the Solway and the Tweed."

This will be fully realized by the one hundred and twenty of us, who as Canadian students, were given the privilege of attending Edinburgh University for a period of five months previous to our demobilization. Our experiences were by no means confined to the University as the reader might infer. The University was our "excuse," but Scotland was our "opportunity." Edinburgh became our temporary home—it was the "inn by the wayside," where we rested in our itinerary—

or perhaps we should say that it was the hub from which we radiated in all directions to the very rim, urged on by the lure of the unseen. So steadily did the centrifugal force exert its influence over us that the matter of carrying a club-bag or haversack became habitual — so much so, indeed, that we have often been found, wandering down the street, in a fit of absent-mindedness, swinging a suit-case.

Scotland offered to us a delightful variety of attractions. Robert Louis Stevenson, in referring to his native land, has said, "The beauty is not merely beauty; it tells, besides, a tale to the imagination, and surprises while it charms." We found this to be particularly true of the Highlands on our five-day tour. As we speeded along the mountain railway, winding past successive lines of hills which lost their snow-capped peaks in the clouds, a new panorama appeared at every turn and we received an impression of old Scotia's grandeur that will not soon fade away. Quaint little towns and villages were seen, snugly nestled in the valleys, sending up fine curling wreaths of blue smoke which seemed to add a human touch to a scene in Nature that was almost too austere.

Many of these villages were seen

scattered along the Caledonian Canal, that waterway in the heart of the Highlands, which joins the Atlantic with the North Sea, but none of them was more attractive than the town of Fort Augustus, that old relic of bygone days, whose inhabitants were still leading the primitive life and whose grim old monastery, still in use, made it serve as a link between the past and present. The only sounds that disturbed the peaceful quiet of that secluded spot were the faint, subdued tinklings of the bell in the Abbey tower, calling devout worshippers to prayer. On Sunday morning we attended the service in the monastery church. The monks were clad in the sombre hoods and cloaks, characteristic of their Order, and chanted the service which had remained unchanged for centuries. As we left that old village in the gray hours of the morning we heard the tinkle of the bell, and it seemed to be telling us that its work was not finished—that it had a future as well as a past.

We continued our journey through the Highlands by rail toward the west coast. After climbing a steep grade we frequently found ourselves three thousand feet above the sea-level. In these high altitudes there was nothing to confront the eye but a dreary waste—for miles one would not see a shepherd's cottage. It was always with feelings of delight that we found ourselves gliding down into the fertile valleys, and the train caused us no small amount of amusement as it circled in and out, apparently trying to find a way of escape from the network of hills that hemmed it in on all sides. One of the humorous members of our party, on seeing the engine of our train

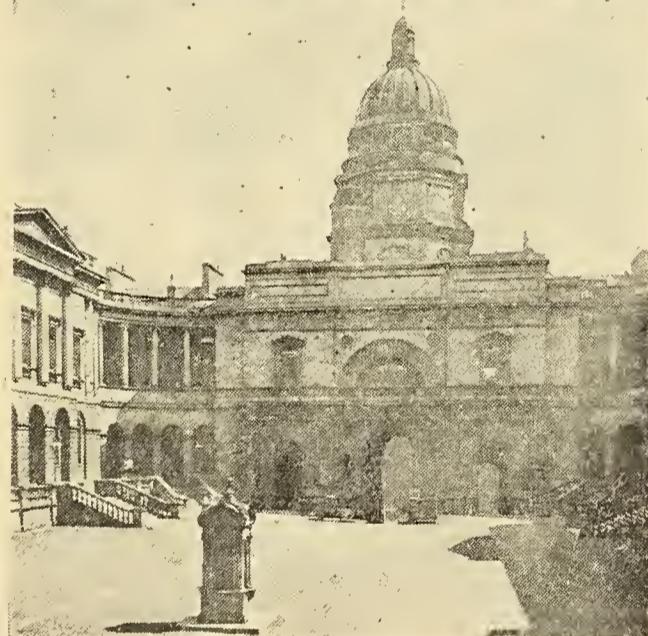
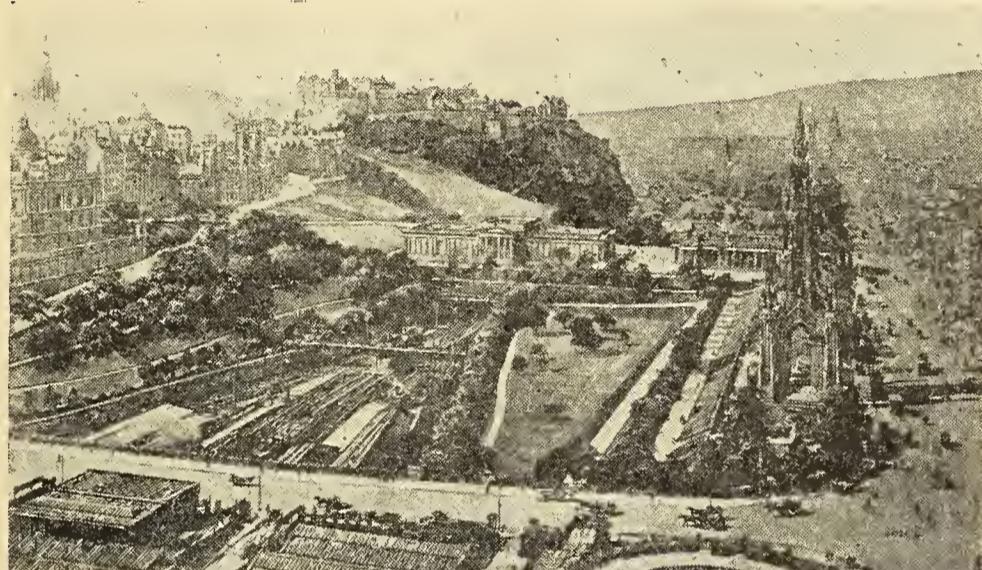
pass within a short distance of our coach window, on a sharp curve, suggested that we were in danger of a rear-end collision.

After we had spent some hours in viewing the mountains along our route and in trying to estimate their heights, Ben Nevis suddenly loomed up before us, towering high above its neighbors. Its steep sides stood out as a sort of challenge to us, and after a hasty decision we found ourselves scrambling out of the train, eager to scale the highest peak in Britain. A winding road, surrounded on both sides by cascades and rushing torrents, led us to the base of the mountain. We began the ascent. Our progress was slow. The gradient was quite steep and the coarse furze and heather increased our difficulties. Frequently we rolled over in a state of exhaustion. From our restful position, we would look longingly up at the peak, the object of our desire, and would look disdainfully down upon our comrades who were content to sit at the bottom. We struggled on for two hours during which time conflicting ideas arose within our minds as to the advisability of continuing the climb. Whenever anyone hesitated and looked as if he might turn back, someone was heard to remark: "What an honor it will be to say that we have climbed Ben Nevis!" With the idea of accomplishing the wonderful feat—and with the comforting thought that we were possibly the first Canadians to do so, we continued the ascent. Finally we reached the top and were about to plant a stake indicating that we had discovered a new land, when —————— what do you think we saw? a Ford car! How do you suppose it

got up there? We did not stop to ask any questions. As we descended we spent our time framing a suitable story for our pals at the base of the hill, but individually we had decided that we would not climb another mountain until we knew what was at the top.

The Highlands pleased us on account of the startling variety of its

able combination of mountain and lake, woodland and meadow, that we saw those scenes which delighted us on account of their exquisite beauty and charm. One would hardly imagine views more attractive than this district offered to the careful observer. Here the rolling uplands, covered with purple heather, sloped down to the green-carpeted valleys;



TOP—Castle Rock, Edinburgh.

BOTTOM—University Tower, Edinburgh.

scenery but the pleasure was tinged with a mild form of melancholy for there was an element of lonesomeness in those gigantic forms of Nature—those sentinels of Time whose only purpose was to stand and wait—there was a sullenness about those rival peaks whose angry brows seemed to indicate strife rather than peace. It was not until we passed into the Trossachs, with its remark-

here the placid, silvery lake, flecked with slumbering islands, shone in its heavy bevelled frame; and here the dark patches of forest, strewn at intervals along the hillsides, hung like pictures on Nature's walls.

We approached the Trossachs from the east, passing through Falkirk and Stirling, those old spots which witnessed so many stirring scenes in the early struggles between the

Scots and their English neighbors, and which still maintain the traditions of the Wallace and the Bruce. In our compartment we had as travelling companions two old men, the one English and the other Scotch, and each one thoroughly representative of his race in facial expression, dress and general appearance. As the train drew near the memorable field of Bannockburn, where the Scots, against great odds, made a final stand against the English invaders and won their independence, the old Scot became quite happy, while the Englishman became correspondingly uneasy. The tension grew until we came within sight of the cross which marked the battlefield, when suddenly, our kilted friend, with a twinkle of his eye, turned toward the Englishman, and pointing through the window at the hill, marked with the cross, he said: "I sae maun, thir's a lot o' yir contraemen a-lyin' over yunder." The remark brought a flush of color to the face of the Englishman, whose pride seemed slightly touched, and the canny old Scot, seeing his advantage, turned toward him once again and said, "Niver moind, niver moind, tha're a-pooshin up the taters for us the noo." We began to fear a second Bannockburn, but fortunately they parted company at the next station.

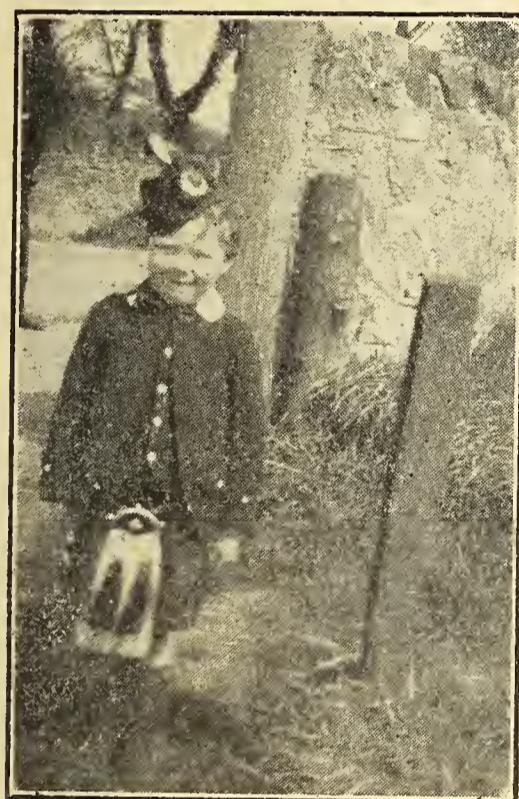
Our journey by rail ended at Callander, and after an eight-mile jaunt in a six-horse tally-ho we arrived at the head of Loch Katrine, where a small steamer was waiting for a party to take the daily cruise. The steamer was well named, "The Sir Walter Scott," for it was spending its life on that narrow lock and within sight of those rolling hills

which the famous Scottish poet has described so beautifully in "The Lady of the Lake." Those who are familiar with this story will recall how Douglas and his daughter Ellen were banished from the kingdom, but had returned secretly and were living with Roderick Dhu on "Ellen's Isle" in Loch Katrine. The King Fitz James finally learned of Douglas' return, and as Douglas feared that the king would wreak vengeance on the island, he turned to Roderick Dhu, and said:

Brave Roderick, though the tempest roar,
It may but thunder and pass o'er;
Nor will I here remain an hour,
To draw the lightning on thy bower.

As we approached that island, there was a heavy thunderstorm rolling up from the west. Two men in a small skiff ahead of us were pulling for the island for shelter. When they had beached their boat, they scrambled to the top of the rocks and began to forestall the chill that the storm would bring by emptying a bottle of "hooch." We steamed within fifty yards of them, and as we watched their ceremony, we noticed that they were quite undisturbed by the torrents of rain that were falling — the business which they had in hand was too urgent. Finally we saw the bottle rise for the last time—bottom upward. We were watching it as it remained poised in the air — when suddenly there was a terrific crash of thunder accompanied by a blinding flash of lightning. We were partially stunned, and when we recovered our first thought was of our friends on the island—they were no-

where to be seen. In the course of a few seconds we heard a faint groan from the water at the base of the island—presently there was a confused harmony of groans from the same quarter. The disturbed water, in the direction from which the sounds had come, revealed two struggling forms that were quite unprepared for that part of the ceremony in which they were engaged. We dropped a boat and went to their rescue. When they had sufficiently recovered from their shock to tell



A wee Highlander.

their story, we were told that the lightning had struck the empty bottle and had unceremoniously pitched them over the rock into the water. The more talkative of our unfortunate friends gave expression to more truth than fiction when he said that the lightning had no more respect for an empty flask than he had himself. We returned to "The Sir Walter Scott" and concluded that it was quite a coincidence that we should see the lightning on the bower.

The reminiscences of Scotland

would be quite incomplete without a passing reference to good old Edinburgh, or "Auld Reekie" as it is sometimes called. No city in the United Kingdom seems to have such a variety of historical associations—such a wealth of time-honored tradition. It is no longer the seat of Royalty, but it still remains in appearance a royal city. Political changes can never divest it of its regal beauty. The haze which the dawn of morning or the dusk of evening throws over its battlements and towers, and over old Arthur's Seat, forms a mantle of purple which, when it is touched with the rays of the rising or setting sun, excels in richness and depth the colors that flout the capitals of the Orient. The old cathedral, hallowed with age, stands as a national monument, breathing forth to the generations of the future of the cherished memories of the past. It tells of the struggle for religious liberty, and its members still point with pride to the spot from which Jenny Geddes hurled the stool at the Anglican Bishop's head for attempting to force his liturgy upon 'the auld kirk;'" and as one looks over the solemn congregation on Sunday morning he invariably decides that Jenny Geddes has many successors who could perform a similar feat if the occasion were to demand it.

We found many attractions in Scotland, but the chief of all was in the Scotch people themselves. On a certain occasion a Scotsman was heard to remark that there were only two classes of people in the world—those who were Scotch and those who were d——d sore that they were not; and as we were bid-

Continued on page xvii.

The Royal Agricultural Winter Fair.

By G. E. DAY, Sec.-Treas.

Dominion Shorthorn Breeders' Association.

SOME years ago the Dominion Department of Agriculture conceived the idea of inaugurating a great Dominion live stock show, and the proposition was received with enthusiasm on the part of the live stock interests. One of the great difficulties in connection with the enterprise was to settle the location of the show. Some claimed the show should be located west of the Great Lakes, others that it should be east of the Great Lakes, while others proposed that it should alternate between the east and the west. The matter dragged along for a considerable time, and eventually the project was abandoned.

During the fall of 1917 the idea of a big live stock show was revived, and was discussed at the live stock convention held in Toronto in February, 1918. Most of the live stock associations appointed delegates to meet with representatives from other associations to organize if possible a great live stock show on a scale never before attempted in Canada. It was decided that the show should be financed and controlled by that part of Canada lying east of the Great Lakes, so that Western Canada, when the time arrived, would be free to organize a similar show west of the Lakes.

The delegates from the various associations decided to organize on a very broad basis, and the result is that, if present plans are carried out, the show will include horses,

beef and dairy cattle, swine, sheep, poultry and pet stock, seeds, dairy products and manufactures, fruits, flowers, honey, and any other branch of the agricultural industry. Whether it will be possible to include all these branches in the first show remains to be seen, but there is no doubt that there will be great variety in the character of the exhibits.

It was not until October, 1919, that the location of the show was decided. The cities of Hamilton and Toronto both wanted the show, and the vote of the delegates finally located it in Toronto.

A large arena will be erected upon the grounds of the Canadian National Exhibition, and some of the present stock buildings on the grounds will be utilized in connection with the plan for housing stock. The housing of this show will cost in the neighborhood of \$1,000,000.00, and the City of Toronto has passed a by-law authorizing the erection of the arena and other buildings necessary. Grants towards the show of \$25,000.00 per year for 10 years have been promised by both the Ontario and Dominion Governments, and the show management have agreed to raise at least \$40,000.00 per year for 10 years, which will go towards the cost of constructing the buildings, and also to raise \$10,000.00 per year for 10 years as rental for the buildings during the time of the show.

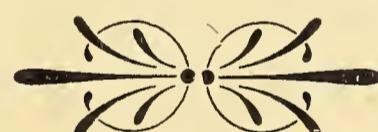
The show has been incorporated,

and since the Toronto by-law has been carried, and grants promised from the two Governments, there appears to be nothing to prevent immediate action in connection with getting things into shape. Some enthusiasts believe that it will be possible to hold the first show in November or December of this year, but this remains to be seen.

A show of this character and scope will mean much for the agricultural interests in Canada, and will serve a number of very important purposes. Necessarily a great representative show is highly educational, and no doubt every effort will be made to emphasise the educational side of the Exhibition. Another

function of such a show is to stimulate interest in agriculture in all its branches, and give encouragement to those who are ambitious to excel. In addition to these two important considerations, there are the possibilities of advertising Canada as a great live stock and agricultural country, a feature which must not be overlooked in connection with a show of this kind.

Never before has a show of this scale been attempted in Canada, or even on this Continent, and the friends of agriculture will watch its development with interest. We hope every Canadian will have reason in future to take a pride in this great Canadian enterprise.



The Brook in February.

A snowy path for squirrel and fox,
It winds between the wintry firs;
Snow-muffled are its iron rocks,
And o'er its stillness nothing
stirs.

But low, bend low a listening ear!
Beneath the mask of moveless
white,
A babbling whisper you shall hear
Of birds and blossoms, leaves and
light. —Roberts.

A Brief History of the Department of Farm Management.

By J. C. NEALE, B. S. A.

AS there does not appear to exist in the student body at the College, or among the general readers of the "Review," a very clear conception of the scope and aim of the Department of Farm Management, the following article is written in the hope that it may bring to its readers a general knowledge at least of the work of this most recent addition to the staff of the College.

Before going into discussion of the work done here at Guelph, it might be well to touch briefly upon the history of farm management investigation in the United States. Dr. G. F. Warren, of the Cornell University, Ithaca, N. Y., is one of the pioneers of farm business investigation, and has probably done more along this line than any other one man on the American continent. His first business survey of an area in New York State was made in 1907. The idea was shortly taken up by various other States of the Union, and by the Bureau of Plant Industry of the United States Department of Agriculture, at Washington. The work of the Federal Department soon became too large and too important to be considered a side-line of the Bureau of Plant Industry, so the Office of Farm Management was established, with Professor W. J. Spillman as head. Professor Spillman remained in charge until 1918, when he resigned and was succeeded by Dr. H. C. Taylor. The Office of Farm Management has conducted

a large number of surveys in both northern and southern areas, and has published many valuable bulletins. The work has extended among the various States until, at the present time, practically every State College of Agriculture, or State Experiment Station, in the Eastern and Mid-Western States has its own Department of Farm Management.

In Ontario, the work of Farm Management or farm business investigation was commenced in the summer of 1917, under the direction of Mr. A. Leitch, then Lecturer in Animal Husbandry and Superintendent of the College farm. For some years previous, Mr. Leitch had advocated the commencement of such a work, both for its value in supplying statistical information, and for the purpose of determining just what systems of farm organization were proving most successful in actual practice. But up until 1917, he found it impossible to sufficiently impress those in authority that such a work would justify the expenditure of the funds required. The opportunity came from an unexpected quarter. The Organization of Resources Committee, which was formed by the Government to investigate the entire resources of the country, found that they could secure absolutely no authoritative facts or figures on the agricultural industry. Through the influence of this committee, an appropriation of funds was secured for the beginning of

investigation of Ontario farm business.

The first farm business survey in Ontario was made in Caledon Township, County of Peel, in the fall of 1917. Caledon Township is typical of the general mixed farming areas of Western Ontario. Records were taken from 113 farms. This small survey was not important from the viewpoint of actual information gained, but in other respects it proved of great value. In the first place it gave those engaged in the work the necessary experience to enable them to go ahead with larger surveys. And of still greater importance, it supplied actual figures by means of which the nature of the work could be explained to farmers in other areas. As may be imagined, a considerable amount of explanation was required to convince a large proportion of the farmers of any section, of the legitimacy and need of such a work.

In the Spring of 1918, the first two large surveys were made of 437 farms in the dairying section of Oxford County, and 340 dairy farms in the County of Dundas. A record was taken, on each of these farms, of all farm business transactions for one year—in Oxford County, for the year ending February 28, 1919, and in Dundas County, for the year ending April 30, 1918. It is not the intention, in this article, to discuss the methods of collecting data or the conclusions which have been drawn therefrom. These have been published in pamphlet form by the Department as, "The Dairy Farming Business in Western Ontario," and "The Dairy Farming Business in Eastern Ontario."

Owing to the varying conditions

of weather which so greatly affect the "farming business, no one year's result may be taken as representative of that business. A true representation may be obtained only by taking records from the same farms for at least five consecutive years and then averaging the total data secured. With this end in view, a second survey of each of the above mentioned areas was conducted in the Spring of 1919. Records were taken of farm business transactions for the year ending February 28, 1919, in Oxford, and April 30, 1919, in Dundas. An average study of any area (averaging all years) will not be made until the entire survey is completed. Each year's records will be worked up by themselves, and the result published. The conclusions drawn from these second surveys of Oxford and Dundas Counties are being published as Bulletin 275 of the Ontario Department of Agriculture, Part 1, of which—"Dairying in Western Ontario"—will be in the hands of the public by the time this article appears.

But the work has not been confined to dairying. In the Spring of 1919 two other surveys were made, one of the beef producing district in North Middlesex, and one of a typical mixed-farming section, comprising parts of Dufferin, Peel and Wellington Counties. The reports of these surveys will also be published in bulletin form.

The aim of the Department of Farm Management in conducting this farm business investigation is two-fold. In the first place, as has been stated, it aims to supply authoritative information and figures pertaining to the farming business

Continued on page xxvi.

Buying Sheep in Great Britain.

By D. E. McEWAN, '18,
Of Alloway Lodge Farm, Byron, Ontario.

A VISIT among the various breeds of sheep in England discloses an entirely different system of management and feeding from ours. It is customary, before going to a flock, to wire the owner or agent telling him when you will arrive, as he will then have the sheep selected and arranged for you to see. The shepherd decides what sheep are for sale and usually what the price will be. The owner leaves such matters of selection and price to the discretion of the shepherd. Sheep which are not for sale—the good ones—are not shown, except in rare cases, as this does not help the sale of the others. It is remarkable how the breeder can impress one in a disinterested way that he is not particular whether he sells a certain individual or not, and that the price quoted is a bargain. Certainly trade seems to have been good during the war, and at an advanced price—due in some cases to boosting among the breeders—but there does not seem to be any depletion of the pure-bred flocks, as we had believed took place during the war. The breeding flocks are made up of selected individuals, proven as producers, and each year the best of the yearling ewes are selected and kept for breeding. It is practically impossible to buy yearling ewes from the selected lot, as they are seldom shown to the buyer. In Canada we are tempted to sell what we should keep when the price is alluring. The owner

agent is always very hospitable and considerate and endeavors to make you welcome as only a British gentleman can.

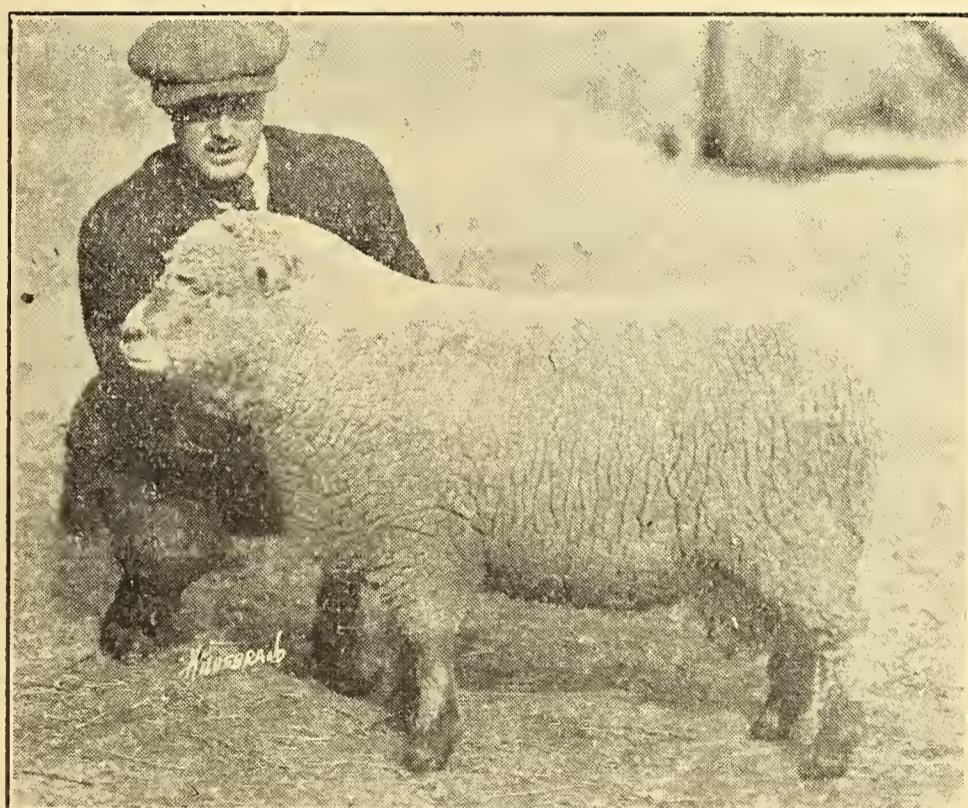
The hurdle system is used almost entirely in pasturing the lambs. A field is planted with oats and vetches, or vetches alone, and hurdles or a portable fence are used to give the lambs fresh pasture by moving them from one spot to another about the field. The flock of ewes are allowed to follow where the lambs have pastured and pick over what is left.

The lambs are fed grain all the time—usually oats, oilcake and winter beans—a mixture we would consider too heating in our summer climate. For show lambs, mangolds that have been pitted over winter are fed whole or cut, in addition to the grain. These mangolds often last till the middle of August. This method of feeding entails considerable labor and expense, but it certainly produces growthy lambs and keeps them free from disease or infested pastures. It is commonly stated that internal parasites such as the stomach worm are unknown in England. This is not really the case but due to the method of handling the lambs they are not open to the same chance of infection. Turnips are also used for hurdling in the fall and winter; and as a means of cleaning and enriching the land there is no better way than hurdling sheep over it.

It is compulsory for all sheep to

be officially dipped once a year—when sheep scab, or any other disease in animals breaks out it is the duty of the police to see that the district or parish is quarantined. In some instances, even where disease does not exist, a permit must be obtained from the chief constable before animals may be moved from one farm to another. The shepherd usually has two or more helpers, except in a small flock, and this affords him ample time and opportunity to see that all the sheep are properly cared for.

accommodation was inadequate, and many people were forced to stay in other towns forty or fifty miles away and come in by train each day to the show. The hotel cooks and waitresses chose this most inopportune time to strike and the confusion in the hotels at meal hours was really dreadful. The general principle of the show is on the same plan as our exhibitions, but the buildings and grounds are not so well equipped, as the show is held in a different place each year. Differing from our exhibitions, it con-



Champion Ram Chicago, 1919—Imported in August

The Royal Show this year was held at Cardiff, South Wales, which is in the heart of the coal section. The selection of this site was not on account of its location in regard to livestock, but rather for its historic interest. His Royal Highness, the Prince of Wales, was visiting Cardiff during the show and it interested the people greatly to have him elected as Honorary Patron of the Royal Agricultural Society. The Welsh people are very hospitable and put forth their best efforts to accommodate visitors. Even then,

sists only of livestock, poultry, agricultural machinery, grain and seeds, without the gaudy midway attractions with which we are familiar. While the buildings to accommodate stock are not equal to ours, the stock is housed in such a manner that the animals are attractively displayed, and any breed can readily be found.

The attendance is remarkable for a purely livestock show; but the Britisher, regardless of what his occupation may be, is essentially an agriculturist at heart. The town-man displays a wider knowledge of

farming than the average town-man here, and delights in long walks through the country. This may in some degree account for the large attendance at the show.

With a wet spring and a dry summer to contend with, the stock shown was scarcely as good as usual, and the price of feed and variance of labor also proved a drawback. The cost of all commodities and travelling has advanced since the war, and, with a poor crop this season, the entries were perhaps somewhat curtailed. The quality and finish of the stock was remarkable, but the stock we find shown at Chicago and Toronto would be almost on a par as far as fitting and condition is concerned.

Undoubtedly in England they have better foundation stock, and they are very careful in selecting a sire, and until we can get as good we will be forced to import. There were breeds of cattle and sheep exhibited at the Royal of which I had never heard and some which we would never miss should they not be imported.

The Highland Show held this year at Edinburgh holds the same position in Scotland as the Royal in England. But there we find stronger classes in their popular breeds — Clydesdales, Shetlands, Scotch Short-horns, Angus, Cheviots, Leicesters, and Black-faced Highlands. However, the total entry is not equal to the Royal Show.

After buying all the sheep required, the next question was to arrange for boat space to Quebec. Not till then did one fully realize the unsettled condition of labor. The coal miners were striking for shorter hours and increased pay — which

they received and then they required two or three holidays a week to spend the money. The stevedores at many of the ports went on strike, and boats were held up for discharging and loading cargoes. The ship crews demanded more pay, and forming unions, would not sail without a full compliment of men. Even farm laborers in some parts formed unions, and in one country went on strike in the middle of the haying season. Union farm laborers worked fifty-four hours per week, with increased pay for overtime and Sundays. There was also a non-employment wage of about four or five dollars a week for people out of work. The railroad men were unsettled and some held up all trains pending settlement.

After four weeks delay the sheep were finally loaded on board ship, but the crew refused to leave as they were two men short, and also August Bank holiday was coming. After waiting five days, the boat sailed, and besides a cargo of sheep, only thirty or forty tons were carried, fresh water and coal being used for ballast. The cargo which was loaded in five days at Montreal, took the stevedores three weeks to unload at Bristol. There seems to be a lack of enthusiasm among all the laboring men in England.

The Estates are finding it difficult to make money at farming, and much of the land is being broken up into small farms. It seems that the day of the tenant farmer in England is past, but if some of our methods were introduced it might prove to their advantage.

Under present condition we can produce grain and fodder and there-

Continued on page xxix. >

The Future of Fruitgrowing in B.C.

By F. M. CLEMENT, B. S. A.,
Dean of the College of Agriculture, University of B. C.

IT is not long since the British Columbia fruit industry was struggling to find solid ground on which to stand; to-day the struggle is not over, but a firm foundation has been laid, and it is only fair to expect that the future can be looked forward to with extreme optimism. The industry in British Columbia, as in other Provinces, suffered during the War, but the growers did not lose heart, and every effort was made not only to retain the productivity of the orchards but to improve it. Although the British markets were cut off, and the Australian markets denied us, the Prairies and the Eastern cities of Canada were available; and thus the close of the War finds British Columbia apples not only firmly entrenched in the markets of Eastern Canada, but in some American cities as well.

There was a time when lands were sold at any price; when tales were told of unbounded soil wealth and of irrigation water which, when brought down from the hills, supplied the fertilizer; when the stranger gasped at the stories told and purchased and planted indiscriminately, expecting in a few years to reap an abundance harvest. But the days of hap-hazard planting are, however, largely over, and the industry in going forward by leaps and bounds. New plantings are springing up here and there, poor varieties are being worked over; irrigation systems are being repaired

and permanent development is taking place everywhere.

But the stories of the speculators were not all untrue. A naturally rich soil; a good supply of water; unlimited sunshine; a long season; the many varying altitudes of the valleys, benches and uplands permit of an adaptation of varieties unknown elsewhere in Canada. Growers have taken advantage of this variation in soil, climate and altitude, and are making their plantings after due consideration of local requirements and factors of production.

Many pages could be written on the varying conditions of Southern and Northern Vancouver Island; the Lower Mainland; the Thompson Valley; the Shuswap Lake County; the Okanagan; the Arrow Lakes; the East Kootenay; the West Kootenay; the Boundary Country; Central British Columbia, and many other sections of the Province comparing one with the other. A great deal could be said in comparison of climatic conditions; the great extremes of temperature; the moderate temperature all the year round; the extremes of sunshine, and the great extremes of rain-fall from less than ten inches in some parts of the interior to sixty inches or more at the Coast. But in an article of this nature it is not possible to give minute statistical information.

Some comments on the Okanagan I believe, however, might be of interest to "Review" readers. Sica-

mous is a junction point on the mainline of the C.P.R.. The line running south from here taps that great country that is known as the Okanagan Valley. Every day this Fall a large fruit train left the Valley, generally so large that it was necessary to break it into two sections to get over the mountains. The town of Armstrong on this line is almost at the northern limit of commercial fruit production. Only the hardy varieties thrive there, and even these are profitable only on the bench lands. The town and the Valley are, however, noted for their production and export of lettuce and celery. A few miles farther south we come to the town of Vernon, situated a short distance from the head of the Okanagan Lake. Nearly all varieties of apples are profitable here, but the harder varieties are recommended; the McIntosh, the Wealthy and the Delicious are possibly the most popular. Though irrigation is practised everywhere, there is a fair amount of rain-fall and it is necessary—generally speaking—to spray for Apple Scab. The famous Coldstream Estate with more than eight hundred acres of bearing trees is situated quite near this town.

Going south from Vernon we pass through a beautiful country with varying soil and climate. Oyama and Okanagan Centre are well known by the fruits they produce. Okanagan Centre has one block of trees of seven hundred acres, which in itself is worthy of consideration. The town of Kelowna is situated about half way between the northern and southern ends of the Lake, and in addition to the varieties of apples produced at Vernon, a large

number of tenderer varieties are found thriving very well. This year about five hundred acres of tomatoes and almost as many onions were produced here. The rain-fall is a little less than at Vernon, and consequently less spraying is necessary to control the Apple Scab.

A number of small places might be visited as we travel south, but the first marked change in production and climate is noticed at the town of Summerland. Here the apricots and peaches thrive fairly well, though this may be said to be approximately the northern limit of their profitable production. Summerland to-day is noted for its shipments of cucumbers, cantaloupes and other tender vegetables, in addition to apples and stone fruits grown everywhere.

Penticton marks the southern end of the Okanagan Lake. Peaches, apricots and all the tender varieties of apples thrive very well. The rain-fall is comparatively light—so much so that it is generally unnecessary to spray for the control of fungus diseases, especially Apple Scab.

From Penticton to the Washington boundary to the south is approximately fifty miles. For the first twenty of this, the road follows the bank of the river and lake, but at the town of Fairview the Valley widens and forms what is known as the Southern Okanagan Country. Here the Lands Department of the Provincial Government has acquired quite recently the control of twenty-two thousand acres, and has let the contracts for the construction of the irrigation flumes. The Southern Okanagan is in many respects the largest and most attractive un-



SNOWSHOEING SONG

Hiloo, hiloo, hiloo, hiloo!
Gather, gather, ye men in white;
The winds blow keenly, the moon is bright,
The sparkling snow lies firm and white
Tie on the shoes, no time to lose,
We must be over the hill to-night.

Hiloo, hiloo, hiloo, hiloo!
Swiftly in single file we go,
The city is soon left far below,
And as we climb, we hear the chime
Of church bells stealing o'er the snow.

Shake off, shake off, the clinging snow;
Unloose the shoe, the sash untie;
Fling tuque and mittens lightly by;
The chimney fire is blazing high
And richly stored, the festive board
Awaits the merry company.

Hiloo, hiloo, hiloo, hiloo!
The moon is sinking out of sight,
Across the sky dark clouds take flight,
And dimly looms the mountain height;
Tie on the shoes, no time to lose,
We must be home again to-night.

—Arthur Weir.

A Visit to Iowa State College.

By RUNDALL M. LEWIS, '21.

WHEN it was known that O.A.C. was sending a delegation to the Student Volunteer Movement Convention in Des Moines, Mr. J. A. Neilson, a graduate of this college, and now taking post graduate work in Horticulture at Iowa State College, Ames, Iowa, invited the delegates, whoever they might be, to take a day, while at Des Moines, to go and visit Ames. Mr. Neilson was in Guelph for a few days in December, and we who had been chosen as delegates, gladly accepted his invitation.

On New Year's Day, 1920, the delegates from Ontario Agricultural College, Manitoba Agricultural College, Saskatchewan Agricultural College, and British Columbia Agricultural College met at Des Moines terminus of the Suburban electric line that leads to Ames, thirty-five miles out to the north. It was 10.30 when we were let off at the college landing, about a mile short of the town of Ames. The first building we came to was the Dairy Building, but before entering it, our whole party of about twenty-five united in one of the hearty "Canada" yells that had been evolved especially for use at the convention.

The Iowa State College, as we were given to understand, grants degrees in three departments, Agriculture, Veterinary Science and Mechanic Arts. Most of their buildings are beautiful in design and construction. There are no dormitor-

ies for the men, who find accommodation in fraternity and club houses. Dormitories—that we did not visit—are provided for the numerous lady students of the institution. The total enrollment in all courses is about four thousand.

Mr. Neilson had not yet returned from Canada, but we found Prof. J. R. Buchanan, who showed us pretty thoroughly over the campus, and occupied us until noon when he brought us where we might eat. The Y.M.C.A. and Y.W.C.A. are housed in a building of their own, in the basement of which they maintain a cafeteria, where they daily feed eighteen hundred students. It was there we met Mr. Hinman, another graduate of the O.A.C., now engaged in post-graduate work in Animal Feeding. And during the afternoon Mr. Hinman was our guide.

The Agricultural work is centred in a large, beautiful, four-storey building of gray sandstone. A striking event of the day of our visit was a guessing contest. Hung in the central rotunda was a pen containing two fat capons that had been starved for twenty-four hours, and then been presented with an abundance of whole corn. The guessing was as to the number of kernels of corn the capons would eat in twenty-four hours. The prize for the nearest guess was the birds themselves. Needless to say great interest was shown in the event, as the time drew toward a close, high

guessers feeling elated, low guessers depressed, as each new kernel of corn was picked up!

The Dairy is one of their older buildings, about the size of the Biology Building at O.A.C. They are equipped for all the common dairy activities, including the manufacture of ice cream. Milk for sale is pasteurized after being sealed in bottles. A feature of the building is the bacteriological laboratory, where some of the most important results in America's contribution to this science are worked out.

Separate buildings, entirely apart from the rest, represent the department of Veterinary Science, where in addition to the work done in that course, all the veterinary work for agriculture students is given. The department includes an animal hospital.

Near the Vet. Buildings is the Abattoir, where large classes can be seated to observe demonstrations in the slaughtering and dressing of any "critter" from a pullet to an ox. It is here, too, that many show animals get their last trimming before exhibition. Mr. Hinman told us that on one occasion he here found a man trimming with a safety razor the lips and ears of a peculiarly fine sow.

In the department of Horticulture, I saw only the green-houses. These are extensive and appeared to be all that could be desired, especially in the tropical houses, where the collection was varied and profuse.

We entered one of the engineering laboratories, where about a dozen huge steam engines of various types, and three or four automobiles are maintained as laboratory apparatus. Most of the engineering department was not that day access-

ible. Mounted outdoors, however, we had pointed out to us, "The First Locomotive to Cross Iowa."

One very fine building is the gymnasium, said to have cost \$300,000. In the basement is a 220-yard track, while on the main floor are three separate basket-ball courts and all conceivable sorts of athletic appliances. This main floor, when cleared for dancing, will accommodate fifteen hundred couples. A balcony extends completely around the building, overlooking all parts of the floor.

Mr. Hinman showed us through the various barns and lots that cared for the stock of the institution. We were interested by his account of his work on Salt Ration for sheep, and saw some fine enough animals of all classes. We were united, however, in thinking that the barns and sheds were not as good as our impressions of all the main buildings had led us to expect. The cattle barn was, to us, a distinct disappointment.

The gem of the campus was reserved until the last. A new, tidy, bright little hospital, about the size of the "Maid's Residence" at O.A.C., with sunny, cheerful wards, thoroughly equipped operating and X-ray rooms, and normal accommodation for thirty-five patients, is a treasure that adds not only to the comfort and health of all students, but is an ornament in itself of which every person connected with Iowa State College is justly proud. The feeling among our Canadian party was unanimous—"How I wish I were sick!"

We returned to Des Moines that afternoon feeling that we had gained breadth of vision and new ideas from our visit to Ames. We had spent a large day and were tired.

A Promise

By D. G. FIDLAR, '22.

(Continued from January)

CAMP that night was made very comfortable by the simple expedient of picking out gently sloping ground, pitching the tent over it, and laying out the canvas tarpaulin and one blanket over the natural covering of long grass. No softer mattress was ever stuffed together; soon the regular pulsing of their breathing testified that old Morpheus was on duty, and the myriad little whisperings of night faded into silence.

The dews of the fourth morning had not been dispelled before the blue, tangy odor of a fire evinced the fact that the men were up betimes, and trout for breakfast was the happy slogan. Suffice it to say that the fish this time was enjoyed to the last morsel.

The ensuing four hours were one long back-breaking effort to take all the paraphnalia across a mile and a half portage to Eye Lake. The trail was an old one, a terrific storm earlier in the season had made a veritable steeple chase of it with huge trees torn down and flung across, and those tenacious alder bushes had clutched the once intervening space with their green fingers filling it with leaves and scratching twigs. To make it worse under foot, corduroy logs, once solid, were now rotted and uneven, and many a muffled roar went up as they gave way and top-boots disappeared in a bog of roots, rocks and water. The bulging sides of the canoe, striking

a tree would stagger the legs supporting it, and swaying from one side to another, would finally resume its unnatural locomotion, the while muffled and unintelligible sounds resounded from it like from an infuriated bull. Finally by one o'clock everything was over the trail and the scratched and perspiring pleasure-seekers were on their way again breasting the refreshing breezes of the lake, and eager to push on.

Five o'clock found them prepared for another jaunt over land at one end of Eye Lake, which is just like all the other lakes of the region, inevitable shores of spruce, pine and birch with disused lumber shanties tucked away in bogs around its shores. After a quarter mile to Big Turtle Lake the men were becoming weary, but daylight forbade them camping, so pushing ahead they finally located a suitable camping spot well down the lake, and did full justice to a night's rest, although boiled rice and raisins with a slightly charred taste, lay heavy within them that night. (Be sure to have enough water when you boil rice in a pail!)

The next morning broke clear and cold with a white breasted hawk, that keen O-Pip of the forests, circling above the smell of frying bacon and potatoes. The good healthy meal went the way of others, particularly since a plunge in the cold water had materially increased that silent yearning for breakfast.

So the routine was followed. Dip stroke, dip stroke with the drops from the wet blades and an occasional comment on passing scenery the only sounds heard. Yes, the only sounds, but within each man was growing that feeling of contentment, physical exhilaration and joy of the outer outdoors, that somehow made the horrors and vicissitudes of the past four years appear as through a convex mirror, small and distant. And so they went, racing passed a close promontory or scarcely moving in a widening of the lake.

A change of scenery was now observed. Bleak and desolate hills, all their tree growth just charred skeletons, so silent and protesting in their death poise, were on either hand and shores lined with drowned timber, for the lake had been raised six feet, was no sight to go into raptures over. In fact melancholia settled her dumb fingers over the craft and a spontaneous sigh of relief was vented, when green shores and hills were once more sighted in the distance.

Nature in her rainiest days is never so sad or hopeless as when her living forests have been converted into a shambles of blistered black birch, charred pine, gaunt on the sky-line, and when that tender blanketing of green shrubbery has been reduced to a gray dust and Mother Earth's bones, dead white and protruding, are betrayed to the scorching suns of summer and the icy tenacles of winter. Why transport our dreariest thoughts to a Sahara when we have these vast graveyards in our own "fair land."

Through Big Turtle Lake to Crow Rock; lunch at Big Turtle narrows

and more ancient shanties, once the abode of those picturesque figures, Lumberjacks, but now the rendezvous of pole-cats, foxes and chipmunks—oh, what a downfall was there! On into Turtle Lake and a disappointment, for the portage to Clearwater Lake West, as laid out on the map, was inaccessible, since a hundred feet of drowned land, roots and trees is impossible to overcome. So of necessity the extreme end of the lake had to be reached, and there another surprise, for a long wide clearing, a fine gravel wagon road, and a standard gauge railroad greeted their eyes as they rounded the last point. This was indeed interesting, and had to be explored.

A walk of a mile, past piles of logs and a potato patch, which omened well of civilization, brought the pair to a high bank above a lake, and at their feet a beautiful beach of white sand stretched to the right and left. Across the mile of black water, the virgin forest stood, dark enough in the cheeriest of suns, but now black and forbidding in the gathering gloom of a stormy night. As their eyes made the circumspection of the lake, smoke from a solitary chimney-pipe wavered into view, a single dog yelped, and then silence. Truly a deserted village. But the slight twinge of sadness was dispelled upon the realization that this must be their lake, and wheeling about, they returned to their burdens, and a labored hour and a half found them mighty tired, but all their dunnage transported.

So well had the trip been working out as regards time and distance, that it was decided to take the day off and explore about the lake, and although the morning was dull and

a stiff wind blowing down from the north-east, the canoe was successfully handled over choppy sea some six miles to the lee shore, and as it rounded a point the canoeists beheld several log cabins, an engine stack at the narrows, and two boys and a man bearing down on them in a motor punt. Although mistaken in the distance for the boys' father, the two canoeists were given a hearty welcome and towed the rest of the way to the narrows.

Fish folk they were, netting lake trout and white fish in the fall and shipping in the winter to New York and Chicago. Truly a long distance but a paying proposition, for they received very good prices for a specially good quality. It was a mere matter of a twenty mile haul over a winter road to the railway before they could get their fish-boxes out, but they thought nothing of it. A different aspect as compared to our network of railroads of the east. They were genuinely glad to see visitors and regaled their attentive ears with game lore and the peculiar tale of the Hermit of White Otter Lake.

This old man, in his halcyon days of youth, had quarrelled with his family, who accused him of being a ne'er-do-well and predicted a lonely death in a shack. But they misjudged their kin, for taking to the woods, he settled some miles back from civilization, and lived the life of a recluse. As lumbering pushed her steely fingers deeper into the wilds, he retreated before it and finally took up a permanent abode on the northern shore of White Otter Lake.

Probably realizing that time was flitting too quickly, he proceeded to

work out a most marvellous residence with a unique type of architecture to be a monument to his memory and a veritable Arch of Triumph over the unchristian hopes of his people. For day by day, and absolutely unassisted even by a horse, he erected a log cabin, thirty-feet wide, forty ft. long and three stories high. And then, as a final punch to prove conclusively that he would not die in a shack, he built a forty-five foot tower at one corner of his mansion. We may marvel at the Pyramids, but raising forty-five foot timber with pegs and a crude block and tackle is also food for thought. Unfortunately, the old man was drowned two years ago, and found resting beside his canoe, long white beard a-float on the water like a patch of weed. A sad ending to an otherwise brave though warped existence.

After a short visit in the vicinity of the narrows, which in reality was a falls harnessed with lumbering equipment and which emptied into White Otter Lake, the men returned to their camp, but not before they had had a strenuous battle against the waves and got nicely drenched for their labor.

Supper time that night was a gala event. It would be an injustice to let that feast go by unheeded. Inevitable bacon and beans, flap-jacks, browned to a turn, boiled onions of a sweetness unexcelled by any Parisian chef, a great pan of fried potatoes, homage to the Irish; and for dessert, those turquoise of the wilderness, blueberries with cream. Afterwards, smokes glowing leisurely, jack boots off, warm sweaters on their backs, all their aches and fatigue dispelling

Continued on page xii. ➤

Departmental Notes.

(We are instituting this feature with a view to keeping Alumni and others in closer connection with the work going on in the various College departments.—EDITOR.)

Field Husbandry Department

Statistics gathered by the Bureau of Industries for Ontario show that for the last eighteen years the average annual crops of oats, barley and wheat have been respectively ten, twenty and fourteen percent higher than the average for the eighteen years previous. From these figures the increased yield in the year 1918, at the average prices ruling during the years 1913 to 1917 inclusive, was worth \$11,071,613. This amount would be sufficient to keep fifty-five colleges as large as the O.A.C. running for an entire year. It is believed that this increase is due in a large measure to the introduction of new and better varieties.

Attention is called to a series of experiments covering a period of thirty years, which have proven that by the practice of crop rotation, oats can be grown successfully on the same farm without a change of seed for that period, and the yields per acre even increased.

Horticultural Department

Definite although unexpected results have been obtained from a co-operative experiment to ascertain whether Ben Davis apple trees are suitable for top grafting in Ontario. The experiment has been running for a period of seven years, and the winter of 1917-18 proved that the variety was not sufficiently hardy to

warrant it being recommended for this purpose.

Chemistry Department

A bulletin is to be issued in the near future embodying the results of the soil surveys of the province. This work was begun in a small way in 1913 and has been carried on for the past six years. Samples have been taken and analyses made of soils over the major portion of Ontario and the publication of detailed descriptions of them will undoubtedly be of interest and value.

Physics Department

Those who are interested in systematic weather observations may find it profitable familiarizing themselves with the apparatus at this department. Last summer the set of self-recording instruments was completed so that continuous records of humidity, temperature, sunshine, wind velocity and direction, and precipitation are now being made. When plotted on the same chart the relation between them is easily seen. It is intended to continue this method of keeping weather records, and perhaps in the future it may be possible to work out some more or less definite principles concerning them.

Botanical Department

The first annual meeting of the Canadian Branch of the American Phytopathological Society was held

at the Ontario Agricultural College, Guelph, Ontario, December 11th and 12th.

Canadian Phytopathologists were well represented at this meeting. Among those taking active part in the proceedings were: Dr. A. H. R. Buller, University of Manitoba; Dr. J. H. Faull, Toronto University; Mr. P. A. Murphy, Dominion Laboratory of Plant Pathology, Charlottetown, P.E.I.; Mr. W. H. Rankin, St. Catharines; Mr. W. P. Fraser, Saskatoon, Sask.; R. J. Blair, Forest Products Laboratories, Montreal; Mr. F. L. Drayton, Central Experimental Farm, Ottawa; Professor L. Caesar, Professor J. E. Howitt and Dr. R. E. Stone, Ontario Agricultural College.

The President, Professor J. E. Howitt, in his address, dealt with what should be the aims of this Society. These, briefly summarized, are as follows:

First—To provide adequate facilities for the training of research men in Plant Pathology in Canada.

Second—To make provision for the publication in Canada of the results of scientific investigations in Plant Pathology not of interest to the general public.

Third—To make available to the general public the practical application of results obtained from scientific research in Plant Pathology.

Fourth—The unification of recommendations made by the various pathologists regarding the control of the more common diseases.

Fifth—The carrying out of a plant disease survey to secure information concerning the financial losses caused by disease to Agriculture and Forestry and the distribution of plant diseases throughout Canada.

Sixth—The adoption of a stand-

ard of qualifications required of men entering the field of Plant Pathology in Canada.

Seventh—The appointment of an advisory board to confer with the Federal and Provincial authorities regarding plant quarantine and other restrictive legislation.

Dr. E. C. Stakman, of the University of Minnesota, was a guest of the Canadian branch, and dealt with the Cereal Rust problems in the United States and Canada.

The following officers were elected for 1920:

President—Dr. A. H. R. Buller.

Vice-President—Dr. J. H. Faull.

Secretary-Treasurer — Dr. R. E. Stone.

Additional members of the Council.

Professor J. E. Howitt and Mr. F. L. Drayton.

Bacteriology Department

A paper under the title "Continued Studies of some Azotobacter," was presented from this Department at the 1919 meeting of the Society of American Bacteriologists at Boston. The purport of this paper was to demonstrate that the azotobacter (non-symbiotic nitrogen-fixing soil bacteria) had a complex life cycle. That, in addition to multiplication by fission, which, as with bacteria in general, is the normal method of multiplication, the azotobacter, in one stage of their development in pure culture, form within mother cells a number of regenerative granules or "gonidia" which on disintegration of the mother cells are liberated and commence to grow into ordinary azotobacter cells. Other phenomena in connection with the

Continued on page xix. ✕

—“APRES LA GUERRE”—

*“Shouldered his crutch and told how
fields are won—”*

TO-NIGHT Conscience smote us; uneasily we reviewed the past week, and discovered with guilty alarm that our sins of omission are piling up at an appalling rate. We have not composed that Essay on Egg-production for ‘Prof.’ Graham; we have not compiled that Short-horn pedigree for ‘Prof.’ Toole; we have not written up our Chemistry notes to date; we have not finished our Farm Management Accounts; we have not read our supplementary reading; (by the way, has anyone read our supplementary reading? You have! Well, say, Mac, you’re a hero!) We have not—oh well, what’s the use! Got to make a start somewhere—here goes for “Heroes and Hero-Worship”—funny old duck, Carlyle, but he had ideas.—* * * * *

Partitions, in the old Residence are thin; every morning as the breakfast bell rings we are roused by the voice of the ex-driver in the next room adjuring his roommate to “show a leg.” Our virtuous spasm of unwonted industry is broken in upon by sounds of wordy strife; and as we are cursed with a vast curiosity, forthwith over goes Carlyle and we depart hastily in quest of the ruction. * * * * Aha! Sherlock Holmes had nothing on us! We follow our tip-tilted nose direct to the centre of the disturbance, and assuming our most magisterial air make an impressive entrance. (Strange to relate, nobody seems to be in the least impressed;—“I” real-

ly must cultivate a more dignified manner, that “we” may exact due respect.)

Evidently someone has been slandering the Eighth Brigade; as we enter, the “C.M.R.” has the floor, and is counter-attacking vigorously. In our somewhat varied experience, his remarks upon the “Shiny Seventh,” their ways and works, their comings-out and their goings-in, have seldom been equalled for variety of epithet and felicity of phrasing, and have never been excelled for pungency and point. The “P. P. C. L. I.” however, is not quiescent; he has no intention of allowing “the crack regiment of the Canadian Corps, Sir,” to be traduced by any foot-slogging cavalry man that ever—“Why, on the Second of June they—” “Were you there?”—“No, but I heard—” “You heard! Where do you get that stuff!” “Now looka here; the batt. came out seventy-five strong where Six Hundred went in!” “Ye-a-ah, but how many beat the outfit out?” “Say, you! For two pins I’d shove that down your throat!” And a “Fifth” artilleryman attempting to restore peace is at once assailed by a “First” Machine-Gunner who reminds him that the “Fifth shot short at Passchendaele.” The “Heavy” is promptly squelched when he intervenes; there seems to be an impression that the heavies were dug-in somewhere near Boulogne—.

A corridor row of the first magnitude is averted by the presence of mind of an onlooker, who asks one

of the combatants what he thinks of General Currie, thereby creating a diversion.—* * * * *

We wander homeward, thinking, "What an awful war it must have been!"—and there upon the table, silently reproachful, lies Carlyle. "Among the Northland Sovereigns, too, I find some who got the title Wood-Cutter; Forest-felling Kings. Much lies in that. I suppose at bottom many of them were forest-fellers as well as fighters, though the Skalds talk mainly of the latter,—misleading certain critics not a little; for no nation of men could ever live by fighting alone; there could not produce enough come out of that! I suppose the right good fighter was oftenest also the right good forest-feller,—the right good improver, discerner, doer and worker in every kind; for true valor, different enough from ferocity, is the basis of all. A more legitimate kind of valor that; showing itself against the untamed Forests and dark brute Powers of Nature, to conquer Nature for us."—

Funny old duck, Carlyle, but he had ideas.

Medals and Awards

Davis, H. R., 21st Fussiliers, att'd Air Force.

For distinguished service as observer and critic.

On various occasions while on counter-battery work the keen eyes of this fearless young observer penetrated the camouflage concealing enemy batteries, thus enabling the junior sniping sections to engage successfully and smother with gas

several big guns on the "Lecture Laboratory" front. He is also officially credited with having brought down in flames three high-flyers of the "Demonstrator" model, and with having driven down at least one heavily-armed battle-plane of the latest "Professor" type, which was observed to crash in No Man's Land.

Oldfield, H. G., 20th Toreadors, (Toole's Terrors).

For most persistent devotion to duty.

During the minor actions preparatory to the final assault of '20 upon the formidable "B.S.A.—Hexam—Degri" line, he was the first to rally his forces from the disorganization resulting from the heavy casualties of the Christmas-New Year operations, and first to bring his guns to bear effectively upon the "Thesis" strong point, which commanded all approaches to the line.

Painter, R. H., 22nd, Y.M.C.A.

For meritorious service.

Throughout the entire fall campaign he displayed the greatest cheerfulness and maledictory inventiveness under most trying circumstances. Subjected as the forces were to continuous bombardment with high-velocity notes, references, cross-readings, scientific names, formulae, equations, and all the horrors of modern agriculture, they were kept constantly keyed to a state of high nervous tension. The services of this officer of the Y.M.C.A. were of inestimable value in relieving the strain, maintaining the morale of the troops, and in promoting the gaiety of nations.

~ The Veteran ~

FARMPOWER

The Future of the Tractor in Ontario.

By L. G. HEIMPEL, B. S. A.

TALKING about tractors on Ontario farms one often hears these questions:—Can the tractor be made to pay? Is the tractor a success in Ontario or does a tractor pay on a hundred acres? These queries can only be answered conditionally. In answer to number one we might say, "certainly the tractor can be made to pay, but conditions must be such as will allow the tractor to work to its advantage. Then one might add, "even if conditions are right for the machine the personal factor in its operation will either make or mar the success of the venture." These answers bring other questions and before we know it we are in the midst of a long tractor farming discussion. Though Ontario farmers are not clamoring very loudly for tractors there is no doubt that a great many of us are turning the buying of a machine over in our minds in a quiet way, and it is because we have no very reliable information as to the average tractor's capabilities that we hesitate to make the plunge. To those of us who are thus perched on the fence a discussion of the above questions may not come amiss.

Whether or not a tractor can be made to pay on any farm depends mainly on three distinct factors:—

(1) The amount of work procurable per annum.

(2) The conditions under which it must do its work.

(3) The personal factor in its operation.

The Tractor Can Do a Great Deal of Work

The man who buys a tractor and has not enough work for it is in the same position as the fellow who has eight work horses when he needs only four. When we try to balance the tractor's account at the end of a year's work we have to the tractor's credit the following items:

(1) The number of days work done by the outfit.

(2) Cropping and extra cultivation which could not be done without the tractor.

Against this there is the following:

(1) Interest on the investment.

(2) Depreciation on the outfit.

(3) Operator's wages, oil, fuel and repairs.

We must mention here that the third item in this account is not the

troublesome one; if we have few days of work for the outfit there will be little expense. It is the first two: interest and depreciation or overhead charges which will decide whether or not the tractor is a good investment. For instance, if our outfit consists of a 10-20 tractor @ \$1,100.00, three furrow plow @ \$200.00, and tractor discs @ \$200.00, the interest on \$1500.00 @ 6 per cent. will amount to \$90.00 per annum, while the depreciation @ 15 per cent., which is fairly low, will amount to \$270.00, or a total of \$360.00 overhead charges. The only way to justly distribute this is over the total time the machine is in use. So that if it does only twenty days work per year the overhead would be \$18.00 a day whereas if one hundred days work were done this cost would shrink to \$3.60 per day. If properly handled the tractor will easily pay for the operator's wages and running expenses.

As to how much work it will find on a hundred acres the following estimates will not be far out: 60 acres of plowing, which at five acres per day would be twelve days work. There are likely to be one hundred and fifty acres of other cultivation at fifteen acres per day or ten days of work. Then there would be possibly ten days of belt work, making a total of thirty-two days of work. This is a larger number of days than one would likely be able to find on the average one hundred acre farm without considerable rearranging of fields. What the overhead will be in this case can be easily calculated. It is certainly high enough to make a man think twice before making the venture. There are, however, other items

which cannot be so easily figured in dollars and cents. If by the use of the tractor one can overcome the shortage of help, clear a farm of some very bad weeds which have infested it and which have thus far defied one's efforts, or if the machine can be made the means by which we can crop a greater area with no more labor expense it will have done a great deal to wipe out the overhead charges.

At present the tractor cannot economically take the place of horses in all farm work, and on the one hundred acre farm at least two horses must be kept. To do justice to itself a tractor should displace at least four horses. Therefore, from an economical standpoint it is questionably whether there is room for a tractor and the necessary horses on a hundred acre farm.

When properly handled the tractor is a voracious brute which can readily devour a tremendous amount of work. As soon as enough work can be found to keep an engine busy for from fifty to one hundred days we have reason to believe that the tractor can be made a paying proposition and a great convenience.

Contour of the Land, Freedom from Obstacles, and Drainage—Important Factors

There are farms which are of a sufficiently large acreage to warrant the purchase of a tractor, but the conditions may be such as to make it impossible to use a tractor successfully. A tractor will do excellent work on level land or gentle slopes but we can not expect good work on hilly land, especially if the soil is loose in character. Time is too valuable and the tractor imple-

ments too expensive to make it a paying proposition to use a tractor on ground full of boulders or other obstacles. However, they are movable and should not be left even if a tractor is not used, so that they need be no permanent bar to the use of a tractor.

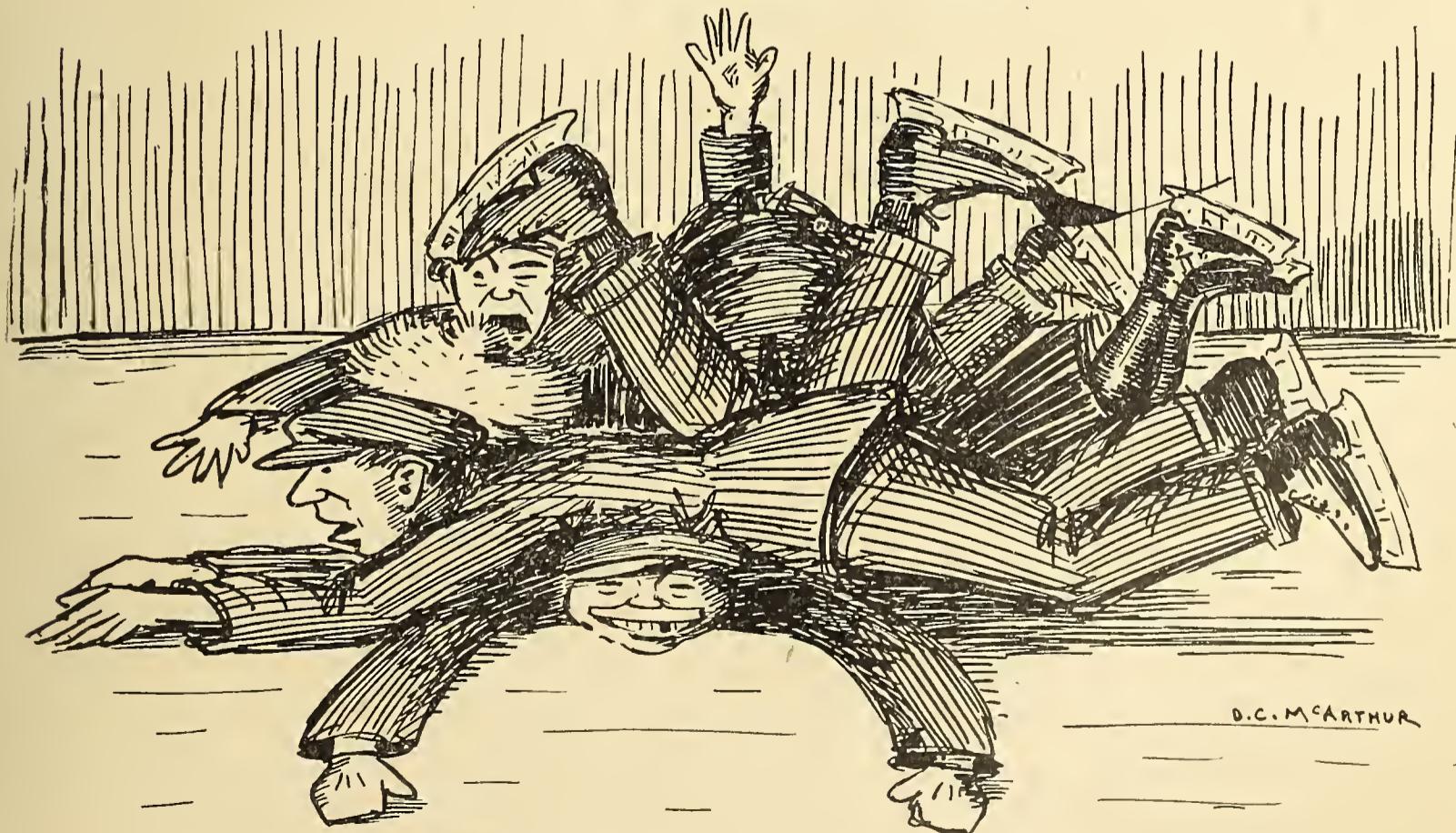
The shape and size of the fields have a great deal to do with the success of tractor farming. The longer the stretch and the more regular the shape of the field the greater will be the quantity and the better the quality of the work that can be done with the engine.

Uniform drainage is another factor which is necessary to successful tractor operation. Most farms have wet spots here and there which can be "muddled in" in spring when horses are used but if a tractor is to be used these holes must be drained or they will prove serious checks to the tractor's progress.

The Personal Factor in Tractor Operation

Cases have repeatedly come to our

ALL IN THE NIGHT'S WORK



Ex-member of rugby team (underneath)—"Gee, I haven't had so much fun since the game with R. M. C., at Toronto!"

notice where the size of farm, the contour and nature of the land and all the other factors mentioned above were all that could be desired but the tractor was not a success because the operator was not able to keep the machine in running order. Anyone can drive a tractor when it is good shape, but to make the adjustments which become necessary from day to day, to be able to detect trouble in its earliest stages, and to be able to remedy them with dispatch are attainments which can only be secured by taking a live interest in the machine and by diligent study. The success with which the farm tractor will meet in Ontario in the future depends more upon the availability of competent operators than upon any other factor. It is the duty of those interested in the tractor industry and of those interested in agricultural education to see that there are facilities where competent instruction in the operation and maintenance of tractors can be obtained.

THE O. A. C. REVIEW

REVIEW STAFF

D. C. MCARTHUR, '21. *Editor-in-Chief.*
 E. T. CHESLEY, '22, *Associate Editor*

W. A. FLEMING, '20, <i>Agri.</i>	J. G. MCCRIMMON, '21, <i>Alumni</i>
E. L. EATON, '20, <i>Exper.</i>	MISS O. GARDINER, '20, <i>Mac.</i>
C. M. DICKEY, '20, <i>Hort.</i>	MISS MURRAY, '23, <i>Mac. Rep.</i>
W. P. SHOREY, '20, <i>Poultry.</i>	J. A. MACADAM, '21, <i>Col. Life.</i>
S. D. IRVINE, '21, <i>Query and Farm Power.</i>	H. R. CLEMENS, '21, <i>Athletics.</i>
	F. J. WELLAND, '22, <i>Locals.</i>

EDITORIAL:

The Future.

IT is impossible to read of the continued unrest with which Central and Eastern Europe is seething, without reflecting on essential differences between that unhappy continent and our more fortunate America. For in spite of our many domestic troubles, which we might feel were serious enough if we did not compare them with those of the European nations—in spite of these, we have fairly rational conditions of living, and no widespread hunger and acute human misery stalking through the land.

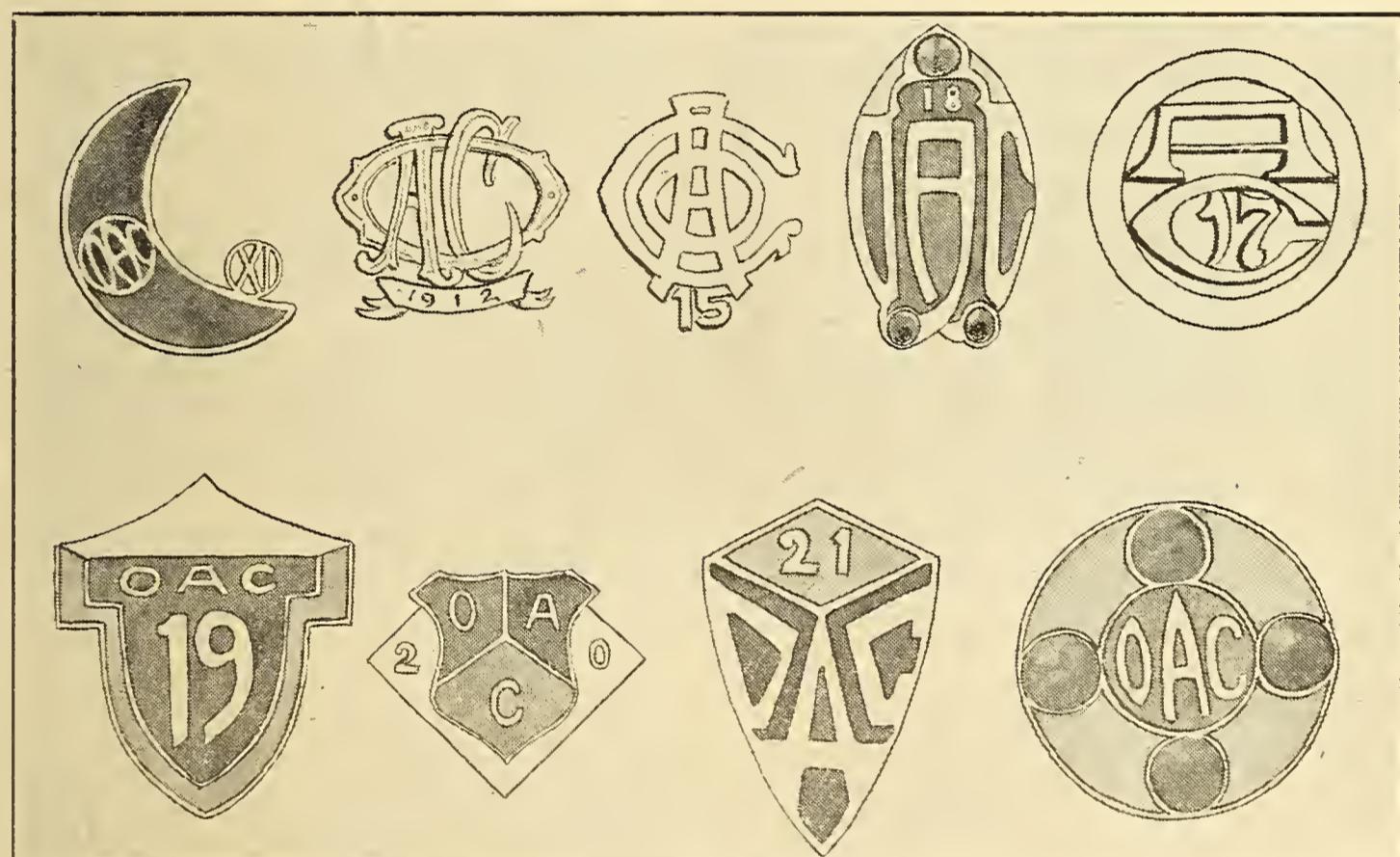
After every upheaval, such as the recent war, there is a surge from the lower levels of humanity upwards—countries whose governments have ruled huge, and almost

illiterate populations with an iron hand are to-day in the direst straits with their formerly strong governments broken down, and their people, unused to self-control and respect for others that true freedom breeds, are capable neither of governing themselves nor anyone else. The greatest protection that Canada has in these days of transition and change, is in the common sense and good nature of the average Canadian citizen. Just as the Canadian Corps could be depended on in the hottest actions through the individual initiative and intelligence of the average soldier, so our country to-day finds her security in the same qualities in her citizenry. An ignorant population, held down by

College Badges.

THE insignia worn by the students at the College are becoming so numerous and varied in style, one almost requires the help of an expert in heraldry in order to learn what they all mean. Class pins, small shields, large shields, the college coat of arms in different designs, the O.A.C. emblem, the large O and above all the red and blue arranged in different ways may be seen any day on the campus.

the College, there would be at least ten different designs displayed. Considerable trouble, time, and often expense are required for the production of these pins, which perhaps is to be regretted, for although they are worn considerably at first they gradually disappear in the senior years and are seldom if ever worn by students after leaving the College, whether two year men or graduates. The reason for this



What do they mean? Do they mean anything?

Class Pins

It has long been the custom for each class on entering the College to adopt a pin of its own, and as originality and distinctiveness have always been the aim, there are now a large number of pins utterly unlike and often so obscure in design that their connection with the institution can only be determined on close inspection. If the students now in attendance were all to wear the pins belonging to the classes with which they originally entered

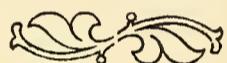
is that the pins are of little value, being difficult to recognize by members of other classes. This fact was fully realized some years ago and in order to meet the demand for a college pin which would be known to all students, past and present, and even to those not connected with the College, the student body of 1913-14 adopted the present design, which is now being worn by many ex-students of the O.A.C. and Macdonald Institute.

In the opinion of some this pin does not fulfil all requirements; for one reason because it does not allow

centuries of oppression, is like a powder magazine when the sparks of unrest are flying: the more general the spread of education, the more inured men are to freedom, the less danger there is of excesses when older ideals give place to new.

The unit of any country's civilization is the home. The idea which lies at the bottom of our pioneer history, is the desire of men to build up a land of homes, earned from the wilderness by their own toil and privations. In European countries the farmer is still the peasant: his life is one of unending toil, in the humblest surroundings, lightened by few of the advantages

which the progress of the last century has brought. The gulf between the peasant of France, and Belgium and Germany, and the farmer of Canada is immeasurable. Civilization moves westward, and the best that we have in Canadian farm homes, is the most hopeful sign of the world's progress. "What we want on Ontario farms to-day," said the Hon. E. C. Drury at the O.A.C. on January 20th, "is an Anglo-Saxon yeomanry, and not a peasantry." With the prospects of a huge immigration during coming years this is worth keeping in mind; if we can make Canada a land of happy homes, her lot shall be fortunate among the nations.



Acknowledgments.

BY a rather peculiar coincidence when we had decided to publish each month a paragraph based on the "Review" of thirty years ago, the Hon. Nelson Monteith unexpectedly presented us with the first eight numbers. These run from November, 1889, to June, 1890. The magazine of those early days in O.A.C. history was made up of eight pages, considerably larger than those of its present form, and print-

ed in smaller type. The cover was buff, with a large picture of the Residence, looking rather lonely without its guardian water tower.

During the period of these eight issues, Mr. Monteith edited the "Correspondence and Personals" department, from which we hope to glean some material interesting to our readers of to-day. We are greatly indebted to Mr. Monteith for his thoughtfulness.



We all are weary travellers
Upon Life's dusty way—
If any man can play the pipes,
In God's name let him play!
—Unpartizan Review.

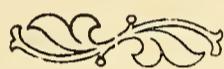
any date to be shown. This objection may be a good one, but it is a matter which should be decided by the Student Council. At any rate let us adopt and stick to a college pin and do away with the individual class pin once and for all time.

Emblems

The emblems which are awarded by the Athletic Association and by the Student Council to those who have achieved something for the College are rapidly being "snowed under" by the multitude of shields, emblems and decorations which different executives have seen fit to

devise, either as marks of distinction for their classes or as rewards of merit. These are worn on many different sweaters and jerseys, the student body appearing to have lost sight of the fact that there is a regulation College jersey and a regulation sweater. In short, there is much room for discussion on the lack of rules governing the wearing of emblems and colors in the College. These matters should be investigated and controlled by the Student Council and any regulations made should be strictly enforced.

"LANCE JACK."

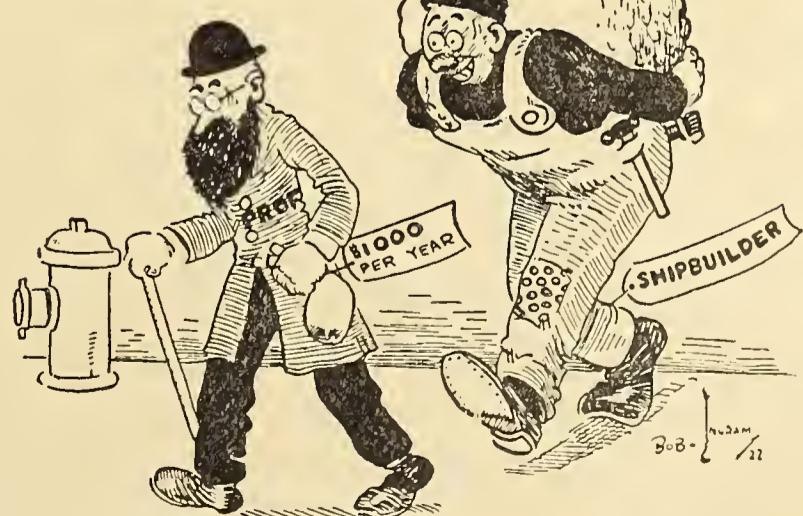


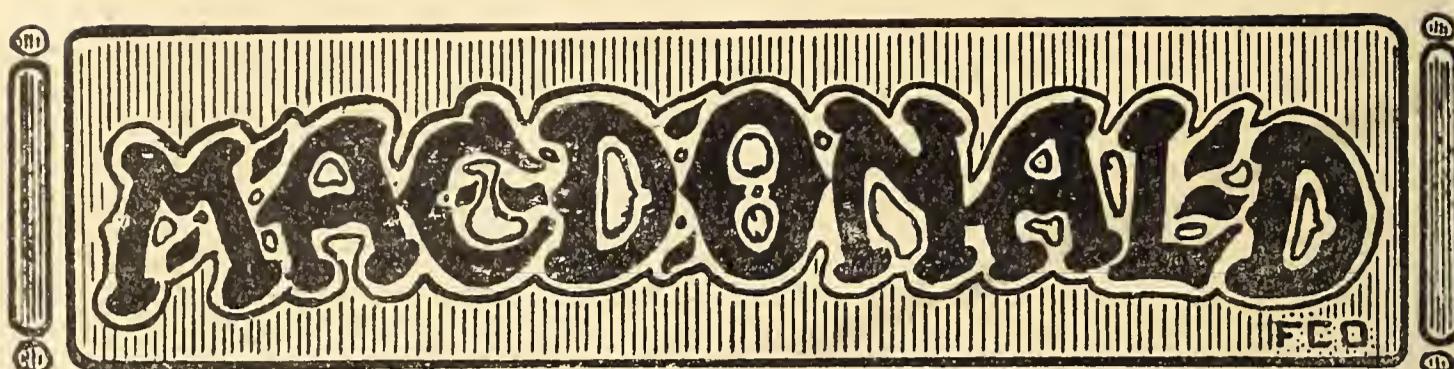
Staff Salaries.

O A.C. students and ex-students will welcome the announcement of the Hon. Manning Doherty that substantial increases in salary are to be made for the college staff. Remuneration for teaching was scandalously low in pre-war days; since then the continued rise in prices has made such salaries little more than a pittance. The expansion of agriculture and the industries allied to it has offered increased opportunities to men with

the B.S.A. degree: if professorial work is to attract the men that it should, salaries must be adjusted proportionally. Loyalty to institutions, and love of ones work are admirable qualities, and worthy of emulation, but food, shelter and clothing are just as essential to idealists as to anyone else. The Rockefeller gift to the States has helped to bring this matter into the limelight, with results that we hope will be lasting.

Arguments for a college education contrary notwithstanding.
—California Pelican





Union Literary Society At Home

On Friday evening, January 9th, there was held in Macdonald Hall, under the auspices of the Union Literary Society, a most enjoyable At Home. After the holiday the girls were all in the gayest of spirits, and the thought of an orchestra and "late lights" added a few more thrills. Evidently the boys were just as thrilled to be once again within the walls of Mac Hall, for promptly at seven-thirty they began to arrive, and the sound of male voices soon brought the girls from all corners to that dear old rendezvous "the well." Programmes were soon filled, and despite the fact that it was the first New Year's dance, the gentlemen had all the honors. Fourteen dances and several extras made up the programme. The orchestra played in splendid style, each selection being somewhat better than the previous one.

This being the first dance of the term the "freshettes" were duly introduced. What a charm they added. Around their necks they wore the usual green ribbon to which was tied a cunning rattle. Black pumps and white hose with large green ankle bows quite caught the eye of the boys, one even remarking in serious tone that he thought the new style of ankle bows was quite effective.

Thus they came, both freshettes and old girls, but this first At Home

of the New Year was acclaimed by all to have been the best of its kind. May there be many more such gatherings!

S. T. M.

Winter sports are now in full swing at the Hall. Every afternoon when lectures are over, parties of warmly clad Macites don their snow-shoes or skiis, and gaily tramp off to the dairy woods or the bowling green or wherever the drifts are deepest. Others, muffled equally well, wade through the snow to "the Hill" to toboggan, till tea-time.

In the evening, the hill is even more popular—and justly so—imagine a frosty moonlight night, a jolly crowd—a hill like glass! Is it any wonder the time flies as quickly as the toboggans themselves?

At ten fifteen, there is the final "last slide," the parties tramp back to the Hall, and the girls after hasty leave takings, hurry to their rooms to hunt feverishly for bread and butter or even a mislaid cookie. After all tobogganing does make one ravenous!

The Short Course

Once again Macdonald Hall welcomes the new Short Course students. These girls, who have just come in residence are entering for the best possible term as far as social activities are concerned, and,

even at this early date, the new comers have shown that they do not intend to neglect this particular phase of their course.

The girls are twenty-four in number, four of whom are living out of residence. The majority are from rural districts, and it is to these girls that the practical nature of the course is especially suited.

The class has survived the indignities thrust upon it by the Homemakers (who take great delight in initiating them) and they have already begun to take part in the various activities of the life at the Hall.

Miss Evelyn MacLean '19 has entered Winnipeg General Hospital as pupil dietitian.

Y. W. C. A.

The Y. W. C. A. held only three meetings in October, the Sunday preceding Thanksgiving being left free.

On October 5th Miss E. Watt gave a reading on "The Kind of Leaders Needed in the Country" from "College Women and Country Leadership." Miss Ferguson contributed a vocal solo. Miss Morton led the meeting.

Mrs. Crowe, of Guelph, addressed the Y on October 19th. She spoke particularly about opportunities for service in small ways, and gave some very helpful suggestions. Miss M. Kennedy sang "One Sweetly Solemn Thought," by Ambrose. The meeting was led by Miss De Haviland.

On October 26th we had an exceptionally good meeting. Miss Ruth Goldie, a former student at Macdonald Institute, and now head worker in the Robertson Memorial Institute

in Winnipeg gave a talk about her work in the West, which is chiefly among foreigners. Miss Goldie's stories of some of her experiences were most interesting, and excited not only laughter, but also a deeper sympathy for the "strangers within our gates" who want to be like real Canadians.

Miss Little, of Guelph, gave a talk to the Y on November 2nd. The meeting was led by Miss Malcomson, the newly elected Vice-President.

On November 9th Miss Fraser came from Toronto to explain the aims of the great International Conference of student Y. M. C. A. and Y. W. C. A. representatives, which was to be held in Des Moines, Iowa, during the Christmas vacation. On the following Sunday evening, Mr. Robinson, the part time Y. M. C. A. Secretary of the O.A.C. also spoke about the Des Moines conference, urging the importance of sending our full number of delegates. These two meetings preceded a canvass for funds with which to send Miss Luckham and Miss Robinson who were chosen later.

The meeting of November 23rd was devoted to the subject of Missions, and Miss L. Watt, of Guelph, gave a very interesting and instructive description of the Leper Missions in India. Miss Leitch sang a solo. Miss Sharp led the meeting.

On December 14th the time was taken up chiefly by the reading of a letter from Miss Olive MacKay, the Canadian Student Y. W. C. A. Secretary in China, giving us her first impressions of her new surroundings. Miss Luckham and Miss McManus sang solos. Miss Cass, the President, led the meeting,

which was the last held during the year 1919.

Husbands

A perfect husband, who can find one? For his price is far above gold bonds. The heart of his wife rejoiceth in him, and he shall have no lack of encouragement.

He worketh willingly with his hands and bringeth home all his shekels.

He riseth without calling and lifteth the ice from off the dumb-waiter. He starteth the kitchen range. He considereth his wife, and kisseth her occasionally.

Six days of the week doth he labor for his moneys, and upon the seventh doeth chores within the house for relaxation.

With his own hands he runneth the lawn mower and washeth the dog.

He layeth his hands to the parlor curtains and putteth up the portieres.

He hooketh his wife's dresses up the back, without mutterings.

He putteth the cat out by night.

He is not afraid of the cook.

His ashes fall not upon the carpet, and his cigarette burneth not holes in the draperies.

For he doeth his smoking on the piazza.

He weareth everlasting socks and seweth on his own buttons.

His overcoat doeth him two seasons.

Yet, when he ventureth abroad with his wife he donneth a dress suit without grumbling.

The grouch knoweth him not and his breakfast always pleaseth him. His mouth is filled with praises for his wife's cooking. He doth not expect chicken salad from left-over

veal, neither the making of lobster patties from an ham-bone.

His wife is known within the gates, when she sitteth among the officers of her Club, by the fit of her gowns and imported hats. He luncheth meagrely upon a sandwich that he may adorn her with fine jewels. He grumbleth not at the bills.

He openeth his mouth with praises and noteth her new frock. And the word of flattery is on his tongue.

He perceiveth not the existence of other women.

He may be trusted to mail a letter.

Lo, many men have I met in the world, but none like unto him.

Yet have you all seen him — in your dreams!

From "The Sayings of Mrs. Solomon."

Miss Wismer, Housekeeper '19, who since her graduation has been at the O.A.C. dining hall, has resigned her position of assistant dietitian there, and is engaged in dietitian work in a Y. W. C. A. in Montreal.

Heard in Class

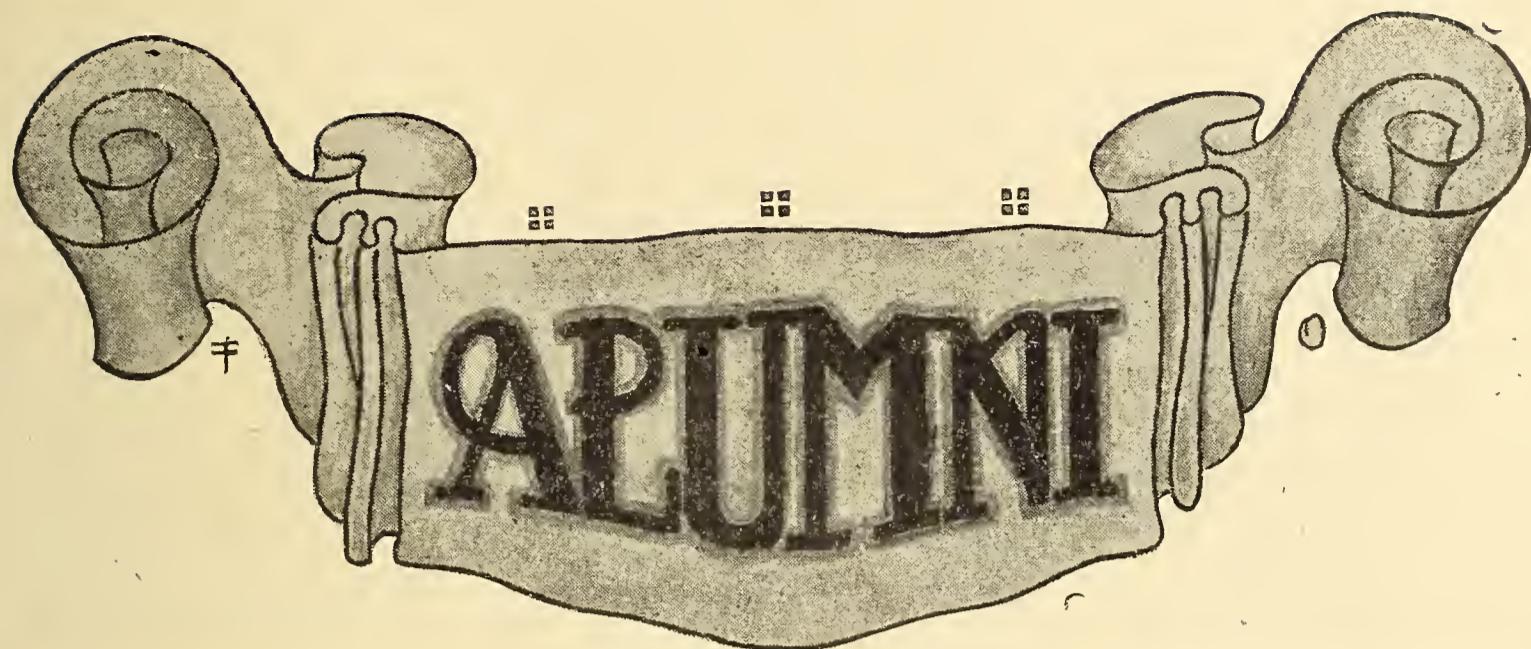
"Tist—"Speaking of the comical chemp—er the comp—, the chempical comp—, I mean the chemical composition of this substance."

Mr. I.—"Now, there are a few odd ones in this class—"

J. (sotto voice)—"Huh! I'll say there are!"

The wheat was shocked, the beets turned red,
The corn pricked up its ears;

Continued on page xxiv.



Munro-Eldridge

We take a great deal of pleasure in announcing the marriage of Miss Frances Eldridge, R. N., to Mr. John B. Munro, B.S.A. The wedding took place on Christmas Day, at seven-thirty p.m., the Rev. J. H. Philip, D.D., officiating. The bride was attended by Miss Anna Argue, of Havergal College, Toronto, and the groom was supported by his brother, J. Alex. Munro, O. A. C., Guelph. After the ceremony a reception was held at the home of Mr. F. W. Argue, 590 Lisgar St., Ottawa. Among

the guests were several O.A.C. men, including J. B. Spencer, B.S.A., '94; R. D. Allen, B.S.A., '19; W. F. Argue, '19; F. C. Odell, '20; W. C. Hopper, '20, and J. A. Munro, '22.

The bride is a graduate of the Ladies' High School, Grantham, Yorkshire, England, and Newark City Hospital, Newark, N. J. The groom is well known to both the student body and alumni as the Editor of the "Review," in 1917-1918. Mr. Munro is now Associate Editor of the "Agricultural Gazette," Ottawa.

The "Review" and staff extend their heartiest congratulations, and with them every good wish for the years to come.

Mr. W. H. Harvey, an Associate of '92, was recently elected member of the Saskatchewan Legislature for Kindersley district. He has the distinction of being the first candidate of the Farmers' Party to be elected in his province. He was born at Exeter, Ont., went out West in 1909, and is now farming eight hundred acres four miles north of Flaxcombe. It is interesting to note that he defeated Hon. W. R. Motherwell, who is himself an Associate of '91.

A very sad accident occurred at Suffield, Alta., a short time ago, when Amasa Snyder, a member of Class '10, was accidentally killed. He and a companion were out shooting and in climbing over some fallen trees, his gun was discharged and he was instantly killed. He married a Guelph Girl, Miss Ruthamah Baer, in 1913, went West shortly afterwards and has been engaged in ranching since. To the bereaved family we extend our sincerest sympathy.

R. E. Elder, '18, is now an instructor at the Carleton Co. Vocational School, Woodstock, N. B.

S. G. Freeborne, '15, and A. E. McLaurin, '14, are now on the Sheep Division of the Dept. of Agriculture at Ottawa.

W. R. White, '15, has been promoted from the Soldiers' Settlement Board at London, to the Ottawa Branch.

Notes Re Memorial Hall Campaign

For the information of ex-students and subscribers, items will be published from time to time, as the campaign proceeds, under the above heading.

We have now complete returns for two of the graduating classes, viz., the class of '88, which was the first to receive the B.S.A. degree; and the class of 1920, which, if all goes well, will receive this degree next May. The class of '88 have donated and paid an average of \$125.00 each, while the class of 1920 have donated and paid \$25.00 each.

These handsome donations, from a class on the one hand who have been ex-students for more than thirty years, and on the other from a class who have not yet reached the earning stage, are most significant of loyalty to the Institution from both ends of the scale, and of the true spirit of comradship in thus doing honor to the great O. A. C. fraternity.

A Reunion

Good wine, they say, improves with time,

And so do old boys' recollections;
As story-tellers reach their prime
They cull out any imperfections.

A student's mild as buttermilk,
Or temperance beer—it makes no matter,
(Abominations of an ilk,
If one is flat, the other's flatter!)

A student may be mild, I say,
But by the time he's fat and forty,
You'd think he travelled on the way
Of all that's rough and tough and sporty.

"Remember Bill," he'll cry, "The night,
 "We gave ten Freshmen's hair a clipping,
 "And when they tried to start a fight,
 "We gave their whole blamed year a whipping."

"And that reminds me of a scrap,
 "When I was living in the Tower;
 "We put them all be beneath the tap,
 "And filled their hair with glue and flour.

"No matter who or what the foe,
 "We won—that goes without conjecture;
 "Tho' Doc Reed chased us through the snow,
 "For scrapping at his morning lecture.

"Let's see—where are the boys we knew?
 "There's Jack—Ah, Bill, he was a real man!
 "Remember when the beggar threw
 "That water bag on Doctor Creelman?

"Poor Joe—he died of indigestion—
 "He almost flabbergaster "Ikey,"
 "In Botany he asked a question
 "Why milk-weed juice is always sticky?

"Remember how we all got tight on
 "Hard cider—O, it was distressing,
 "I'm darned if I could get the light on
 "And went to bed without undressing.

"One night I tried to plug like thunder
 "With Lady Nicotine for patron,

"Till someone rapped—I yelled:
 "Slide under,"
 "And there, Good Lord, it was the matron!"

But whoa! This guy would talk for ever,
 He'd fill the whole "Review," once started,
 We'll have to can him now or never—
 "Good-bye, old man, it's time we parted!"

—D. McA.

Central Ontario Branch

At a series of meetings of O.A.C. graduates of recent years, held during the Winter Fair week, 1919, the subject of O.A.C. Alumni Associations was thoroughly discussed. Following the example of the already constituted Western Ontario Alumni Association with headquarters at London, Ont., it was resolved that a central branch should be formed with headquarters at Toronto.

A temporary committee was appointed to start the preliminary work of getting in touch with college ex-students in Central Ontario in order to broach the subject of these associations and to ask that the idea be given full consideration so that at a banquet to be held in Toronto the third week in January, all men attending should come well prepared to discuss the permanent establishment of these associations, to offer suggestions, and, if necessary, to accept honorary positions of responsibility in them.

Nothing is as yet definitely established, but it is felt that these associations are needed to perform the following functions:

1. Fraternal—

To establish a medium through which ex-students of the O.A.C. in Central Ontario may meet from time to time, hold luncheons, discuss agricultural and college affairs and fraternize.

2. Relationship of Alumni to Alma Mater—

1. To sustain the interest of the ex-student in the Alma Mater.

2. To establish the status of agricultural graduates on a par with that of graduates of other sciences.

3. To consider the advisability of a post-graduate course at the College.

3. General—

1. To assist Farmers' Associations in securing from our Governments due recognition for Agriculture.

2. To give farmers and the general public, a correct conception of the O.A.C.

From a letter recently received we learn that J. G. Glavin, '22, is now in Siberia. His address is: Pte. J. G. Glavin, Company "D," 31st Infantry, A. E. F., Siberia, via San Francisco.

In another letter we find the news that W. F. Edmonds, an Associate of Class '15, and his wife, who was a Homemaker of '12, are now farming at Silver Water, Ont. They extend a hearty invitation to "Pure Spring Farm," to all their old acquaintances.

J. G. Glavin, '16, has forsaken agricultural teaching for agricultural journalism, and is now Manager of the Service Bureau of the Orange Judd Publishing Co., Springfield, Mass. This company

publishes six agricultural journals, having a total subscription list of one and a half millions. The Review staff extends congratulations to Mr. Glavin on his success.

G. E. Patton, '17, who has returned to Canada after his repatriation from Karlsruhe prison camp, is now with the Soldiers' Settlement Board in Toronto. While in Germany the genial George, as his friends might expect, led a busy life organizing concerts and plays for the camp. He has generously offered his services to the College Veterans in their proposed concert in aid of the Memorial Hall.

Death of William Squirrell, Sr.

All ex-students of the O.A.C. will learn with regret of the death of William Squirrell, Sr., a familiar figure on the college grounds, and a personal acquaintance of every person who attended this college from its earliest days. Mr. Squirrell passed away on Christmas Day, four days after undergoing an operation, the results of which, in the case of a man of his age, were doubtful from the first. The news of his death, however, came as a shock to the college people, many of whom were unaware of any serious illness. Apparently he was enjoying excellent health until this illness came upon him.

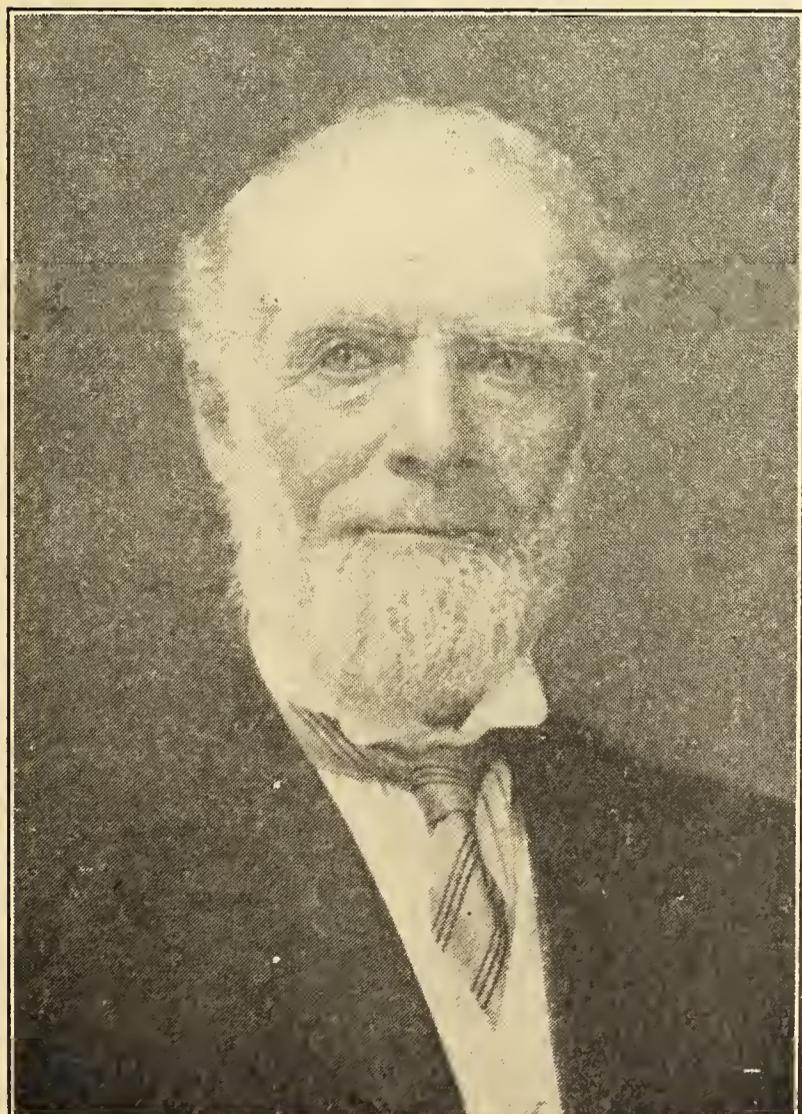
William Squirrell trained as a gardener in England and came to Canada in 1871. For a few years he was gardener on an estate at Galt, and when the college commenced operations in 1874, he was engaged on the Horticultural Department, later becoming foreman for landscape gardening and work on

lawns. The present splendid appearance of the lawns, drives and shrubbery on the college campus is due in no small measure to the proficiency of Mr. Squirrell in producing the best results in landscape work. Most of the ex-students at some stage in their college course have assisted Mr. Squirrell in this work on student labor afternoons, and at these times have been regaled with reminiscences of the early college days, and escapades of students long since passed from college halls, told as only the old gentleman himself could tell them.

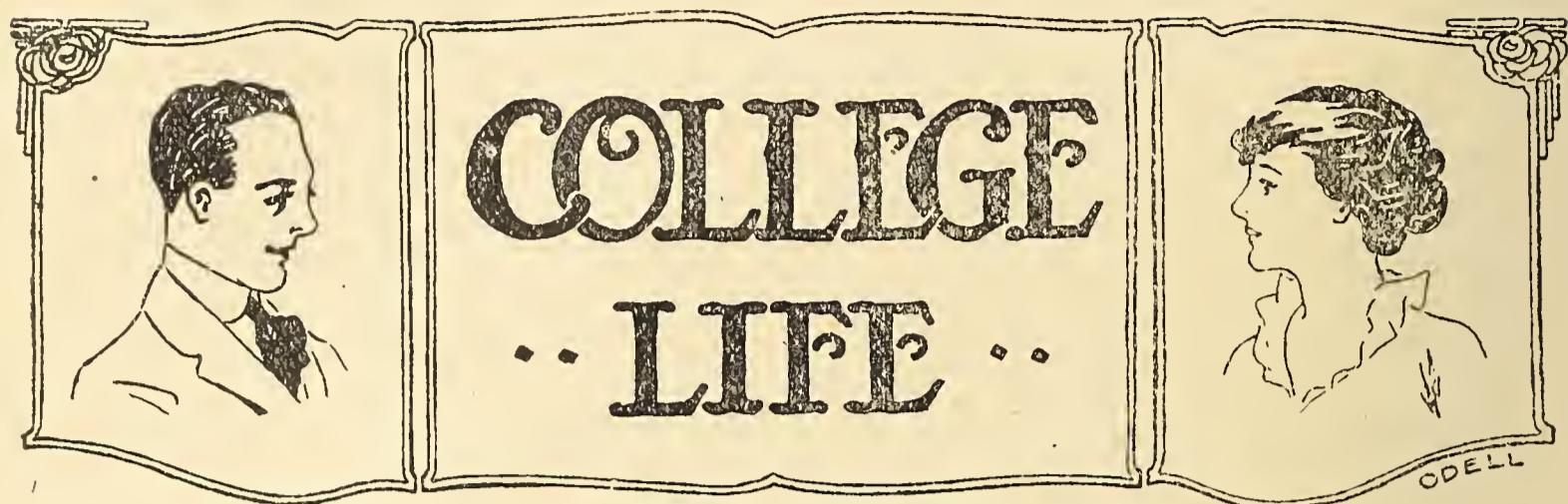
Mr. Squirrell continued his duties at the Horticultural Department until the spring of 1918. For a great many years he was the only employee of the college who had been here since its inception. For the past two years he had travelled considerably, visiting his two daughters

in Southern Manitoba and friends as far west as Vancouver Island. In 1919 he took his last trip to the Old Country to see his relatives and friends of early days. He returned to Guelph in September and resided with his son, Professor W. J. Squirrell on College Heights, and with his brother John, also a former employee of the College.

In the passing of William Squirrell, we all say good-bye to a personal friend for whom everyone had the greatest respect and esteem. His familiar figure on the campus, his genial manner and witty remarks will be greatly missed by his associates at the College, and the deepest regret will be expressed by all ex-students when they hear of his death. The sympathy of the college staff and of the whole O.A.C. fraternity goes out to his bereaved family.



The Late William Squirrel, Sr.



O.A.C., January, 1920.

Dear Old Bud,—

Well, we're back on the job again. Lectures started on the sixth, some of them where we left off, others new subjects, some of which are a welcome change.

The main topic the first few days was the comparison of the late exam. marks, and it is funny Bud, how some fellows who stood so low have now such high marks. Talk about your watered stock, some of these could qualify easily as expert wildcat promoters.

There has been quite a change around the Residence. It has gone back to the old system of housing all the years again. The veterans were given preference this term and most of them have come into the fold, thereby saving the odd buck on the H. C. of L. Perhaps that is the idea of digging up the old army clothes. It is the fashion now to sport riding breeches and putties, and believe me old top they are bally fine this cold weather, you know, while for tobogganing or snowshoeing they're jake-a-loo.

The rink is the main attraction at present, and prospects for a star hockey team are good. The boys are practicing steadily and may show that the Aggies have still an-

other sport besides rugby and politics.

We had an enjoyable dance at the Hall the first Friday we were back. The Union Lit's usual promenade for the Freshettes has become a dance. This time they excelled themselves by providing a snappy orchestra, and those old dry "proms" are things of the past.

You will remember when they changed the old dining hall into a dormitory and the avenue became "Grub Alley." Well, this has been duplicated by the conversion of those rooms above the laundry into rooms for the men. It is known as "Maiden Lane," and considered a choice location, rather exclusive as it were. The metamorphosis of the old Residence is now complete, but it will be eclipsed next fall by the larger and more beautiful Polyphemus across the way. That is to say the new dormitory we used to imagine is fairly well on and we can now get an idea of its final appearance. It is in front of the new dining hall, opposite Mac, and just below the "Green Cabin." By the look of it now it will be "some" building. It is reported the junior faculty singles are to inhabit the side facing Mac Hall. That's alright, though Buddie, me for the top floor—it is above the trees.

Next time you visit the old place you will hardly recognize that side of the campus. A Memorial Hall is to be built farther down the curved roadway, among the trees. It is to be Gothic in style, and the plans call for an auditorium with seating capacity of eight hundred, a sorely needed improvement. You will probably be receiving a request to contribute, because they are depending on the students, ex-students, graduates and all interested in the O.A.C. for the necessary funds which with the Government grant of \$40,000 will cover the cost of \$100,000, so come across you old Midas, you got considerable out of your sojourn here and had a good time those four years.

Your old friend at the Tuck Shop has departed, being succeeded by Joe and his family. Joe has considerably more pep adding to the "Coal Oil, Tobacco and Groceries," as was advertised by the old sign, a lunch room, where we can get a good meal instead of going down town to the Chinks.

The short courses are in full swing, with an attendance of three hundred and twenty-six. When the Farm Power and the Horticultural courses register next week the college enrollment of this year will be worthy of note. Here's hoping the knockers will observe.

Am sorry you will be unable to get here for the Experimental Union. Like the Winter Fair it is going to be bigger and better than ever. Premier Drury will address them Tuesday evening, and Dr. Stevenson is putting on "The Brown Mouse" Wednesday evening—uplift propaganda for the rural schools.

This budget ought to satisfy you for this month. Will write again when more accumulates. Aurevoir old thing.

TUBBY.

At the Arena

Skating is to the winter term at O.A.C. as salt is to porridge, as scent to a rose, as mustard is to the cold bologna that we get for breakfast. It dispels the sluggishness of lectures, and sets the blood coursing in quick time with Kronke's eight piece band. For pure, healthy exercise it has dancing beaten forty ways, and it loses none of the social advantages which that pastime affords. So away with text-books of Chemistry and Nutritive Values, and out with the skates for a proper Canadian night's entertainment—and don't forget your season ticket!

The Y. W. C. A. of Macdonald Hall innovated a "hot dog" and coffee stand on the 17th of January, a most successful affair, which was appreciated by everyone. The diffused aroma of sizzling weiners added a zest to the skating, and when the intermission came along, there was a general rush for this Coney Island delicacy that kept the volunteer waitresses on the jump. Skating creates appetites in short order, and this venture should prove profitable, and will, we hope, be a permanent feature of our rink.

Planning the New Residence

I am intensely interested in the new residence. So many times have I inspected the greystone structure; watched with critical eye the week's

labor of placing a brick; the cunning hand of the mason as bit by bit he lays on the mortar which will nestle in the dim future another stone, that I sometimes fancy myself the architect, builder, and father of the enterprise. My ideas for its interior appointments may not be what the plans specify, but such as they are, I freely offer them to the authorities.

The old residence has served its day. It is now hopelessly out of date. But, you will exclaim, it gives safe retreat from cold and rain, and provides a place where one can garner eight good hours sleep in every twenty-four. Ah, yes, but in these days of advanced scientific study, and aesthetically polished social manners such daily intimate surroundings as are presented in the venerable and massive grey lime-stone building are a hindrance rather than a help towards their attainment.

The new rooms must be decorative and soothing to the tired nerves of the student. Delicately tinted walls must replace the glaring white of the old building. We might have distinctive mural designs for each room after some of the old Masters as Rubens or Titian, whilst Maxfield Parrish or Harrison Fisher wall paintings would minister to the various tastes of the modern minded. No up-to-date apartment is complete without a dumb-waiter connected with a well equipped restaurant. The Englishman finds a cup of tea and a muffin essential elements in the carrying on of his business affairs. Similarly does the student need refreshment after a long night's study. Time means money in these strenuous days. A telephone in each room would save

many hours waiting at a single telephone booth.

In designing the bath-room equipment, I have decided to eliminate the spasmodic hot and cold showers which are in use in the old Residence. They may be invigorating to some natures, but general opinion condemns them. Most people prefer shower baths which will deliver hot water or cold water as ordered. An up-to-date barber-shop would be a useful innovation.

Should the spacious reading room be furnished with a piano? This is a vexed question. Slow hymns played all day Sunday and rag-time played continuously throughout the other six days proves wearing to moderate lovers of music. I myself am in favor of a mechanical player-piano with a new ration of assorted music rolls served up each week, and the tempo control fastened at "Moderato."

Carpet the stair-ways and halls to give the much desired silence. Provide recreation in the form of billiards, bowling alleys and ping-pong tables. Remove the trees from the north side of the building so that a clear view of Macdonald Hall may be obtained—and the O.A.C. student of the future amongst these pleasant surroundings will without doubt provide many fresh leaves for this Institution's laurel wreath.

— E. T. C.

A Railroad Romance

There are events which mark the divisions of a man's life. There are experiences which stand out because of their very uniqueness and peculiarities, experiences which carry with them memories of good deeds done and brave things accomplished. The experience which I wish to relate is a comedy inter-

mixed with tragedy and pathos, an experience which comes to man but once in a lifetime, and which takes a lifetime to forget. It is an experience which calls for the greatest presence of mind, the resourcefulness of a general, and the fearlessness of a warrior. Amongst us dwells a man of sunny locks, possessing all these qualities and who, on a most memorable occasion, was called to the test, and stood firm and true to his colors.

It happened in a pullman sleeper soon after the close of last college term. The train was bounding along on its journey to the Capitol, when above the rumble of wheels came a disturbing thud; beautiful Florence, the brown eyed maiden as lovely as a goddess, had fallen from the dizzy height of the upper berth to the floor of the car. Little did the occupant of the lower berth, as he donned his night attire at eleven o'clock, expect to be rudely awakened by the cries of this tender creature a few hours later. Immediately he was awakened, every faculty was on the alert; and throwing all discretion to the winds, he bounded from his berth in his pink pyjamas and heroically lifted the sufferer in his strong arms, soothing the pain in her head as gently as a lover.

With the aid of the porter's ladder the noble rescuer carried his precious burden to the upper regions of the car in safety. He slept but little the rest of the night for the sight of her beautiful face would not leave his mind.

Although well known to us all his extreme modesty prevents him from telling of this good deed done, but perhaps a little bird might

whisper in your ear. The young man who so nobly acquitted himself is our auburn-haired Arthur who stepped to the wheel and steered the good ship '23 into quiet waters at a time when the billows of unrest seemed about to overthrow it. But alas for the romance, Florence was a maid of only two summers!

W. C. H. '20.

Thirty Years Ago

(From Review Files)

It is interesting to note that the first copy of the O.A.C. Review was published in November, 1889—a little more than thirty years ago. It was undertaken at first by the Literary Society, and came out each month during the College year.

The list of editors is particularly interesting in view of the prominent position these men now occupy in Canadian Agriculture. The list of officers for the first volume follows:

H. H. Dean, Managing Editor.

C. F. Whitley, Local Editor.

C. A. Zavitz, B.S.A., Agriculture Editor.

S. N. Monteith, Correspondence and Personals.

J. A. Gelling, Exchange Editor.

Business Managers, J. Harcourt and J. A. B. Sleightholm.

The Third Year at that time, which was then the graduating year, consisted of Messrs. Brodie, Dean, Gelling, McEvoy, McCallum, Monteith and Shantz. There were at that time eighty-seven students in Residence: fifty-one in the first year, twenty-six in the Second, seven in the Third and three taking a special Course.

In the locals column we read,

"The boys appreciate the advent of sauce dishes on the supper tables, and are also glad to have the porridge better cooked."

Then again we see, "The new stock is coming in by degrees. Two Ayrshires arrived on the 9th November, driven by two students, who arrived at nine p.m., footsore and weary after a tramp of thirty-five miles."

"Early morning lectures in the stables (B-r-r-) have now commenced on the feeding and care of live-stock generally. We are confident that such a Course cannot fail to be of great benefit to all students."

From these extracts we can see that the students of the early days had troubles of their own.

General Meeting, O.A.C., G.W.V.A., January 8th.

On Thursday evening, at 4.30, the veterans got together again for their first general meeting in the new year. Owing probably to the fact that their homes were close at hand, an extra-large crowd graced the armchairs, davenports and window seats of the students' parlor, and possibly the same fact will explain the remarkable unanimity and lack of dissension shown throughout the meeting.

The business transacted was more of a routine nature than that of a question of policy as has been the order heretofore. The first matter to come up was that of a change in the petition to the Dominion Government asking for assistance. The sum and substance of the first petition was to ask for loans without interest for a period covering the college course. In the meantime, the other returned students organizations had agreed

to ask for a gift of \$500 per year, for three college sessions, provided the applicant could prove his need for such assistance. After a short discussion, the Branch decided to endorse the latter petition of which copies were to be immediately signed and forwarded. The Branch also showed itself heartily in sympathy with the proposed Memorial Hall, by unanimously deciding to give a concert in its aid. For this purpose a committee was appointed to arrange a programme and is already at work. No doubt volunteers will be very welcome at the headquarters of this committee, which is reported to be Room 115, Cataract Hill.

W. H. GRANT, Sec'y.

Horticultural Club

On January 13th the "Horticultural Club" held their semi-monthly meeting in the "Horticultural Building," which proved to be one of the most popular of club gatherings of the season by the splendid turnout of over a hundred Horticulturalists.

The speaker of the evening, Mr. F. Palmer, B.S.A., Superintendent of the "Vineland Horticultural Experimental Farm," gave a very interesting address on "The Opportunities of Experimental and Research Work in Horticulture," bringing out the vast importance of more experiments along practical lines and deeper research work in plant breeding.

Mr. Palmer's topic and valuable experimental work was most appropriately demonstrated by several films on the work of the Experimental Station, which were shown and kindly loaned by Mr. Dawson, B.S.A., of the Provincial Motion Picture Bureau.

S. ODELL

O.A.C. vs. McMaster

The college hockey team played its first league game at the Toronto Arena on Tuesday, January 20th, when it defeated the McMaster sextette in an interesting struggle. The ice was rather sticky, and the play was hardly as fast as intermediate inter-collegiate games usually are, but the score indicates fairly well the relative merits of the teams.

In the first period Shoemaker was penalized for what looked like an accidental fall of the McMaster right wing. With the odd man on the ice McMaster failed to score, and Shoemaker came on again just in time to bat in a rebound from the McMaster goal keeper. Shortly afterwards McMaster scored from a scrimmage in front of the O. A. C. goal, after Smallfield had made a brilliant stop.

In the second period McMaster was lucky enough to get another one from a mix-up; while O. A. C. did not figure in the scoring column.

The College men went on for the final spasm with blood in their eyes. Edwards, Taylor and Shoemaker tested the McMaster goalie with shots from all angles, but luck was against them till Shoemaker looped a high one into the corner of the net. Then Musgrave and Taylor went up together. Taylor shot and Musgrave pushed the rebound

past the post. McMaster put everyone except their goalkeeper on the offensive to even up the score, but Smallfield's citadel was impregnable and the game ended 3-2 in favor of the O.A.C.

Smallfield was the star player in the game, but credit must be given to Doc Edwards who with the exception of a short rest in the second period played through the game with a sprained ankle, and fairly skated his check into submission.

The line-up:

- L. Wing—J. W. Edwards.
- R. Wing—H. H. Taylor.
- Centre—J. S. Shoemaker (Capt.)
- R. Defense—A. B. MacDonald.
- L. Defense—A. H. Musgrave.
- Goal—H. A. Smallfield.
- Subs.—Burke and Scott.

On the evening of January 12th, the first hockey of the season was played at the college arena, when the Varsity Junior O. H. A. team defeated the college in an exhibition game by a score of 7 to 1.

The Varsity team had been practising for practically two months, and consequently were not only in the very best condition but were also able to exhibit splendid team work. It being the first game for the college team we scarcely expected them to show up as well as the Varsity team. Nevertheless the

ice being in splendid condition the game was clean and fast.

The College aimed to get some pointers from the coach of the Varsity team and so played practically two full teams with a line up as follows:

Goal—Smallfield-Long.

Left Defense—Musgrave.

Right Defense—Cook-McDonald

Centre—Shoemaker-Burke.

Right Wing—H. H. Taylor-Scott.

Left Wing—Doc Edwards.

2nd Year vs. Shamrocks

Year '22 brought another victory to the college when they succeeded in defeating the Shamrocks, of Guelph, by a score of 3 to 2.

Lack of practise and condition was evident throughout, but some brilliant rushes and a tendency to "rough it up" made the play exciting for the players and fans as well. The Sunday school leaguers presented a strong line-up, and were only defeated in the last few minutes of play, when Smith made an end to end rush and scored the deciding point.

Basket-Ball

The college basket-ball team, which is entered in the intermediate O. A. B. A. series, defeated the local "Y" in an exhibition game by a score of 50-17.

Stratford "Y" vs. O.A.C.

On Saturday, January 17th, the basketball team played their first league game, and defeated the Stratford Y. M. C. A. by a score of 37 to 14. The game was fast and hard fought, and several spectacular baskets were shot. The Stratford team did some excellent work,

shooting fouls while the college showed some very good combination and team work which often netted them a basket.

The line-up follows:

Forwards

D. Fraser	C. B. Ziegler
A. Capper	D. G. Fidlar

Centre

R. Smith	F. Wiggins
----------	------------

Guards

W. Edwards	F. H. Rowlands
W. Fraser	W. Bisset

Walter Ziegler replaced Fidlar at half time and probably played the star game of the evening, keeping well to his position in the team work. In the middle of the second half C. B. Ziegler replaced Wiggins at centre and Fidlar went back to forward. Wiggins is improving as centre, and is fast becoming an outstanding player.

Baskets—Fidlar 4, Wiggins 4, W. Ziegler 4, Rowlands 3, C. B. Ziegler 2.

Fouls—C. B. Ziegler 1, Rowlands 1, W. Ziegler 1.

Londoy "Y" 30, O.A.C. 12.

On January 22 the basketball team journeyed to London and were defeated after a hard fought game in the Y. M. C. A. gymnasium, the many bruises and wounds of the players being mute testimony of the battle. As an exhibition of rugby, the playing was beautiful but as basketball, it was rotten due to the seeming unwillingness of the referee to call many fouls. The game became more and more like a prize fight until 4 minutes remained to play when after a long pow wow the opponents shook hands and finished the game with a burst of great basketball.

**"Reverie" by Doc. Edwards**

Scrape! Scrape! Scrape!
Each morning I have to shave;
And then with a tonic to coax the
hair

The top of my head I lave:
And this is the song I spin
While giving the blade a shove
"Why can't I be bald upon my chin
And have whiskers grow above?"

Locals—"Did you see that joke I left on your table?"

Editor in C.—"No, I read it, but I didn't see the joke."

Life's Little Tragedies

M. and R.—"Good afternoon, Miss R."

Grace (pointedly)—"Why, hello, Mr. M."

R. (aside)—"Colder to-day, with showers."

Disbrowe—"Time to eat, fellows."

Mac—"Why, we're five minutes late now."

H.—"No, it's only ten to."

W.—"Five minutes to go, you roughnecks."

B.—"Well, I make it seven after."

So they called for a show of watches and there were one, two, three, yes, the whole five were Ingersolls.

The girl had gone down to the brook for a pail of water, but remained there gazing at the stream.

"I wonder what's keeping that girl," said Ma.

"Guess she hasn't seen a pailful she likes yet," replied Pa.

New York's 400 has nothing on the first 100 of the Freshmen Class. The green ones were either within the charmed circle—and the residence—or out of luck on both.

A word to the fair sex down town—there's good hunting this year at the College Arena.

"There's a Long, Long Trail A-winding," so sing the Downtowners as they struggle up the hill.

After the Dairy Exam.

"All he wants now, is an introduction and a few pictures and he'll have a new book on Dairying."

Mike says when he graduates he's going to get out a new book "Poetical Answers for all Exams."

If you hear a fellow muttering, "Old Mother Time Ticks Merrily after all women," don't think he's crazy. He's merely remembering the ingredients for a permanent pasture mixture, a la mnemonic system.

Charity Collector — "Have you any particular use for your old clothes?"

Citizen—"Sure, I'm wearing them."

Memorial Tablets in Bronze

"Enduring as the Ages"

Made and designed
in our workshops

Ryrie Bros.

Limited

134-136-138 Yonge St.

TORONTO

AT THE SHOW

"Who was that girl you were out with last night, Teddy?"

"Out with a girl. I only wish I could get the chance."

Girl in the audience, "Hello, Teddy, dear."

According to latest reports Ted, with both cylinders running smoothly was making twenty knots per, in the direction of the College.

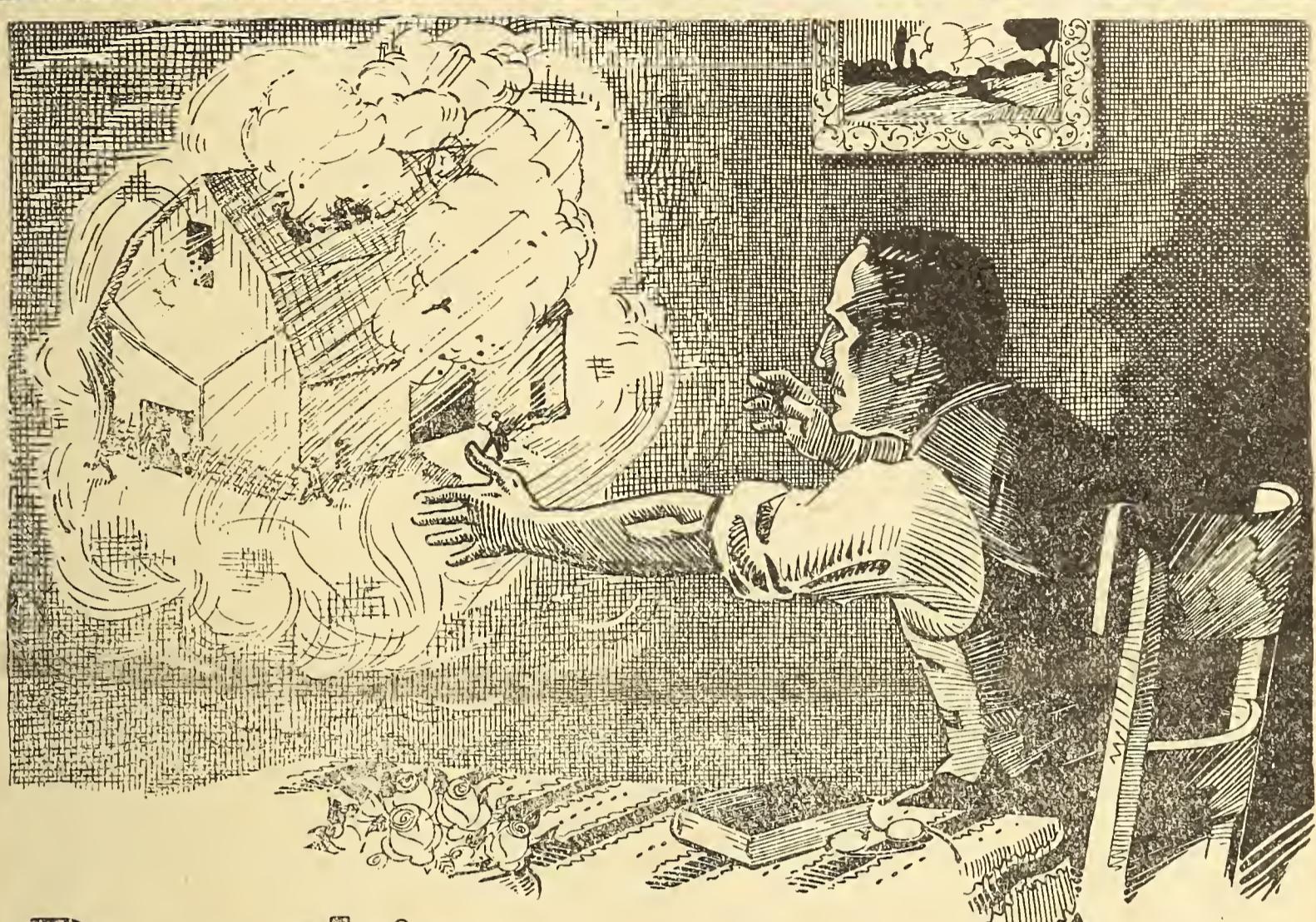
THE FUTURE OF FRUITGROWING IN B. C.

Continued from page 280.

developed fruit area in Canada. It is warmer and earlier than any other section. This year the first of the Bing cherries were shipped from the southern part of the Valley on May 27th. This means the Southern Okanagan producer will have a fair opportunity of competing with the early imported article.

British Columbia has, fortunately, never known a failure in the fruit crop. This year's total shipments will show an increase of sixty per cent. over last year's. Ten years ago the total production was less than three hundred cars. This year it will be more than five thousand cars. The apple shipments from the Okanagan this year are approximately two thousand seven hundred and thirty cars, two hundred and seventy-five of which went to Great Britain; three hundred to Eastern Canada; two hundred and fifty to the United States; sixty to New Zealand and the balance to Western Canada.

Beyond doubt the British Columbia fruit grower has every reason to look to the future with confidence.



Does this Vision haunt you?

THE fear of fire—the fear of 10 years' work going up in smoke in 10 minutes—does it ever worry you?

With Ontario barns burning up at the rate of 1000 per year it is natural to THINK of fire, but there is no need to WORRY about it. These fires start mainly on the roofs—from lightning or sparks—and you can absolutely banish all fear of such a fire by simply putting on a roof of

Metal Shingles

Then you can let the lightning play or the sparks fly with never a mom-

ent's worry, because Metal Shingles, grounded, are sure protection against lightning and they *simply cannot burn*, so sparks cannot harm them.

Metal shingles are not only proof against fire and lightning—they are proof also against all the elements that attack a roof—rain, sleet, snow, wind, and extremes of heat or cold. They are the "100 per cent. roof" for Barns, Houses, and all other sloping surfaces.

The cost is very moderate—little, if any, more than inferior roofings,—and, figured by years of service, they are really the cheapest roof you could buy.

Prices and full information from any of these firms:—

The
Metal Shingle &
Siding Co. Limited
Preston

The
Pedlar People
Limited
Oshawa

The
Galt Art Metal Co.
Limited
Galt

The
McFarlane-Douglas
Co. Limited
Ottawa

The
Metallic Roofing Co.
Limited
Toronto

METAL SHINGLES
SAFETY & PERMANENCE

A PROMISE—Continued from page 286.

with the radiant fire, they rested.

The next day's trip was through lake after lake. Mountain Lake, Whitefish Lake; portage into Martin Lake, with signs of game increasing. Finally darkness forbade any further travel, and camp was pitched over the first dam on Martin Brook.

A small rapids was shot successfully and the canoe was just turning a bend, when the apparition of a great cow-moose burst on the gaze of the men. She was knee deep in the stream, her great hump of shoulders thrust forward and head submerged with just the tip of her ears above the surface. Slowly the craft drifted down upon her: she raised her head, long eye-lashes dripping with water and streams of it running from her mouth and nostrils. A most ludicrous expression on her face, she stolidly munched the succulent roots from the bottom.

Gradually she awakened, eyes opened wide, ears stiffened and jaws stopped working. What strange log was this, bright red with round white disks above it? Strange enough to be dangerous, perhaps! So with a great commotion of water and mud she leaped up the bank, took one last look over her shoulders, and crashed away through the dense spruce swamp, disappearing in an incredibly short moment.

Two trappers, one a French Canadian, the other a Swede were met just at a portage over the middle of three big rapids and by mutual assistance their outfit and the dunnage of the paddlers were transported in short order. But not before one of them stepped on a wasp's nest in a stump. Emitting lurid yelps of H abitant dialect, he

bounded down the trail, arms waving wildly in the air or beating about his flashing trousers. A side-splitting incident to watch, but most uncomfortable to take part in. Luckily his clothes were thick wool and no sting had pierced, although he was dotted with little yellow-jackets till he resembled the hive itself.

The lower rapids were a bit deceptive and almost ended the budding career of two nature-students, for hitting the second curl of water, the bow dipped deep and a perfect tidal wave swept over the bow-man and the canoe staggered and swallowed like a waterlogged derelict. But quick work on the part of the steersman prevented an undignified plunge into the river and the canoe wabbled into dead water below..

As an unforgetable picture to remember the river by, the cool nights of the past two weeks had started the leaves turning to their autumn colors, and curving down to the placid waters as they did made a perfect picture of peace. A native red creeper, every leaf and tendril vermillion, streaked the dark trunks of the ask trees like blood, and the swamp maple carried the shading to perfection. Dark pines in the distance completed the scene. No more typical picture of old England could be conceived in our country, talk as we may of old Ontario or Acadia.

So you have the rough story of a Canoe Trip given, not as others could write it with the fullest use of its possibilities, but as a simple recounting of daily happenings and a bit of bare-faced philosophy thrown in.

.....

Well now Old Timer, you old muligan juggler, I have kept a promise, have you?

*You Require a Garden
to Reduce the High Cost of Living*

BRUCE'S SEEDS

will do the rest.

They not only grow, but also produce the largest and best crops.

Free for the asking. Our 128-page catalogue of Seeds, Plants, Bulbs, Poultry Supplies, Garden Implements, etc., is ready. Write to-day.

JOHN A. BRUCE & CO.
LIMITED
Hamilton - Ont.
Established 70 years.

221

BRUCE'S SEEDS

LEAD ALL IN QUALITY

DEPARTMENTAL NOTES

Continued from page 288

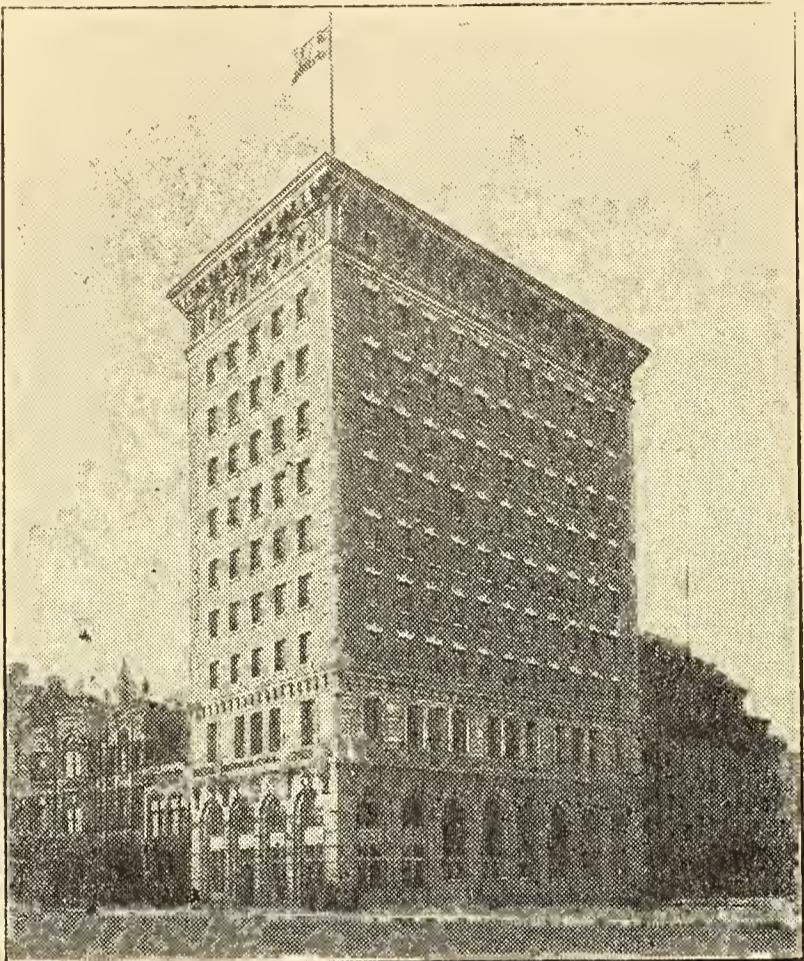
life cycle of these organisms were also presented in the paper. The studies on which the paper was based were made for the purpose of confirming similar observations published by the writer in 1913. Since that date other investigators have shown that other species of bacteria beside the azotobacter have methods of multiplication besides the common method of simple fission. These studies are of practical as well as strictly scientific interest seeing that in the control of bacterial action we have to deal with all stages of the life cycle of the organism. Some recent investigations have indicated that in some species of bacteria regenerative bodies are produced which are so small as to be closely related

to the filterable types of microorganisms.

Apiculture Department

The Tenth Annual Winter Short Course, from January 13th to 24th, had an attendance of over sixty. These short courses have aroused considerable interest among bee-keepers, and as shown by the attendance, they are filling a place in the development of apiculture. The objects of the short courses are to aid those who have already shown an interest in bee-keeping matters rather than to try and increase the number of bee-keepers.

Seasonal management is thoroughly discussed and the essential features demonstrated. The Winter Short Course is really a part of the Summer Course, the two combining the theoretical and the practical.



MAKE THIS YOUR BANK

*Our accommodations,
conveniences and cordial personal service
will make you feel at home with us.*

*A Savings Account
Creates Capital*

*Open one to-day and
watch it grow.*

**UNION BANK
OF CANADA**

S. C. Evans, Manager

Next to Post Office

Guelph

Protection and Profit



When money is in a Savings Account in The Merchants Bank, it is absolutely safe from loss, as far as you are concerned. All the time it is here, it is earning interest —so that the bank actually pays you to let it take care of your money. Don't carry unneeded sums on your person or hide them at home. Protect them against loss, theft and fire by opening a savings account.

THE MERCHANTS BANK

**Head Office: Montreal. OF CANADA Established 1864.
GUELPH BRANCH, J. G. DEWAR, Manager.**

The branch solicits the accounts of Students.

The Merchants Bank, with its 138 branches in Ontario, 44 branches in Quebec, 1 Branch in New Brunswick, 2 Branches in Nova Scotia, 36 Branches in Manitoba, 46 Branches in Saskatchewan, 86 Branches in Alberta, and 12 Branches in British Columbia, serves rural Canada most effectively.

R. S. Cull & Co.

The Good Clothes
Shop

35 Lower Wyndham
Street

Guelph

GEO. M. HENRY

Agent for

CURTIS PUBLICATIONS, GUELPH
SKATES GROUND

"WYNDHAM INN"
(Tea Room)

Afternoon Tea 3.30 to 5.30 p.m. High
Tea 5.30 to 7.00 p.m. Private Afternoon
and Evening Parties arranged. Dancing
every afternoon.

148 Wyndham St.

Phone 459W.

FOOTWEAR

We have what you want in Street Shoes,
Work Shoes, Sporting Shoes, Dancing
Pumps, and Comfortable House Slippers.

The Big Shoe Store.

J. D. McARTHUR

BRING US YOUR REPAIRING.

Dominion Cafe

98 Wyndham Street.

THE MOST UP-TO-DATE CAFE AND
BANQUET HALL

In Hamilton stop at the Devonshire
Cafe, corner James and Vine Streets.

Under the same Management.

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

Stock Donaldson's Barber Shop

29 Douglas Street

Guelph

Around from the Post Office.

Hair Cut 35c

Razors Honed 25 Cents.

He'll give you attention.

Our motto "To Serve"

SHOE SHINE

We Give the Best Service and Shine
in the city

We Clean Hats and Re-Block Them

OPP. KANDY KITCHEN, L. WYNDHAM

J. E. CHEEVERS

LOOSE LEAF AND BLANK BOOK
MANUFACTURERS

Phone 1107J

80 Quebec Street E.

GUELPH.

TAXI

Auto Livery

C. L. KEARNS

PHONE 41W

The insistent demand for
SOUND QUALITY AND VALUE IN
FINE FOOTWEAR

Is fully met in Thurston's Shoes.

W. J. THURSTON

"Where the Good Shoes come from."

PROGRAMMES

Letter-Heads and Envelopes, Cards, Invitations, Menus, etc., artistically designed and neatly printed.

KESLO PRINTING CO.

Fine Job Printers

Tovell's Block

Guelph

Buy your Millinery at

MISS STOCKFORD'S

We are in business now eleven and a half years. That's proof of quality, service, and price. Let us serve you.

238 Woolwich Street.

Guelph.

WATCHMAKER JEWELER J. J. McTAGUE

RIGHT AT THE POSTOFFICE

MOLLOY AND FINLAY

St. George's Square Barber Shop.

Three Barbers.

No Waiting.

TYPEWRITERS FOR RENT

Club Rates to Students

Theses Written

A. E. MCLEAN

Lower Wyndham Street.

MACDONALD—Continued from page 300.

The mockers mocked, the mint was crushed;

The onion moved to tears.

The tater's eyes oped in surprise,

The tickle grass was tickled;

The cause of all you may surmise,

The cucumber was pickled.

— (Selected).

Why is Chemistry like love?

Because the lower the gas the greater the pressure.

Agnes—Oh, Grace I just love your tam, it looks like a Japanese lantern.

Grace (Tapping her head)—Yes, Agnes, and the light is in here.

(Teacher to Young Miss)—Parse the word kiss.

Young Miss—This word is a noun but is usually used as a conjunction. It is never declined and is more common than proper. It is very singular, that is it is always used in the plural. It agrees with me.

Moore & Armstrong

STYLISH MILLINERY
CHARMING NECKWEAR

A grand display of Women's and Children's Garments, on Second Floor.

Northway Coats and Suits.

Crompton Corsets.

Perrin's and Dent's Gloves.

Holeproof Hosiery.

A STORE FAMOUS FOR SILKS.

A wide variety of Dress Fabrics.

Hosiery, Gloves and Underwear—A splendid Range to Choose from.

The White House

R. E. NELSON'S
Men's Store, 93 Wyndham Street

QUALITY GOODS

In Hats, Caps, Shirts, Neckwear, Collars, Hosiery, Braces and Men's Goods. If you want the best they are here.

MEN'S CLOTHES

We are makers of Men's Clothes. Made on the premises and made well—complete stock of Woollens and Serges—Goods with Quality and Style—Prices reasonable.

When you want satisfactory service come to this store.



Telephone 40.

Next P. O.

N. B.—We sell Semi-Ready Made to Measure Clothes. Over 300 samples to select from. Special values in Overcoats made to measure.

REMINISCENCES OF SCOTLAND.

Continued from page 271.

ding farewell to Scotland we realized that there was, indeed, a great deal of truth in what he said. The kindly reception that was tendered to us in the Scotch homes—the generosity and hospitality which were extended to us from all sides—left an impression with us that will not soon pass away. Those sturdy qualities of character that have made the Scotsman such a worthy pioneer in every corner of the globe, were so evident among the people whom we met that we shall always consider with pride the Scotch blood that flows in our veins.

It has been the homes of Scotland that have made her great—and if there was one privilege that we appreciated more than another, it was the privilege of sitting around the family hearth-stane as the bitter east wind drew the blazing fire far up the chimney, and listening to the quaint old stories of Scotland's rough and troublesome history — the border feuds and the clash of angry clans. Nor was humor absent from the evening's programme. The man who said that a Scotsman's humor showed to best advantage at a funeral is hitting wide of the mark. The average Scot is bubbling over with humor and gives full expression to it around his own fireside. I still hear the father of the household repeating the lines of "The Hielan' Man's Prayer" with that adding of emphasis and burring of r's which made it so amusing.

"Oh Lord, Lord o' the Glens, an' the Bens, an' the hills an' the stills an' the gills, an' haufmutchkins, hear oor prayers. Pless a' the pig Floras

an' the wee Floras, an' the pig Archies an' the wee Archies, an' the Ronals an' Tonals an' Tugals, an' the rest of us, moreover. An' Lord, don't forget to sen' us some whusky, an' after that some more whusky, an' sen' us hills of joy an' mountains o' love, an' rivers o' prose, an oceans o' whusky especially. An' Lord, pless a' oor Jonnie pagpipers too moreover; an' sen' them win,' Lord, gales of win' to fill their pipes an' soont them in Thy praises. Lord, pless oor pig coos an' oor wee coos, oor pig soos an' oor wee soos, an' oor polismans pertikler. Mak' them prave, Lord, an' always ready wi' their batons to knock tamnation oot the Lowlanders. An' don't forget, pless us a' to-day an' to-morrow, an' the morning before, an' Lord do not forget the whusky, an' the glory be Thine for evermore. Amen."

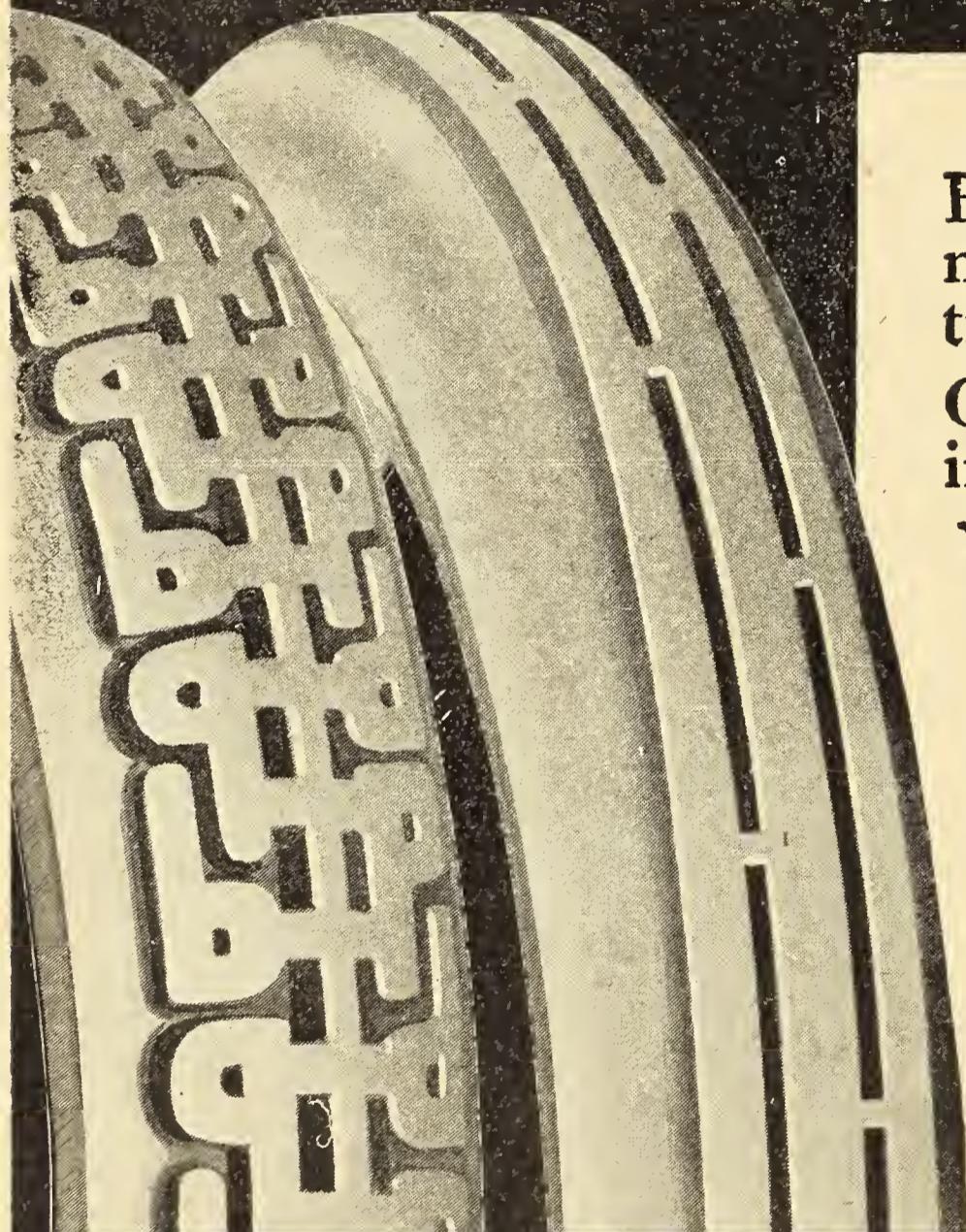
These old stories which have been handed down for generations, are accompanied by the songs of Robert Burns and the old Scotch Airs which age has rendered dearer to the hearts of the people. Such evening around the open fire place have hallowed the home to the Scotch nation.

"From scenes like these old Scotia's
grandeur springs,
That makes her loved at home, revered abroad;
Princes and Lords are but the breath
of Kings,
'An honest man's the noblest work
of God.'

A woodpecker lit on a Freshman's
head,
And settled down to drill;
It drilled away for half a day
And then it broke its bill.

LOST!

A PARTRIDGE NON-SKID TIRE



Description

Had travelled 7,000 miles yet was practically good as new. Only slightly worn in centre of tread.

Valued by its owner for its wear-resisting qualities.

If you judge a tire by the mileage it gives, equip your car to-day with Partridge Tires.

—They are game as their name.

Made by The F.E. Partridge Rubber Company, Limited, Guelph, Ont.

PARTRIDGE

DR. P. G. BRITTON
DENTIST

45 Wyndham St. (Over Woolworth's)
Telephone 897. Residence 617W

PHONE 966. SUNDAY, 385J

THE ORIGINAL ROSERY

Miss E. S. Marriott

Florist, and Designer and Fancy Goods
143 Wyndham Street Guelph

CUT FLOWERS

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

GILCHRIST'S

Phone 436. St. George's Square.

JOHN J. MALONE

Cigars, Tobaccos, Pipes and Cigarettes.
All Newspapers, Magazines and Periodicals.
50 St. George's Square—Next to Bond's

HURRAH!

for Percy T. King's Goodyear Shoe
Repair, at 51 Quebec Street.

A welcome to the O.A.C. Students.

PICTURE FRAMING

High Class and Artistic Work

W. C. BARD

Phone 1116. 38 Quebec Street.

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

Over Guelph and Ontario
Investment and Savings
Society Bank. Phone 16.

D. M. Foster D. D. S., L. D. S.

Dental Surgeon
Over Dominion Bank
Entrance 60 Macdonell St.
Phone 1500
Nitrous Oxide gas administered

CHAS. F. GRIFFINHAM

Successor to C. E. Hewer
49 QUEBEC ST. WEST
Cleaning, Pressing & Repairing
Goods Called For and Delivered

Phone 808

Pants, Pressed.....	\$0.15
Pants, Cleaned and Pressed.....	.25
Coats, Pressed.....	.30
Coats, Cleaned and Pressed.....	.40
Suits, Pressed.....	.50
Suits, Cleaned and Pressed.....	.75
Dry Cleaning Suits.....	1.50

Monthly Contracts for Students
Moderate Charges for Alterations

Inst. Jones of the Hort. Dept.

—What is a scion?

—Well it is a bad sign when Burwash is called from his class-room by a pretty stenographer.

High Grade Printing

for Society and
Social Functions. Artistic and Unique
Designs.

**The
Wallace Printing Co.**

Commercial and Book Printers.

45-47 Cork Street.

Guelph.



PRESTO = LUNCH

Let us eat boys. Where will we go? Why, go to the Presto Lunch. You get the best service and real meals.

MEAL TICKETS FOR WEEK \$6.50

Open 6 a.m. to 12.30 a.m. Regular dinner and supper. Dinner from 11.30 a.m. to 2.00 p.m. Supper from 5.00 to 8.00. Meals guaranteed to be satisfactory.

A BRIEF HISTORY OF DEPARTMENT OF FARM MANAGEMENT

Continued from page 275.

of Ontario, as it is actually carried under average conditions. Heretofore, all figures relating to the farming business had to be taken from experimental farms, demonstration farms, College farms, or other farms which were not, and could not be operated under conditions such as exist on the average farms of the Province. Such figures were not representative of the agricultural industry as a whole. The figures obtained by the survey method are taken from farms which are being operated as actual business units. Both successful and unsuccessful farm business are included. Hence the data so obtained may be considered as representative of average farming conditions.

In the second place, the aim of the Department is to conduct a series of lectures in Farm Management and Farm Accounting, including Cost Accounting, in both the Associate and Degree courses at the College. Previous to last September, the subject of Farm Management had received but scant attention in College lecture courses. Little attempt had been made to teach the proper correlation of various farm enterprises, for the securing of greatest profits. At the beginning of the present academic year, the subject of Farm Management was incorporated into the general course of instruction.

As the work grows, it is anticipated that farm cost accounting in various parts of the Province will be added to the other activities of the Department.

HOOD AND BENALLICK

P
H
O
N
E
DEALERS IN

P
H
O
N
E

1201 Fancy Groceries 1201
and Chinaware

FRUITS AND OYSTERS
IN SEASON

BUYING SHEEP IN GREAT BRITAIN

Continued from page 278.

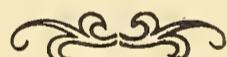
fore stock, cheaper than Great Britain, and though we have a long winter feeding period, our feed is cheaper and we have a variety of feeds, such as corn, which cannot be grown with success in England. A farm laborer here will do about twice the work in one day that the same man will do there, with our method of cultivation and climate. We can handle our hay much faster as it dries more quickly, while in some parts of England and Scotland it is three or four weeks in cocks and ricks before it is stacked. Our expense is heavier in that we must have better equipped buildings for wintering stock, but with perseverance and time I think we should be able to produce as good stock here as in the Mother Country.

STUDENTS

of the
O. A. C.
will find our

SAFETY DEPOSIT VAULT

A safe and convenient place
for keeping bonds and other
valuables.



Safety Deposit Boxes

can be rented at a
nominal charge.

The Guelph Trust Company

Corner Wyndham and Cork Streets,
GUELPH, ONTARIO.

The GRINYER Co. Limited

124-126 WYNDHAM STREET, GUELPH

SOLE AUTHORIZED DEALERS IN

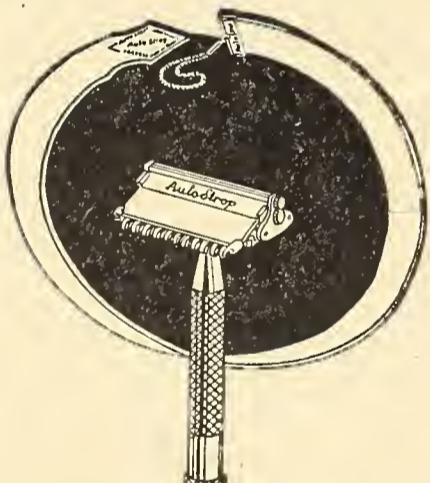
New Edison Phonographs

"THE PHONOGRAPH WITH A SOUL"

Diamond Disc instruments and Amberola types always in stock. Large selection of disc re-creations and cylinder records to choose from. If you already own a "NEW EDISON," have your name put on our monthly inspection list, whether you bought your instrument from us or not. Our expert will examine the mechanism periodically free of charge to you.

OUR ELECTRICAL AND RETAIL DEPARTMENTS ARE ALSO AT YOUR SERVICE.

PHONE 505



Stropping reforms the saw-like edge that results from shaving and provides you with a keen edge for every shave.

Auto Strop SAFETY RAZOR

Razor — Strop — 12 blades — \$5

Alex. Stewart

DRUGGIST

Guelph

Beside the Post Office

DIAMOND

AND SHIELD

O.A.C.

PINS

LEATHER FOBS

Twenty-five Cents Each

SAVAGE & CO.

Jewellers