

PAGES

MISSING

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THE DIGNITY OF A CALLING IS ITS UTILITY.

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The Farmer and the Combines

BY W. L. SMITH.

EVERYTHING the Canadian farmer has to sell is sold in open competition with the whole world. This must necessarily be so as long as this country has a surplus of food stuffs to dispose of, and while Great Britain, the greatest importer of food, maintains the open door.

For a generation past, at least, the farmer has not had the benefit of world wide competition among sellers when purchasing manufactured articles which he required on his farm or in his home. Latterly he has found competition practically non-existent. Many Canadian manufacturers, protected by the tariff against British and foreign rivals, have made such arrangements that different factories manufacturing the same line of goods charge exactly the same price. In several instances hard and fast agreements have been made under which all companies named in the agreement are bound, under heavy financial penalties, to abide by uniform quotations in selling, and in addition to this to so limit production that demand will be kept fully abreast of supply and all temptation to price-cutting be thereby removed. In some lines the same object is arrived

at in another way. The strongest company will fix a price list and all other companies engaged in the same form of industry are warned that if they go below the limit so fixed the strongest concern will declare commercial war, with price-cutting as the weapon used, and drive them out of business.

Occasionally a firm has come into existence that would not enter into a combination and that refused to allow other firms to fix its selling price. The results, so far as the imprudent one was concerned, have, I believe, been uniformly disastrous. A war of prices has followed, which has, I believe, in every case been sufficient to either drive the interloper from the field or to enforce the acceptance of terms fixed by those who had made war.

The effect of such conditions need hardly be dwelt upon. The elimination of competition removes incentive to improvement. When, by means of combination, a profit is ensured on the output of even an antiquated factory, operated under out-of-date methods, there is no special inducement to effort calculated to increase output or cheapen cost of production. Instead of constant striving and advancement there is

indolence and stagnation. There is also the weakening of the moral fibre that always occurs when an individual or an industry is led to trust to the protection of a tariff, aided by a combination formed under cover of that tariff, for a business security which ought to be attained by skill, enterprise and industry.

So far as the consumer is concerned, the effect of what has been going on is painfully apparent. Canada is becoming in many respects, one of the dearest countries in the world in which to live. Ready-made clothing costs more than made-to-order suits would cost if the tariff on British woollens and cottons did not stand in the way of importation. For enamelled-ware fully twice as much is demanded here as in Germany. Canadian users of boots, shoes and rubbers have to pay prices just about equal to the duty in excess of those which American users of the same articles are charged.

In the United States, which is also under a protective tariff, an effort has been made to organize combinations in different lines of industry, but that effort has not been so successful as with us. The country is bigger, and there are more factories in a single line. That is one reason why the work of the trust organizer has not been an easy one across the line. Moreover American law makers and law enforcers have discouraged this pernicious form of activity. Some time ago a combination was formed for the purpose of controlling the business of manufacturing wall paper in the United States. Each company in the combination was left to operate its own business and make its own sales, but a joint committee fixed prices and limited output. One of the companies in

the combine recently found it necessary to sue a jobber for \$50,000 worth of wall paper supplied. The jobber set up the plea that the company, being part of a combination in restraint of trade, and as such acting in violation of the Sherman Anti-Trust law, could not invoke the law for the protection of its interests. The contention of the jobber was last month sustained by the United States Supreme Court. The Court's decision declared, in effect, that the company which sued, being part of an illegal organization, was an outlaw and therefore could not use the law for the enforcement of its contracts, or the collection of its debts. No wonder, with such a law in existence, and enforced in this way, that the trust evil does not flourish so fully in the United States as it does in Canada.

We have plenty of law in this country, too, but it is not enforced. The Criminal Code provides penalties for the maintenance of organizations such as everybody knows to exist, but it is allowed to remain almost a dead letter. Some prosecutions begun under it have been abandoned. One, commenced some three years ago, is, at this writing, still dragging its weary length through the courts.

The law is supposed to provide an other means of relief. Authority is given the Dominion Government in all cases in which a combine is shown to have been formed for the purpose of preventing domestic competition, to abolish or reduce the duty on imports which would compete with the home combination. Evidence has been piled up by the Toronto Star which shows that home combinations have been formed, that competition has been eliminated, but still the Dominion Government makes no move looking to re

moval of the grievances, complained of.

The situation is, however, far from hopeless. There is the most gratifying evidence that farmers are at last awaking to the need of effective effort for their own protection in this and other respects. As a result we find the membership of the Grange in Ontario increasing by leaps and bounds. As a further result we have, within the past few weeks, witnessed a union of the Alberta Farmers' Association and the Society of Equity, with a joint membership of 5,000. Most gratifying of all

is the fact that steps are now under way looking to a federation of the Grange, the Manitoba and Saskatchewan Grain Growers' Associations and the Alberta organization. When this work has been completed, and it looks as if consummation will be reached within the present year, farmers will be able to compel all Governments to take notice of their just demands. In helping on the work of union, and in promoting agricultural organization generally, students and ex-students of the O. A. College can do a most useful work.

LIFE.

Mysterious Life! We speak as if we knew

What meant this vortex: Ah, what does it mean?

A spirit of unrest is Life—hath been

Alluring made with many-tinted hue.

From darkest chasm it lifts man to a peak

Where he may see ideal flowers blow;

But as he learns to love them, it will show

Him other heights that he is forced to seek.

Enchantress, Disenchantress,—both in one!

Surrounding us to-day with dazzling light,

To-morrow hiding every ray of sun

Till we are sunk in the abyss of night.

The oracles are dumb: Whate'er Life be,

Man walks by faith alone; he cannot see.

—Mary Morgan.

Ditching Machines

BY W. H. DAY, B.A.

ONE of the greatest hinderances to underdrainage in Ontario to-day is the slowness and the high cost of existing methods of digging the trench. Especially is this true during the dry part of the year, when the ground is hard, when the spade is of no avail, and the pick and shovel must be resorted to. During

In cases where the ground is hard enough to need picking there are two implements now on the market which facilitate the digging very materially. The "pick-plow," manufactured by various plow companies, has under actual test been shown to reduce the cost of digging forty-one and two-thirds per cent. below the cost when the hand



SIDE VIEW OF DITCHING MACHINE.

the months of July, August and September ditching operations are practically at a standstill because, owing to the extreme hardness of the ground the diggers cannot "make wages," and the farmers are unwilling to pay a higher price in the summer than that for which the work can be done in spring or fall when the ground is soft, and so the operations are held back.

pick was used. The ditching plow manufactured by the Wilkinson Plow Co. is also said to work very well and lessen the cost materially, but I have no figures as to the exact percentage.

But even these are not fast enough, and for many years the need of a ditching machine has been keenly felt. Many have been tried, but none manufactured in Canada has passed the trial

stage with sufficient distinction to lead to its general use, and few in the United States. At present writing I know of only one which has anything of a history. The Buckeye Traction Ditcher, manufactured at Findlay, Ohio, of which two cuts are shown, has been on the market for about twelve years. At first it was very imperfect and met with but indifferent success, so much so that in 1924 when I saw

smooth sides, true to grade, and ready for the tile in one transit over the ground. The soils in which they have been to be working were ideal for ditching machines, one a loam and the other a heavy clay, both free from stones. For stony or gravelly land a special machine, with steel pinions, and steel cutters and "rooters" is manufactured. The Cornell College of Agriculture has one, and it has given them



DITCHING MACHINE AT WORK.

one of them at one of the American Experiment Stations it was not represented to me as satisfactory. Since that it has been very much improved and the later models are giving good satisfaction.

In October last it was my privilege to see two of these machines working and their performance was very creditable. They travel slowly, digging as they go. One could not wish for a better trench, straight, uniform in width,

good results in stony land. It is claimed by those who have used them that they dig from 90 to 100 rods a day on an average.

Perhaps the method of operation may be understood from the cuts, except the means by which a true grade is obtained even over rough ground. The digging wheel is so hung that it may be lowered as the engine rises, or raised as the engine sinks. An arm attached to the frame of the digging

wheel projects horizontally sidewise, and the operator sighting over it keeps it just in line with the cross-heads set along the ditch. The line over them is parallel with the ditch-bottom, and if the arm is kept in this line, as it may easily be, the grade must be true.

One of these machines has been op

erated in an intermittent way in Essex County for three years. It is to be hoped that others will be tried this year, and that their work will become so well and favorably known that they will come into general use, for the price of ditching in most parts of Ontario would be materially reduced by their adoption.

Dairy Instruction in the Province of Ontario

BY GEORGE A. PUTNAM, DIRECTOR OF DAIRY INSTRUCTION FOR ONTARIO.

WHILE the present system of sending specialists in cheese making and butter - making to all factories and creameries in the Province, throughout the season of manufacture, for the purpose of assisting the makers in producing a more uniform and better quality of cheese and butter, inspecting the factories for sanitary condition, and advising the patrons in the care and handling of the raw material, is a development of recent years, we find that, as far back as 1879, the Dairymen's Association of Western Ontario employed Professor L. B. Arnold, of New York State, to go from factory to factory with a view of assisting the makers in introducing methods of manufacture with a view of improving the quality and establishing a uniformity in the product. Professor J. B. Harris, of Antwerp, New York, was engaged by the Dairymen's Association of Eastern Ontario, to carry on similar work in 1880, 1881 and 1882. In 1883 his field of labor was in

the western portion of the Province, while Messrs. Jas. Whitton and Bissell acted as instructors in Eastern Ontario.

The late Hon. Thos. Ballantyne who did more to advance the dairy industry than any other individual in Ontario in the eighties for a year or two years, at least, bore the expense of sending a specialist in cheese-making to visit a number of factories in Western Ontario, believing that the ultimate success of the industry was largely dependent upon quality and uniformity, which could best be secured by sending an up-to-date man from factory to factory throughout the season of manufacture. At the annual meeting of the Western Association, held February, 1884, the Hon. Mr. Ballantyne stated:—"I know some places where the goods were of the poorest description, and the maker was desirous of having Professor Harris come, and the cheese were much better from the first day of Professor Harris' visit to the factory until the end of the season. If our funds

would admit of it, it would be a good thing to employ a number of instructors so that they could be all the time about the factories; it would pay."

While it was considered wise on the part of the officers of the Dairymen's Associations to secure instructors from New York State during the years 1879-1883 inclusive, it is a matter of congratulation to Canadians that it has never been thought necessary either by the Associations or the Department of Agriculture to go outside of the Province for specialists in this branch of dairy education. On the other hand, many of our best men have been sought as commissioners, teachers and instructors in dairying by many states of the Union, the British Isles, New Zealand, Australia and other countries.

Dairy instruction was carried on by the Dairymen's Associations to a greater or less extent and with much benefit to the industry, throughout all the years from 1879 until in 1901 we find eight men employed by the Association of Eastern Ontario and three in Western Ontario. The creameries were also receiving instruction at this time. We find in that year for the first time that the work of the instructors was recognized by the patrons as educational rather than that of detectives. The time devoted to the patrons was for the purpose of instructing them in the care and handling of the milk rather than in an endeavor to detect skimming, watering or the keeping of strippings for home use. This was a decided step in advance. In 1902, three men were employed by the Association in Eastern Ontario and nine in Western Ontario. In this year two groups or syndicates were formed, and a man placed in direct charge of a limited number of factories. This enabled

him to make periodical visits and to establish a uniformity and improvement which had not been manifest up to this time. The experiment proved so successful that in the following year, 1903, we had for the first time a chief instructor for both Eastern and Western Ontario, whose duty it was to keep in close touch with the instructors employed by the Associations and to direct them along uniform lines, thus establishing a system covering practically the whole of the Province. The two Chief Instructors were officially appointed by the Provincial Department of Agriculture.

In 1904 the instruction work assumed such large proportions that the Department of Agriculture decided to relieve the Dairymen's Associations of the financial burden and made an appropriation for the payment of 32 regular instructors and two chief instructors, one for Eastern Ontario and one for Western Ontario. Factories which desired assistance were required to pay ten dollars to the Department of Agriculture for the services rendered. This did not cover quite one-third of the total outlay of over \$23,000 for the season. The factories were arranged in syndicates or groups and each instructor was held responsible through the chief instructor for the work in his district. The work was better arranged than ever before and improvements were more marked. In addition to the regular work of instruction 136 meetings were held during the summer months. At these meetings the instructors were enabled to give the producers information as to the best methods of handling their milk, the necessity for an improved water supply, etc. The improvements in factories during the season amounted to \$158,000, many of

these being made at the suggestion of the instructors.

In 1905 we find 37 instructors with two chief instructors. Eight hundred and eleven factories were included in the groups and 239 meetings were held. The Dairy Schools at Kingston and Guelph gave a 10-days' course, specially for the benefit of the instructors. This enabled them to receive instruction upon the most improved methods and to carry it on to the makers throughout the country, and tended to greater uniformity.

The Provincial Legislature, in 1906, passed an Act requiring that all cheese factories and creameries be kept in a clean and sanitary condition and made provision for the appointment of inspectors upon the recommendation of the Minister of Agriculture. Accordingly two men were appointed to enforce this law, and the result was that much improvement was made in whey tanks, drainage, and the general surroundings of factories. We also see in this year an increased number of curd tests being made with the object of tracing undesirable flavors which developed in the manufacture of the cheese.

The season of 1907 witnessed another decided step in advance. Up to this time the factories desiring the services of instructors were required to pay a portion of the expenses connected therewith. The weakness in this system was that the factories most in need of assistance and those which could not afford to engage a high-priced maker were the ones which did not receive assistance. It was therefore decided by the Department to assume the whole financial responsibility and give instruction to all factories and creameries without making

any change whatever. This placed the instructors in an independent position which they did not enjoy before. It can easily be seen that when the factorymen were paying a portion of the expenses of instruction, that the instructors hesitated to make demands or to offer suggestions which they would otherwise have made had they been entirely independent. Then again the poorer factories received the same attention as the larger and more prosperous ones, with the result that a greater uniformity was established than was found possible under the old system.

In Eastern Ontario 178 factories received instruction for the first time in 1907, and a few factories in Western Ontario which had not up to this date been included in the instruction work were visited for the first time. We find 1,182 factories and 99 creameries receiving regular visits from the instructors and a definiteness of purpose and uniformity which had not existed previously.

Regular instructors were all clothed with the power of sanitary inspectors, which proved of great assistance in having the sanitary conditions of the factories improved. Heretofore they had been in a position only to *make suggestions and requests*. Now they were in a position to *demand* those improvements and alterations which were necessary to place the premises in a sanitary condition.

Up to this time the instructors devoted considerable attention to testing milk, and in some cases making prosecutions for the adulteration of milk. At the request of the Department the Western Association employed a man to look after this work. The instructors co-operated to a certain extent, in

the gathering of evidence, but the work of prosecuting was left to the special official. This still further strengthened the position of the instructors, especially so far as the patrons were concerned. The same system of prosecution was adopted by the Eastern Association in 1908, with most satisfactory results. The Magistrates throughout the country evidently appreciate the action of the associations in dealing with the adulteration of milk in this manner, and are in the majority of cases imposing substantial fines. There is a marked decrease in the percentage of adulterated samples, and it is hoped and expected that the coming season will see a still further decrease.

It is generally admitted by those in

close touch with the dairy industry that the method of instruction which we now have in Ontario, the appointing of special officials to deal with the adulteration of milk, and the holding of factory meetings and district dairy meetings, has resulted in a greater improvement during the past two years than in the preceding several years.

This article is already long enough, else I would like to set forth some regulations which shall have to be adopted before we can make that progress which we would all like to see, and before we can establish the industry in all sections of the Province upon the sound basis which its importance demands. This feature of the work must, however, be left for some future date.

MY CANADA.

My Canada!

Thou art not old, thou art not skilled,
 But through the ages youth hath thrilled;
 'Tis dawn with thee,
 Thou hast a glorious promise and thy powers
 Are measured only by the golden hours.

My Canada!

With loyal sons to take thy part,
 To hold thee shrined within the heart,
 Proudly we say,
 "This is our country, strong and broad and grand,
 "God guard thee Canada, our native land!

—Jean Blewett.

Canada's Mountain Region and Coast Country in Winter

BY E. D. EDDY, B.S.A.

Have you gazed on naked grandeur, where there's nothing else to gaze on,
Set pieces and drop-curtain scenes galore,
Big mountains heaved to heaven, which the blinding sunsets blaze on,
Black canyons where the rapids rip and roar?

ANYONE who can give an affirmative answer to this question put by Service, in his Call of the Wild, will do well to read no further. Those who have seen the Canadian mountains, and felt their influence, must realize what an impossible task it is to give anything like an adequate description of the scenes presented and the sensations produced by these crowning triumphs of the Great Creator's art. The enormous piles of rock lifting their peaks miles above the sea into regions of perpetual snow, and the deep dark canyons with the sparkling streams, hundreds, perhaps thousands, of feet below, fairly overpower one with admiration and reverence, and defy description. One cannot gaze on these magnificent and awe-inspiring monuments to the titanic power that fashioned our planet without being forcibly impressed with the littleness of man, and having an added respect and reverence for the architect of the universe.

Readers of the Review therefore will understand that this article is not an attempt at that which our best writers know better than to undertake. It is not supposed to be a descriptive sketch as usually understood, but is written rather with the idea of convey-

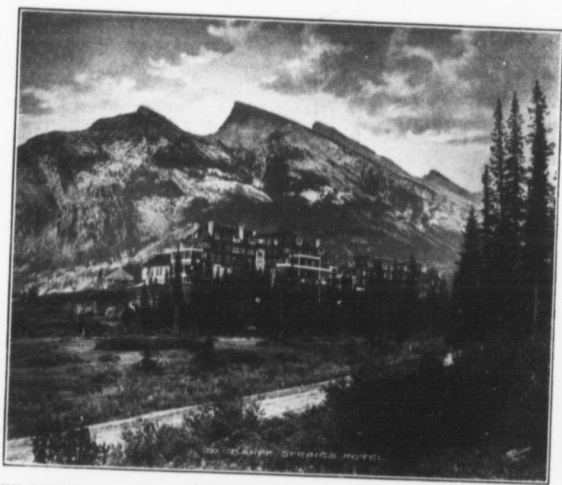
ing to old friends some personal impressions of Canada's mountain district and coast country, in the hope that it may convey a little commonplace information about this, our national park, playground and garden.

From Calgary to the summit of the Rockies, a distance of about one hundred and twenty miles, the railway track follows the Bow River Valley, crossing and re-crossing the stream several times, but through it all maintaining an even and not excessively heavy grade. On a clear day the mountains are plainly visible from Calgary, or even from a further distance. One would think that they were perhaps fifteen miles off. But in this region of high objects and rare atmosphere, distances are very deceiving, and the mountains that appear to be comparatively close to Calgary are really over sixty miles away. As you approach the mountains, they seem to recede, and instead of reaching them within a few minutes after leaving Calgary, as you would expect, it is two hours and a quarter before "The Gap" is entered.

One of the most popular summer resorts in the mountain district is Banff, headquarters of the famous Rocky Mountain Park, by far the largest park in the world, comprising nearly six

thousand square miles. Banff, situated about twenty miles west of The Gap, the beginning of the mountain region, is the first point of special interest on the westward trip. Near Banff are many points of attraction for the tourists, chief among them being the hot sulphur springs which have made the place famous as a health resort. People flock to these springs from all parts of the continent to leave their coughs,

and Field, a distance of only eight miles, the track drops nearly one thousand feet. At some points the grade is between five and a half and six per cent. What this means in rail roading is best indicated by the power required to haul a train up the hill. On our return trip we had only eight cars. At Field the train was broken up, and a large six-wheeler engine was put on in front, then followed four cars. Be



BANFF SPRINGS HOTEL WITH MOUNT RUNDEL IN THE BACKGROUND.

rheumatism and other ailments, and incidentally their cash.

Continuing westward from Banff, the train steadily ascends the gradual slope until the summit of the Rockies is reached, when the descent on the westward side is started with an abruptness that is almost startling. From the summit to Field, the first station on the western slope, is what is known as "The Big Hill," the heaviest grade on the mountain section. Between Hector

hind these and attached to them were placed two enormous eight-wheelers, and another eight-wheeler brought up the rear. With these four enormous engines, puffing and snorting in the exertion of their utmost strength, the eight cars were gradually brought up the hill, but during a considerable portion of the journey progress was so slow that the passengers could have gotten off and walked with no danger of losing ground.

At the summit of the Rockies is a very interesting spot, marked by a large sign printed with cedar bough letters, "The Great Divide." Here a



CATHEDRAL MOUNTAIN—SEEN FROM ACROSS THE KICKINGHORSE RIVER ABOVE FIELD.

tiny sparkling stream, flowing down the mountain side, divides into two parts on the backbone of the continent. A turn to the right or to the left, at this critical point, means on the one hand the Atlantic, and on the other the Pacific, as the final destination.

From The Great Divide to Field, the mountains and valley present a continually shifting scene of indescribable charm and beauty. The railway follows the Kicking Horse River canyon,

which is an ever fruitful field of startling change and discovery. In this region nothing is level or in a straight line. The car you are sitting in has a decided slant towards the front, owing to the extremely heavy grade of the track. The tram switches around curves at such a sharp angle that, sitting by the window in the rear coach of a nine car train, you can sometimes see the engine that is drawing you and the first five cars behind it. Across country there is an unending sea of mountain peaks, the higher ones lost from sight in the clouds, thousands of feet above, while almost immediately below the track the river surges along at the bottom of the canyon, hundreds of feet below. Such a scene is impressive beyond description at any time or season, but for the fullest artistic effect it should be witnessed in winter, on a calm, clear, frosty night, when the moon is full. The evergreens in the valley are laden with snow that glistens like diamonds in the moonlight.

The snow-covered mountain peaks in the distance stand out against the deep blue sky like great piles of glistening silver, while over all, in the rare mountain atmosphere multitudes of stars shine with an added brightness.

Field, a popular summer resort, is situated at the base of Mt. Stephen, one of the most imposing mountains in the Rocky range. The summit is 10,450 feet above sea level, and the base 4,064, so that the mountain itself

is nearly a mile and a quarter high. From the summit of the Rockies, the Kicking Horse River is followed by the track until Golden is reached, almost the low point between the two ranges, when it changes to the Columbia River and follows that stream to the foot of the Selkirks. The ascent of the Selkirks is not as steep from either side as the west slope of the Rockies, the maximum grade being about two and a half per cent. At the summit of the Selkirks, the scenery is even wilder than in the Rockies.

Through Rogers' Pass the track follows the base of the mountains very closely and in winter blockades are common, through snow slides. These slides were so extensive and frequent through here before the snow sheds were built that the section was named The Devil's Acre, by the railroad men, although the connection between snow slides and the devil's reputed place of abode is not made clear. One of the most imposing peaks of this region is Mt. Sir Donald, near The Great Glacier. At the time of passing, the base and shoulders of this mountain were covered with snow, but the peak, of clear bare rock, stood out against the sky an enormous arrow head, defying lodgment even to the snow.

On the west side of the Selkirks is the famous "Loop," where the track takes the form of the letter S, in order to get a sufficiently low grade to make the descent. The train travels about

six miles to advance one, and in one case the tracks are only about forty or fifty yards apart, one almost directly above the other, simply tacked to the mountain side at a higher elevation. These tracks of course run in different directions and the connecting loop is about a mile long.

One of the most picturesque portions of the trip is the canyons of the Thompson and Fraser Rivers, which the track follows about 185 miles. The canyons vary greatly at different points, but



AN INTERESTING POINT ON THE CAPILANO RIVER NEAR VANCOUVER. THE DEPTH OF CANYON IS BEST INDICATED BY HEIGHT OF THE SWING BRIDGE.

during all the changing scenes interest never lags. At times the train is some distance from the edge of the river,

running in a fairly straight course. Perhaps the next minute it will be on the very brink of a precipice, hundreds of feet high, and turning angles with an acuteness that makes one wonder why the whole train does not slip off the corner and fall into the river below. But it doesn't, and you go merrily on amid the wonders of nature. Across the river, the left bank rises in an almost perpendicular wall sometimes for hundreds of feet, and then recedes gradually and is finally lost in cloud-enveloped mountain peaks. To the right, the outlook is blocked by an almost continuous wall of rock. The Fraser canyon varies considerably in width and at some points the current is very swift. The narrowest point of the canyon is appropriately called Hell's Gate. Here, during freshets, the water rises 125 feet above the winter level, and the depth is estimated at 300 feet, although accurate soundings can not be taken. At Yale, 100 miles east of Vancouver, the head of navigation on the Fraser, the railway leaves the river, with its canyons and mountains, and enters upon the long stretch of now famous British Columbia farm lands.

Now, just a word on the Pacific Coast winter climate. Some children of the prairie have been unkind enough to suggest that the national emblem for the coast should be the umbrella. The citizens of Vancouver admit that they have rather more rain during the winter months than is absolutely necessary to keep down the dust, but in the spirit of local patriotism, so characteristic of the whole west, they try to make themselves and other people believe that it is not a disadvantage. "Yes, it rains a lot here," they say, "but it doesn't wet you."

"There is plenty of mud, but it doesn't stick to your shoes or clothing." So on the prairies and at the coast, everybody is, or should be happy; on the prairie it is cold but you don't feel it, and on the coast it rains, but it doesn't wet you. As a matter of fact, there is an element of truth in both these seeming absurdities. Certainly the cold on the prairie is not nearly so penetrating as the same temperature would be in districts of lower altitude and greater humidity. At the coast, the rain generally comes almost straight down, with scarcely any wind, so that an umbrella affords fairly good protection.

An observant ex-editor of the Review is responsible for the statement that the way a man carries the umbrella when walking with a lady on the streets of Vancouver affords an unfair index as to whether they are married. If not, the lady is well protected and the rain "does not wet her," while the man takes the drip from one side of the umbrella on his shoulder or down his neck. If married, then it is the man who experiences the dry rain, while the lady, if questioned, might express the opinion that it contained at least a little moisture.

During my six days stay in Vancouver, it rained three days, and then only part of each day. Three days were free from rain and for the most part fairly bright. However, I am informed by the residents that this was an exceptionally good record, as the rain generally takes up a greater portion of the time.

But the rains and mild weather have many compensating advantages. The residents of the coast may grow weary waiting for a skate or a sleighride, but they can go out and cut their lawns and

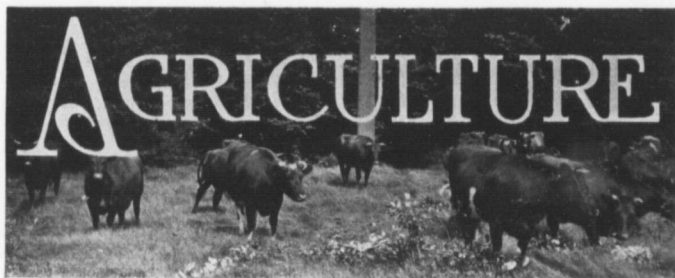
perhaps pick a few roses instead. During Christmas week I saw a lawn being cut in New Westminster, and in the same town there were some roses blooming in the open. They were not large nor numerous, but still they were there. A regular summer picnic party during Christmas week may seem some thing like an absurdity to residents of the prairie and Eastern Canada, but that is what happened at Vancouver this season. The proverbial sandwich lunch was disposed of in comfort on the rock by the edge of the Capilano River, beneath the swing bridge which crosses the canyon above 200 feet above. While enjoying this summer

picnic at the bottom of the canyon, a snowstorm could be seen in full swing up in the mountains many miles away.

Another feature which illustrates the character of the climate is the way the market gardeners handle their produce. Instead of harvesting and storing their roots and vegetables in the fall, every thing is left in the field and gathered as wanted in the winter. Occasionally the temperature takes a sudden drop, as it did two years ago, and there is considerable loss through this method of operation, but it seems to be the established practice after many years of experience.



STANLEY PARK IN WINTER DRESS—A VERY UNCOMMON SCENE, AS SNOW IN VANCOUVER IS A NOVELTY.



Harness Horses and Motor Cars

BY F. C. GRESNIDE, V.S.

THE subject of the extent to which motor vehicles have, and are likely to, supersede the harness horse, has been a great deal debated. Some discuss it as an interesting topic in which they have no direct interest, but many think and speak of it seriously, as it comes forcibly home to them, inasmuch as they have already experienced pecuniary loss from it, and are doubtful as to the developments of the future.

The breeders, the dealers, the harness makers and the carriage builders, the horseshoer, the public stable keepers, the feed men, the veterinary surgeons, the coachmen and many in other capacities, who have been brought to work with horses in one way or another, and that know no other means of livelihood, have reason for anxious thought.

It is generally recognized that it is very difficult for a man who has spent a good many years of his life in the pursuit of an avocation to change to something else, and make a success of

it, so that it is no wonder that those affected by the threatened displacement of the horse feel solicitous for their future.

One living in the great city of New York, as the writer has done for eleven years, has a good opportunity of observing what has already taken place, and to form some idea as to how much further it will go on, particularly as that individual is a veterinary practitioner, and purchaser of horses on commission, and has been identified with all the phases of the horse question in this part of the world for some time. It is rather understating the facts to say that fully one-third of the private stables in Greater New York, with its five million inhabitants, have been closed, and that another third of those remaining have much fewer horses in them. It is further keeping within truthful limits to state that one-half of the large public stables, where many well-to-do people kept their horses, have been closed to them. Such stables used to accommodate from one to

two hundred head of horses. Many of the cab stables have been abandoned, and those that remain are not doing much. A number of dealers have gone out of the business, and those that are hanging on, are not, with few exceptions, making anything. Horseshoers are doing very little, and have nearly all reduced their staffs. Carriage builders and harness makers are doing at least sixty per cent. less business. Some formerly flourishing feed men have failed. Many veterinarians have had their practices nearly cut in two.

Furthermore, there have been approximately seventy thousand licenses issued in New York State for motor vehicles. This will afford a pretty good index as to how the harness horse trade has been cut into, in this the Empire State.

That the autos have come to stay there can be no reasonable doubt, for they have merit, and very considerable merit at that, for some purposes. No person who can afford to keep up a pretentious establishment, could consider it complete without an auto.



A HIGH CLASS CARRIAGE PAIR WILL ALWAYS HAVE ENTHUSIASTIC ADMIRERS

These are some of the changes that have taken place with regard to horses in this city in the last year or so, and have taken place in other cities, but to a less extent in proportion to the size and wealth. When one explains that nearly all of these closed horse stables have been converted into garages and that many roomy structures have been built on purpose to house autos, it is not difficult to understand what has taken the place of the many horses that used to occupy these stables.

To have a good machine is like having a special train at your beck and call without having the trouble of going to the station to take it, as it comes to your door. They are a wonderful convenience to people living in suburban towns, especially where the roads are good, and the cars are fitted up with all the luxury of a Pullman. Many of the wealthy business and professional men who have country places within twenty miles of the city where their offices are, use them for going backwards and forwards. They are

used for many such services, and are a great convenience. As train-catchers for people living a few miles from a station, they are wonderful. Apart, however, from serving useful purposes for necessary transportation, they are being used enormously for pleasure conveyances. Within thirty or forty miles of large cities where the roads are good they are practically swarming with autos conveying excursion parties.

In summer, when it is very hot, people go out in them to get cooled off, for the speed at which they travel produces a most refreshing breeze. For going any distance over five miles, particularly if one is in a hurry, they are preferable to horse drawn vehicles.

On account, then, of their great convenience and the comfort they give under many circumstances, and the really valuable service they perform in many ways, we must concede that they have merit, and have come to stay.

Some thinkers upon the subject look for a reaction and think they will be less used within a few years. It is certain that there are many people of limited means who are using them now who cannot continue to do so, and that people similarly situated in future years will not attempt to incur the expense.

Nothing has ever come into use for purposes of transportation which involves such extravagant outlay as do motor cars. Every now and then you may come across some man who is fond of tinkering with machinery, and has an aptitude for it; who doesn't mind grease and dirt, and can do every thing connected with his machine himself, and who has knowledge enough of them to have taken the chance of buying a second-hand machine, who will show you that his outlay has been

small, considering the returns its possession has given him. This is exceptional, however, and the average owner of motor cars will tell you that the expense involved in keeping them is great and that the depreciation in the value of them is another matter to be reckoned with. Many of them not only soon wear out, but if from any cause an owner has to sell one that was purchased two months before, and is practically as good as new, there will be a depreciation of from forty to fifty per cent. in most cases.

In New York city, the average cost of keeping autos where a chauffeur is in charge is not less than two hundred and fifty dollars a month without counting the depreciation in value of the machines. After the novelty of the introduction of motor cars has worn off, and the craze to be a participant in a new fad has abated, the ownership of autos will simmer down to those who can really afford to keep them for pleasure, and those whom it pays to keep them for business reasons.

The auto craze has reached such a pitch that people are dashing about in them in an aimless manner, and they are not satisfied unless they are going, and the faster the better.

There is a great amount of money spent on them in this way by increasing the running expenses and depreciation, which is unnecessary.

The elements of fad and fashion have had a tremendous influence in increasing the use of autos. The sheep-like tendency to follow the leader exists in a very intensified form in human beings, and nowhere more than in New York and its environs.

Ten years ago, one couldn't walk across the upper part of Broadway in New York on a Sunday afternoon,

without being in danger of being run over with a bicycle. This street was simply black with bicyclists. To-day you might drive a mile up Broadway without seeing one. At that time Riding Schools nearly became bankrupt for lack of patronage, and many people sold their saddle horses, as they were too busy bicycling to use them. In fashionable Newport where the writer practiced for two summers, Bellevue Avenue was full of Millionaires on bicycles. Now they never get on one.

In country districts some such condition existed in a mild form, and livery men became afraid that their business would be injured permanently. Many people claimed that bicycles were a necessity and had come to stay. There never was a better illustration of this "follow the leader" tendency, than that afforded by the rise and fall of the bicycle.

This same "follow the leader" characteristic of human nature has been an immense factor in contributing to the popularity of automobiling. It is an undoubted fact that many residents of small means in suburban towns, mortgaged their houses to get autos, because other people were using them, and it would possibly be no exaggeration to state that fully one-half of the people keeping autos in this part of the world cannot afford them. That they will get cheaper seems reasonable to suppose, but they will never get so cheap as horses for the purposes for which horses are best suited.

And now we come to the question as to the future of the harness horse. Enough has been said to indicate a very much lessened market for harness horses here in the East for the last year or so, but strange to say that they are not cheap. It would cost one as

much to buy a good harness horse to day as it did ten years ago, although there is practically nothing doing in them just now, except in the case of a few show horses, they are bringing a higher price than ever.

The reason for this is that the supply of good harness horses has been largely exhausted. From eighteen hundred and ninety-nine until the last two or three years, there were a tremendous number of harness horses sold, and the prices kept going higher and higher until they were selling for fifty per cent. more than they were twelve years ago. Dealers at the present time are paying so much for their horses in the country that they cannot face a dull market and make anything. It takes some time for breeders living away from the markets to realize that prices are reduced in the consuming centres, and they are asking the dealers as much as ever, which they cannot afford to pay unless it is for a show horse. Breeders, as a rule, have not been pressed for money, and having so few harness horses on hand, have not shown a disposition to lower their prices to meet altered conditions.

When one contemplates the high prices and limited supply of harness horses for the last ten years one can not help wondering what people would have done had it not been for the advent of motor cars. That there would have been a famine in the harness horse market there is no doubt. What really gave the "knock-out blow" to harness horses, temporary though it is, was the financial panic of a year ago, and the business depression that has existed ever since. Autos suffered, too, badly, but the considerable number of people who were keeping both horses and motors, had to lessen expenses,

and they let their horses go. It seems strange that they should have kept the more expensive luxury of the two, but many did. In many cases this was because the novelty of the auto had not worn off, and they still wanted to be "in it," impoverished though they were. Others, of course, retained the motors because they suited their requirements better. Another thing that has militated against the use of the harness horse for summer service is the nervousness of many people in driving behind horses in country roads where there is so much reckless driving of autos. Many have given up their horses on this account. Some keep horses for town use and motors for country work, for this reason.

This is pretty well the status of this question gleaned from careful observation and study. Now for the breeder of harness horses, what is he to do in the future? Is he to give up breeding or not?

The writer's advice is to go on breeding, but make a special effort to breed them as good as possible. There will continue to be a market for good harness horses at fairly remunerative prices.

As evidence in favor of the argument that the past years' dull market was largely due to the financial depression one has but to cite the saddle horse trade of this period. Riding is becoming more popular and general every year in the East, and will doubtless continue to do so. But, when "the bottom fell out" of the harness horse trade a year ago, the same thing happened to the saddle horse trade, and up-to-date it has not improved to any greater extent.

Horses are more convenient and suitable for some purposes. For short

trips in the city as in calling, shopping, where there is much turning, horses are more convenient. For park use, where one drives for the air and sunshine, to see the people and observe the beauties of the park, there is no comparison, as a moderate pace is preferable.

Many people, especially ladies desire a stylish turnout, in which they can see and be seen, and there is no comparison between a nicely appointed Victoria with a pair of stylish horses in front of it and two men on the box, and an auto. Many people like horses, and prefer to sit behind animate motor power rather than to sit upon inanimate coal oil power, even though they do not drive themselves. Others are fond of driving horses, and will never entirely sever their connection with them.

The love for horses is cultivated in children in the cities of the East and it is considered part of their education to learn to ride and drive just as much as it is to dance and swim.

Motor vehicles are going to displace many work horses in towns and cities, as they have already done to some extent. This will be the case in large cities to a greater proportionate extent than in small ones. It has been already determined that for long trips of several miles in a city where it is necessary to take a heavy load, and make good time, it is more economical to use motor vehicles. For short trips, and where there is much stopping, turning or backing, horses are much preferable.

In considering the question of breeding horses for the future, we must emphasize the necessity of recognizing the fact that financial and trade conditions have always had and will continue to have a great influence upon

the demand, and consequently upon the price of horses. One has but to look back to the panic of eighteen ninety-three and call to mind its effect upon the horse trade, and there were no autos then. Horses took such a drop in price, that in the West they began to consider the advisability of utilizing low grade horses for meat.

Breeders became so discouraged at the prices they could get for good horses, that many gave up breeding in disgust. The effect of this action in stopping breeding has been noticeable in the limited supply of good harness horses for six or seven years past. Horses really got to be so high-priced that it was injurious to every one connected with them with the exception of the breeders. In addition to the breeders lessening their operations an active export trade developed, and kept up until prices became so high that it had to be abandoned.

Another reason why horses ran up in price so much was that money was so plentiful that people bought freely of everything they wanted. We may use the saddle horse again to illustrate this. There was practically never any export trade in saddle horses, so we cannot say that that trade made them scarce, but it is a fact that a saddle horse is now worth at least fifty per cent. more than he was ten years ago. The anomalous condition exists in the present state of affairs of saddle horses being scarce and high priced, and very little market for them.

This all goes to show that the trade in horses is very much influenced by what are called good and bad times, and that when people feel better off again, they will buy horses and make trade good. So breeders, don't stop breeding and have nothing to sell when the market revives.

The Short Courses in Live Stock Judging

The Annual Short Course in Judging Live Stock and Seeds, held at the Ontario Agricultural College, passed off this year with little which may be mentioned as distinguishing it from similar courses conducted in other years. It is perhaps, worthy of mention that the attendance showed no tendency to fall off as the result of the numerous short courses that have been conducted at various points throughout the Province, and that the interest in the work as it progressed, and the enthusiasm with which those who took advantage of the course were wont to

speaking of the benefits to be derived from it, were perhaps more marked this year than ever before. This course is designed especially for those who find it inconvenient to absent themselves from their farms for a greater length of time, or from any reason find it impracticable to take a more extended course at the College.

The aim of those in charge is, beside imparting a certain amount of information on questions relating to agriculture, to arouse in the student a desire to know more, by giving him a start, so to speak, in the right direction. His



CLASS OF SHORT COURSE STUDENTS EXAMINING SEED GRAINS.

attention is drawn to certain facts which had hitherto escaped his notice. New phases are brought up for his consideration which he had previously ignored, or which had never before occurred to him. He is brought into direct contact with men who, by introducing science into agricultural practices, have raised the calling of agriculture in popular esteem to a dignity equal to that accorded to the professions.

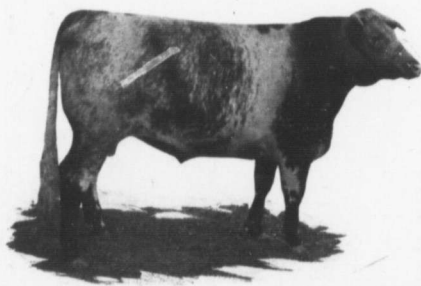
One of the most valuable features of the course was the work taken with market classes of beef cattle, sheep and swine. In each of these sections a class was first judged on the hoof, then the animals were slaughtered and the carcasses exhibited. By this means it was possible to point out clearly the respective merits of the carcasses, which merits had to be conjectured from a superficial examination while the animals were alive.

The judging of the beef animals for the block test, and the placing of the beef and mutton carcasses was again

supervised by Mr. John Gosling, of Kansas City. Mr. Gosling has a continental reputation as a judge of animals fitted for the block, and is always exceedingly popular with Ontario audiences.

The work with Seed Grains was conducted by Professor C. A. Zavitz, and his staff of assistants. Professor McCreedy and Mr. Howitt gave instruction on the destroying of weeds and identification of weed seeds. Dr. J. H. Reed had charge of the classes in horse judging, while the work with the cattle, sheep and swine was conducted by Professor G. E. Day and Mr. R. Wade.

Unfortunately for the work in horse judging the College has no horses suitable for class-room demonstrations, save a few Clydesdales. Excellent as these are individually, they are deplorably insufficient for the demands of Dr. Reed's work; making it necessary for him to secure animals for his purpose from some of the breeders and dealers in the vicinity of the College. The



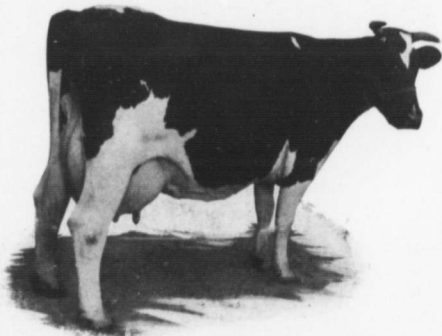
hoped that a suitable appropriation will be made for this purpose in the near future.

A pleasant incident occurred near the close of the course, when Professors Zavitz and Day, and Dr. Reed were each made the recipient of tangible evidence of the appreciation of their efforts by the members of the class. Professors Day and Zavitz were each presented with a handsome gold headed cane, and Dr. Reed with a

dearth of material for class room work and the need for a generous appropriation to remedy this state of affairs has been long felt.

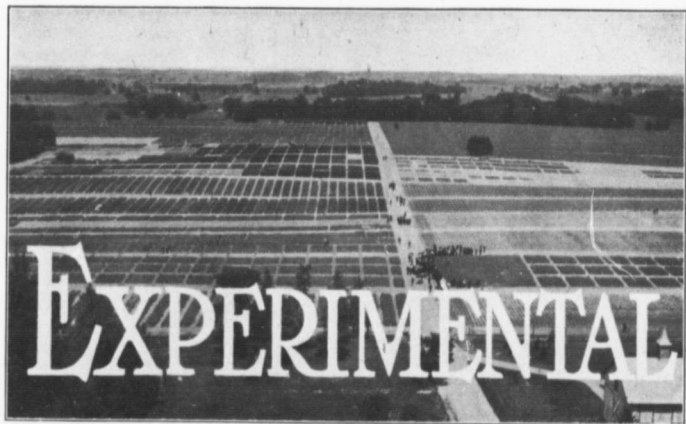
A memorial to the Minister of Agriculture was this year prepared by the Short Course Students, drawing attention to the needs of the College in this department, and stating that in their opinion the best interests of the horse breeding industry necessitated the maintenance at the College of a sufficient number of both draft and carriage horses

to furnish material for classes in heavy gold watch guard, each bearing horse judging. It is to be sincerely a suitable inscription.



THE DAIRYMAN AND BEEF-PRODUCER
HAVE EACH THEIR IDEALS.





Spraying to Kill Weeds

BY J. E. HOWITT, BOTANICAL DEPARTMENT, O. A. C.

THE idea of killing weeds by means of various chemical sprays appears feasible, and, at first thought, suggests to those who have to combat them, an easy way of getting their land cleared, without the labor required for persistent cultivation, hoed crops and various other farm operations which are employed to hold weeds in check. This hope of reducing the amount of labor has led to a great many substances being tried as weed destroyers. Most of them have been discarded as useless or impracticable. There are several chemical sprays, however, which are still recommended for the destruction of certain weeds. Among these are blue stone or copper sulphate and copperas or iron sulphate. Some years ago it was successfully demonstrated that copper sulphate could be used to kill

Mustard in grain crops. It is now quite commonly used for this purpose. More recent experiments conducted in Europe and the United States have proved that iron sulphate may be used for the same purpose with equal efficiency. In March, 1908, Professor Bolley, of the North Dakota Experiment Station, published a bulletin in which he gave the results of spraying various weeds with solutions of various chemicals, which would indicate that iron sulphate might be effectually used to destroy Binweed, Mustard, Canada Thistle, Dandelion and Great Ragweed in growing grain with out injury to the crop. In order to gain further information on this subject the Botanical Department, during this past summer, carried on several experiments with iron sulphate as a spray to kill weeds.

Bindweed, Dandelion, Mustard, Chick weed, Canada Thistle, Burdock, Curled Dock and Annual Sow Thistle were sprayed with a mixture, containing 75 lbs. of iron sulphate to 40 gallons of water. This mixture was applied with an ordinary spray pump such as is used to spray fruit trees. Though no definite conclusion can be drawn from the experiments made, the results are indicative of what may be proved by further experiments.

phate, and, though many of the root stocks were killed by this means, plenty still remained in the ground to send up new shoots at the first opportunity. The result was that a month after the spraying was discontinued the Bindweed was just about as thick as when the experiment was started. It would thus seem to be impossible to eradicate Bindweed by means of spraying with iron sulphate.

A small patch of Dandelions on the



HAND POWER MACHINE FOR SMALL PATCHES OF WEEDS.

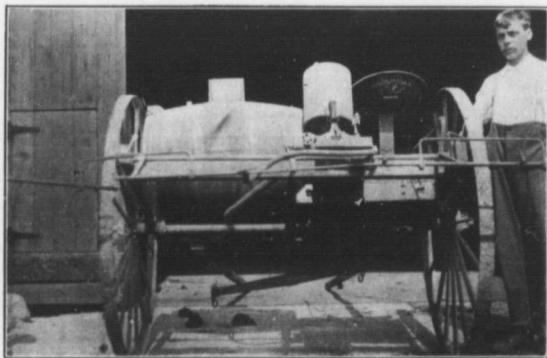
A large patch of Bindweed in the College orchard was sprayed ten times with the iron sulphate at intervals varying from three days to two weeks. At each application of the solution nearly all the leaves and young shoots were completely destroyed, but after each application with remarkable rapidity the underground rootstocks sent up a fresh supply of new shoots and the patch was soon as green as ever. An attempt was made to destroy the rootstocks by cultivating and harrowing them to the surface of the ground, and then spraying them with the iron sul

phate. The first application destroyed nearly all the Dandelion leaves without doing any apparent harm to the grass. In a few days, however, new leaves made their appearance. These were again sprayed and destroyed, only to be replaced by a fresh crop which, however, were not nearly so vigorous as the first lot, and when they were destroyed only a few spindly leaves were produced and none of the plants flowered and produced seeds. It thus seems probable that if lawns infested with Dandelions were given five

or six good sprayings with iron sulphate at proper intervals during the summer the Dandelions might be greatly diminished in number without any apparent injury to the grass beyond a slight discoloration. This, however, remains to be demonstrated by further experiments on a larger scale.

Field Chickweed was completely destroyed by one thorough application of iron sulphate. It would thus seem possible that this method might be profitably used to destroy this weed in or

to the Botanical Department in June enquiring as to the efficiency of iron sulphate as a spray to kill Mustard. The information available on the subject was sent to Mr. Leitch with the request that he would report the results of his efforts. A week later the writer visited Donlands Farm, and was surprised and pleased to see how completely the application had destroyed the Mustard with little or no apparent injury to the barley crop. The following report kindly supplied by Mr.



POWER MACHINE FOR LARGE AREAS.

chards and gardens where it often necessitates frequent cultivation and hand hoeing.

Annual Sow Thistle, Canada Thistle, Curled Dock and Burdock were apparently little harmed by iron sulphate. The foliage at each application would be only partially destroyed and the plants soon seemed to recover their natural vigour.

The test to destroy Mustard by the same means was not conducted by the Botanical Department, but by Mr. A. Leitch, manager of Donlands Farm, Donlands, Ont. The gentleman wrote

Leitch will, however, give the best account of the experiment, and its results.

"Number of acres sprayed, 26; cost of spraying, material, \$11.56; labor, 2 men 1 3-4 days at \$1.60, \$5.60; total cost, \$17.16.

"Strength of mixture, 75 lbs. copper as to 40 gal. water.

"Spraying machine, power Spramotor, Model 1904.

"No. of nozzles, 6 ordinary Vermorel nozzles.

"Time of application, from 8 a.m. to 6 p.m., warm, sunny days.

"Efficiency of spray, at this date, June 26th, just twelve days after application, there is not a living Mustard plant in the field except those missed by the spray, while the fields on surrounding farms are in full bloom. It is quite noticeable, however, that those plants which were in bloom at the time of spraying have, in a few instances, formed seed, though the seed pods and seeds are dwarfed and unhealthy looking. Those plants which were not in bloom when the field was sprayed were entirely killed and formed no seed whatever. Therefore our observations lead us to believe that the proper time to spray is just before the blooming period."

These experiments were but preliminary and are too meagre from which to draw any definite conclusions. The results obtained, however, suggest pretty clearly that for the destruction of Bindweed, Canada Thistle, Curled Dock and Burdock, iron sulphate is of little value, while for Mustard it is just as effective as copper sulphate, and has the additional advantage of being much more easily dissolved in water. The experiment with Mustard also indicates that the proper time to apply iron sulphate is just before the Mustard comes into bloom. From the results of the experiment with Dandelions it would appear that it might be possible to keep down Dandelions on lawns more efficiently and with much less labor by spraying with iron sulphate than by the laborious method of spudding them out. The results ob-

tained with Chickweed indicate that many of the annual weeds in gardens and on gravel walks may be easily and quickly destroyed by spraying them with this substance. The Botanical Department hopes in the near future by means of more extensive experiments to fully demonstrate these points.

Though it has been proved, beyond a doubt that several chemical sprays do completely destroy some weeds, it is not to be expected for a moment that they will ever replace proper methods of cultivation, rotation of crops and other farm practices which are essential to the fertility of the land as well as a means of keeping it clean. Chemical sprays will not rid the land of such weeds as Mustard in one year but, if intelligently applied for several successive years, will reduce the amount until by hand pulling and after harvest cultivation it will be possible to keep them under control. It is seen therefore, that if chemical sprays are to be employed to advantage they must be used in conjunction with the recognized methods of good farming, and not with the hope that by merely spraying a field with a few barrels of a solution of iron sulphate or some other chemical the weeds will be entirely eradicated, thus making the ordinary treatment of the land unnecessary. Such an idea is, of course, absurd and, if carried out, would prove to be most detrimental to successful Agriculture.

THE O. A. C. REVIEW

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Editorial

Every student should ask himself, "Am I making the most of my opportunities during this college course?"

College Societies

This question evidently has not been seriously considered by many college men. A high standing on examinations does not always mark a man of brilliance or exceptional ability, neither is it evidence that a student is obtaining from the course as much valuable knowledge and experience as it is possible to secure. The all-round college man is the man who, while giving due attention to the prescribed work of the curriculum, takes an interest in those organizations which will impart experience that is of value to him, both during his life in dormitory and after graduation when he has launched out upon his

life's work. Of the various college organizations, students are inclined to give most attention to the Athletic Society. This is only natural among a large number of young men, and is, we believe, quite proper. What is more important than health and physical development? There is, however, a small percentage of the student body which takes no interest in sports. A man may be well developed physically and have the strength of a Goliath, still his body cannot be kept in a normal and healthy condition without a certain amount of physical exercise. Then there are those who go to the other extreme and over estimate athletics. They allow themselves to be carried away by the "spirit of athletics." In case of either extreme, there is danger of a one-sided develop

ment. The benefits derived from the Literary Society are also of great importance to the average student. This fact is not fully recognized by a large percentage of college men. The Alpha, Delphic and Maple Leaf Societies are organized expressly for the benefit of the members, but of these the latter appears to be the only one which is truly successful. More interest is evinced among the freshmen in regard to literary work than in the other classes. It has been the case for years. The reason of this we cannot exactly locate; it may be pressure of other work, it may be pure indifference, or it may be a fault of the system followed by the societies, which causes a lack of interest among the second, third and fourth year students. At any rate it is a matter which should be considered. That many benefits are derived from literary work is beyond dispute. The student acquires here what he can not gain in any other way, that self possession and cool-headedness which is so essential upon the platform. Some students possess a special antipathy for the Y. M. C. A. This organization is altogether undenominational. It stands for morality and good fellowship, not only among college men, but among men in every station of life. From this standpoint then, it deserves the sympathy and support of all progressive, intelligent students. How can a student afford to live for two years or for four years at the O. A. College and take no interest in the various college societies. It may not be possible to take an active interest in every organization, but it is within the reach of every student to reap some benefit from each of the different societies if that student is so inclined.

It is frequently remarked that the students at the O. A. College do not give enough time to outside reading, and by outside reading we mean the reading of

books or journals which do not have a direct bearing on the subjects prescribed in the curriculum. There are some, of course, about whom this can not be said, yet, it must be admitted that the majority of the students here do not pay enough attention to such subjects as politics, taxation, municipal ownership, forms of government and many kindred topics.

"Reading," says Bacon, "makes a full man; conversation a ready man; writing an exact man!" You can no more be the "full man" whom Bacon describes without reading, than you can be healthy and vigorous without new nourishment. Reading is to the mind what food is to the blood, which circulates through your veins. Therefore it behooves everyone to be careful when selecting books.

Every young Canadian farmer should have a knowledge of things political, methods of taxation, the tariff, government and municipal ownership and many other topics which are of vital interest to him.

To read a multitude of books will not accomplish the desired end. It is better to master something really worth while than to have only a smattering of many subjects. If the farmer knew more about the governing of his country he could and would take a greater share in it.

There are in the Dominion Parliament from Ontario twenty-five lawyers, thirteen manufacturers, eight lumbermen, and six farmers. A comparison of these figures and of these

four classes will suffice to show that the number of representatives from the farm is not in keeping with the number of farmers in the Province, nor with the importance of their profession.

Should this be so? No! the farmer should be taking a more active part in the government of our land. We hear a good deal about "The Farmer and Politics," but very little from the farmer in politics. There are some farmers who are able to take their places on the platform and to discuss the issues of the day, but the number of such men is too small. The graduates from this College should know more about the farmer's needs along this line and go out prepared and be able and willing to in every way possible arouse enthusiasm and assist the farmer to more fully assert his rights.

This question was discussed some little time ago in these columns, and a suggestion made regarding the advisability of appointing a committee

Debates

to select a list of subjects suitable for debates. As yet nothing seems to have been done in this matter. The benefits derived from the Literary Society work can scarcely be estimated too highly, hence we wish to again emphasize the importance of having suitable subjects, especially for Union meetings. We sometimes hear what is called a debate, but which amounts to nothing more than the presentation of ideas, with little or no attempt toward building up an argument on the one side or breaking down the argument of an opponent.

The benefits of true debate are much greater than those received from an

ordinary address. The debater gets not only the experience in speaking, but has instilled into him toleration; is made two-sided; receives into his mind the sense of reasoned truth and allows the seeds of new truth to be sown. The great object of debate should be in the vindication of some truth seriously disputed.

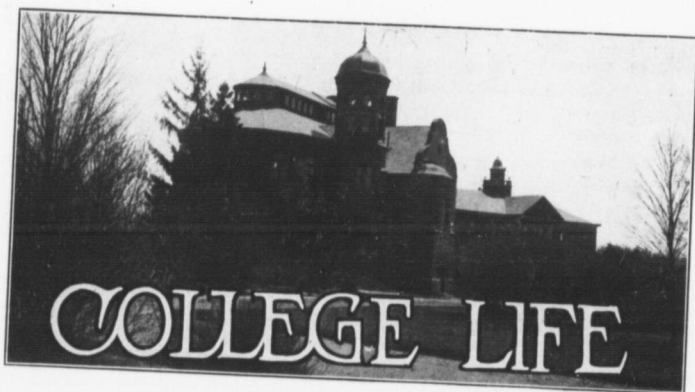
Some may ask what we mean by suitable subjects. In the first place we would suggest that they be subjects which are of vital interest to Canadian farmers, and about which the students at this College should know more. Also they should be live and up-to-date; questions of the day.

As to the advisory board, we would suggest that one be appointed from the staff and student body with perhaps the addition of an interested outsider or two. A list could be prepared from which to choose when occasion required. May we see some action taken soon by the Literary Executive, which will make for greater usefulness in the society's work.

Just before going to press a communication was received by the Editor from W. D. Lamb,

An Offer

Plumas, Man., in which he makes the following offer, to anyone enclosing to him, six cents in stamps, will be sent a copy of the "Single Tax Catechism." It is a small booklet of fifty questions and answers on the subject explaining the phases of taxation, their effect, economic definitions, etc. Or for twenty five cents ten copies will be enclosed to one address. To anyone interested in the subject this is an opportunity to get information in a concise form.



Mock Parliaments

THAT we should know the course of procedure of our parliaments is a part of our every-day education, and we should never leave here without such knowledge. With the object of providing the students with such valuable information the Literary Societies have held mock parliaments in place of regular programmes with debates.

The first mock parliament was held in Massey Hall on January 30th. The Alpha Society and Maple Leaf Society introduced the respective bills—To encourage matrimony in the Dominion of Canada, and, Providing for the reformation of Ontario. The subjects provided interesting discussion, bringing in impromptu speeches, showing the readiness of the numerous speakers to respond when their political leanings were infringed upon.

On February 6th the Delphic Society introduced a bill to regulate and control horse-racing and side shows at fall fairs in the Dominion. The Maple

Leaf Society brought in a bill to amend the Ontario Election Act, which dealt especially with Woman's Suffrage. The speakers in both societies were eager to display their powers and qualifications as orators and legislators. Many valuable points regarding the proper methods of procedure were given by Mr. L. Caesar and Mr. D. H. Jones, who kindly acted as critics.

Union Literary Society.

The first meeting of the Union Literary Society was held in Massey Hall on January, the 31st. President G. Manton occupied the chair and Secretary Howard recorded the minutes.

The opening number on the programme was a piano solo by Miss Bankier, which was very ably rendered and heartily appreciated by all present.

The honorary president, Dr. Be thune, delivered a very fine address, expressing the high degree of gratification it gave him to have the honor of

being elected as honorary president of the Literary Society. He expressed in optimistic terms the future of literary work at this College, and wished that success might always be attendant on this society.

A vocal solo by Mr. Tothill was ably sung and vigorously encored.

Miss Rogers favored the audience with a delightful violin solo, and too much cannot be said in praise of her ability as a violinist. Her technique was magnificent, and she rendered her selections with a brilliancy that charmed her listeners.

The fifth number was the debate. The subject—Resolved, that a system of Ethics is superior to a system of Ideals—showed that the Literary Society endeavored to provide a new type of debate—one not stereotyped by frequent use. This is a commendable feature and we should have a greater variety of subjects for literary meetings.

Mr. Galbraith, leader of the affirmative, gave a clear, unreserved address, but his rebuttal was a short discourse of his subject rather than a refutation of the negative's arguments. In fact the whole debate was lacking in argumentative spirit, which marks a true debate. Mr. Stafford, the leader of the negative, delivered a clever speech, using fluent language and showed a deep interest in the subject.

Mr. Baker, supporter of the affirmative, showed decided dramatic powers, and he is a speaker of rare talent. Mr. Thompson as supporter of the negative, delivered a speech characterized by careful preparation and depth of thought.

A vocal solo by Mr. Unwin brought forth merited applause, and was vociferously encored.

The presentation of the Association Football Cup was made by Mr. T. Hannigan, President Guelph Football Club, and this handsome cup, emblematic of the league championship, will remain with us until it has been won by some other team in the league.

Professor Reynolds criticized the meeting in a most able manner. He showed clearly where the speakers had been at fault and gave many valuable suggestions.

Our College Orchestra rendered delightful music and a pleasant evening ended with their response to an encore. It is a regrettable fact that the audiences at these meetings carry on conversations accompanied with audible laughter when musical numbers, which deserve the same attention as other numbers, are being rendered. *Let us show our appreciation by our silence.*

St. Valentine's "At Home."

St. Valentine's night was celebrated this year in a novel and highly satisfactory manner. Under the auspices of the Literary Society of the College and Macdonald Institute a St. Valentine's "At Home" was given on Friday evening, February 12th, in Macdonald Hall.

At 7:30 a valiant band of College boys, directed by His Majesty King Cupid, eagerly invaded the hall—easily capturing the heart supplies. At 8 o'clock the red heart-shaped programmes were filled with pledged divinities.

Everybody was laden with valentines for their best friends (?), and the Cupid mail box in the gymnasium was filled long before the first promenade was over. Larger boxes were brought into service and once the mailing was completed many maiden minds were set at ease.

The College orchestra rendered selections in its usual pleasing style.

The affinity race caused many partners to be stolen, while other unfortunate ones failed to obtain an affinity either by natural or unnatural selection.

Mr. J. W. Jones recited one of Drummond's poems in characteristic dialect and responded to an encore.

One of the most enjoyable features of the evening was the musical race. Six girls stood behind tables and at a given signal their partners rushed up, each tore open an envelope, glanced at the name on the slip inside and immediately endeavored to whistle the tune of the assigned song. Their fair partners recognizing the tune, wrote down the name and the prize-aspiring ones bolted to the starting point. To whistle before a giggling partner is not an easy matter and the man who accomplished this feat received an appropriate booby prize.

The Misses Rogers presented a short dialogue, involving a humorous discussion on literature, but the sudden recognition of a gentleman and a lady behind a screen, gazing intently at the two ladies throughout the conversation, caused a hasty exit.

The mail delivery now commenced—busy postmen ran here and there, handing to unexpected ones, missives, loving and otherwise. Cupid had evidently scored a grand victory, and when the proper time for departing came, many indeed were the faces that bore irritated expressions and inquisitive glances.

Illustrated Lectures.

During the Short Courses illustrated lectures on subjects of vital interest to those taking these special courses are given by prominent men. On the

evening of February 1st, John Craig, Professor of Horticulture, at Cornell, gave an illustrated lecture on, "Observations on Apple Growing in the Northwestern Pacific States." Professor Craig's lecture was interesting and instructive and the pictures shown, especially those of the National Apple Show, held at Spokane last December, were very fine. To horticultural men in particular, such a lecture should prove valuable, conveying as it did an idea as to the extent and possibilities of horticulture.

The poultry men were favored on February 10th, with an illustrated lecture from Dr. Morse, Chief Pathologist, Bureau of Animal Industry, Washington. He spoke on bacterial diseases affecting poultry, and dwelt at some length on roup, tuberculosis, black head, etc., showing pictures indicating the various stages of these diseases. He emphasized the need for greater care of poultry; special attention should be given to have sanitary conditions, so that these dreaded diseases could not infect the flocks.

Our New Matron.

We are pleased to chronicle the appointment of Mrs. Cunningham to the position of matron. Mrs. Cunningham has had experience as a matron, and already we are noting a decided improvement, that which we long looked for in days gone by, but never received.

We believe our new matron should prove herself very suitable for such a position, and judging from our short acquaintance we feel confident we have secured a kind and generous woman, capable of ministering to the needs of the students in a most acceptable manner.

The standard of residence life should

be raised; the Lord especially requiring improvement. Our life should not be made miserable by the lack of proper food and residential comfort. The nature of our needs is understood by Mrs. Cunningham and by her kindly spirit and desire to do the best we feel certain that we shall have, under her guidance and care, a residence, in which it will be an honor and pleasure to live.

Y. M. C. A.

The Association has been fortunate this term in receiving outside aid. Mr. H. G. Allen, the Bible Study Convener

from Toronto University, favored us with a visit in January. Through his enthusiasm and powerful plea Bible study has received a marked impetus. Dr. Waters, a returned missionary from India, addressed the students on February 4th, on missionary problems, emphasizing the Tokio situation. On the evening of February 11th Mr. C. M. Wright, General Secretary of University Y. M. C. A., spoke to us in an impressing and forcible manner. His subject, "The Essentials of a Well Rounded Life," was ably handled, and many strong impressions remain.

INSPIRATION.

A lark sprang up to greet the dawn
 Close to a rose one day,
 The tears upon her glowing cheek
 His light wind brushed away,
 Her fragrant beauty fresh and fair
 He kissed in passing by,
 And wove her name into his song
 Of rapture in the sky.

The lonely rose sighed, "Ah, my love,
 I cannot follow thee;
 Far, far above in golden light
 Thou hast forgotten me.
 Yet, am I blest for evermore
 Though but an instant dear,—
 Thou singest now a sweeter song
 For all the world to hear!"

—*Lily Alice Lafetre.*



Aquatic Events

THE latest addition to our already large number of student organizations at this institution is the "Swimming Club." Though we have for a long time possessed a first class tank for swimming purposes, this very important and useful branch of athletics has heretofore been somewhat neglected. This year, however, some of our more enthusiastic lovers of the sport formed a club, which has already a score or more of active members, and which has obtained for itself the support of a very large proportion of the student body.

The first meet of the club was held on Friday evening, February 5th. Over two hundred students found seats in the basement below the gymnasium and to judge from the reception the swimmers received, the evening was a distinct success. Mr. Corsan, Varsity's swimming instructor, who played the most important part in the programme, and who has an almost world wide rep

utation, gave demonstrations that were an education in themselves, and there were besides some exciting contests between the various members of the club.

The first event was a relay race between two picked teams of four men, Keegan's team winning by a yard. Following this was a diving competition; after a close struggle between Ryan and Bell-Irving, the latter succeeded in gaining first place. Much laughter was occasioned by the third event, the antics of the competitors while endeavoring to walk the greasy pole being comical in the extreme. The 50 yard dash was won by Phillip's, in 38 seconds, which is excellent time considering that this event came half way through the programme. Rogers and Powell, in their exhibition race in tubs, provided great amusement the tubs showing a strong tendency to capsize at awkward moments. Then came the diving for plates, and finally

a 175 yards race, which Ryan won by less than a foot from Harries. Mr. Cor san's exhibitions were interspersed in the programme, and included demonstrations of the various styles of swimming, fancy diving, and his excellent imitation of a porpoise. Altogether the meet was a great success, and the enthusiasm aroused augurs well for the prosperity of this branch of sport in the future.

The results of the competition were:

Relay Race—Winning Team—

Keegan, Ryan, Marryat, Harries.

Diving Competition—for form—

1, Bell-Irving; 2, Ryan; 3, C. Rogers.

Walking Greasy Pole—

1, Powell; 2, Davison.

50-Yard Dash—

1, Phillips; 2, Harries; 3, Bell-Irving.

Diving for Plates—

1, Musson; 2, Davison.

Ten Lengths Race (175 yards)—

1, Ryan; 2, Harries.

On Saturday, February 6th, a team consisting of Treherne, Ryan, Bell-Irving, Harries, and Cleverly went to Toronto to compete in the aquatic events held there. Besides our boys representatives from McGill and Varsity took part, and the contests were of the highest order.

The diving for form brought out some excellent performances by the McGill and Varsity men especially. In this particular department of the sport, they excelled the College men, dividing honors about equally between them. Ryan in the "Swimming Three Styles," led for two-thirds of the way, but made a poor turn at the last end, and was forced into third place. Harries in the "Under Water Swim," easily outdid his opponents, and in the plunge for distance he also made a good showing, standing second. The other boys

did not gain a place in their respective entries, but made a creditable showing nevertheless, and the experience gained will, no doubt, serve them in good stead, when next they meet in a similar competition.

Inter-Year Hockey.

The opening game of the Inter-Year Hockey series was played January the 29th, first and second years being the opposing teams. As the first year were practically an unknown quantity, there was at the beginning some doubt as to what the final outcome would be, but after the first ten minutes of play it was seen that the freshmen could not stick to the pace which they had started, and from then on the sophs had it pretty much their own way, winning by the score of 6-2.

February 2nd—The third and fourth years met in their first game of the season. Both sides worked hard, but good team play was not much in evidence, the goals being for the most part scored on individual rushes. A considerable amount of unnecessary slashing prevailed which Referee Edgar promptly penalized. The final score was 7-1 in favor of third year.

February 18th—The long-delayed game between the second and third years took place, and was won by the sophomores by a score of 5-2. Because of both teams being so long out of practice, the game was rather devoid of brilliant work, and at times was very slow. This win practically gives the second year the championship, a title which they have held since last year.

Basket-Ball—College Defeats Galt.

The second basket-ball game of the season was played on Saturday, February 6th, when the College team easily defeated Galt Y. M. C. A. by the score

of 53-27. The game was not fast, there being no stellar work on the part of either team. The Galt boys seemed to find trouble in locating the basket, due they claimed to the floor space being so much larger than that upon which they were accustomed to play. It is very doubtful, however, if they could do much better on any floor, as our boys were superior at every point.

Mr. Dingman of Galt acted as referee and gave entire satisfaction.

Line-up for College—Guards, Hoy, MacKenzie; forwards, Reeds, Irvine, Moore.

O. A. C. 47—Berlin 13.

Such was the score. College found the Berlin boys rather an easy mark on the evening of Wednesday, February 17th. The game was fast, but rather too one sided to be termed exciting. Considerable holding was indulged in by both teams, which had better been omitted. The Berlin team caught and passed well, but could not shoot, and thus missed many opportunities to score. Our boys found the basket easily; in fact it seemed as though Irvine and Learmonth could not miss it. Moore is always fast, and his speed was much in evidence in this game, his good passing giving Learmonth and Irvine many openings. Guards Hoy and MacKenzie effectually broke up the combination work of the Berlin forwards, stopping many dangerous rushes. With a little improvement in shooting, Berlin would give our boys a much better argument, and on their own floor they may be able to make things more interesting.

Mr. Jaemitt made an efficient referee.

O. A. C. College team—Guards, Hoy, MacKenzie; forwards, Moore, Learmonth; Irvine (Captain).

Inter-Year Basket-Ball.

February 11th—First and second years met in a game, which resulted in a score quite the reverse of what was generally expected. The freshmen have improved wonderfully since last fall, and won from the sophs handily, score 27-20.

February 16th—The sophs turned the tables on the juniors, more than doubling their score. For the first half play was about even, but in the second half, the sophomores got away from their opponents, and led at the finish, 23-11.

February 18th—The fourth year trimmed the freshmen 38-8. The first year began very fast and for a few moments the game was in their favor, but experience soon began to tell; the seniors took the lead, and kept increasing it till the end of the game.

Inter-Year Baseball.

February 8th—The opening game of the series was played when the second year walloped the freshmen 25-3. The sophomores are playing a strong batting game this year, and can run bases as fast as the most of them, so should stand well up in the list at the end of the season.

February 10th—The fourth year gave the dairy students a few pointers on baseball, winning easily by a score of 13-5. The dairy boys improved as the game progressed, making nearly all their runs in the last few innings.

February 15th—The hardest fought and most interesting game thus far took place between the fourth and first years. Although the seniors always maintained a slight lead the freshmen followed close after them, showing much better form than in any previous game. The score was 14-11.

Our Old Boys

B. J. Waters, B. S. A., '02, is farming at Ivan, in Middlesex County. He is making good use of the training he received while at College, in the advancement of agricultural conditions in general. He has been elected Secretary of the Farmers' Club, a position in which a good man always finds any amount of work to be done.

Merritt Baker, B. S. A., '06, attended the Horticultural Short Course, held here in January. Baker is Chief Fruit Inspector in Western Ontario for the Dominion Government, and is making good. He has been instrumental in instituting many prosecutions against offenders in the fruit industry.

We have, this month, to record the death of one of our Alumni, in the person of W. S. Carpenter, of Simcoe. For many years Mr. Carpenter has been widely known as an extensive breeder of Shropshires, but about a year previous to his death, he sold his farm, which was a fine one, and traveled in the interests of the Zenner Disinfectant Company. Coming to College in 1884, he took his associate diploma in 1886, and is remembered as one of the most popular members of the class.

C. C. Thom, B. S. A., Demonstrator in Physics at the College, has been appointed Professor of Soil Physics at the State Agricultural College, Pullman, Washington.

A. D. Harkness has, at Irena, one of the best fruit and dairy farms in the county, his herd being mentioned by the Eastern Ontario Dairymen's Association as one of the most profitable in Eastern Ontario. Harkness is an associate of the College, having obtained his diploma in 1887.

Congratulations, Esmond, a boy.

On January the 4th, a very pretty wedding occurred at Inglenueux, Hamilton, the home of Mrs. Spratt, when E. G. De Coriolis was united in bonds of matrimony to Hilda, daughter of Mrs. Fuller, of MacDonald Hall.

The honeymoon trip included Niagara, New York and Washington, D. C., and return to Cardinal, where Mr. and Mrs. De Coriolis will make their home.

Fred. J. Boyd, known to the class of '85 as "Ted," is farming at Merrickville, paying particular attention to dairying.

George Sanders, B. S. A., '07, is a member of the staff of the Entomological Department of the University of Illinois. His official position is that of Field Entomologist, which affords an opportunity of visiting thousands of orchards and greenhouses each year throughout the state. To a student of Sander's calibre combined with his acumen for investigation and capacity for work, the present school of experience will without doubt prove a stepping stone to things higher.

Sanders' headquarters are at the State College, Urbana. His classmates will be glad to know that, according to very recent advices, his heart still remains a willing prisoner, happy in its captivity, in the fair home it won in the Royal City. "Things sometimes turn out as they should."

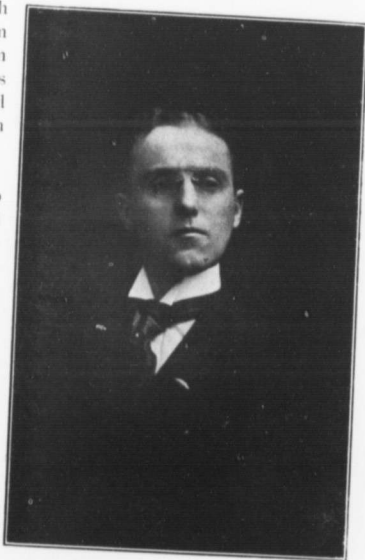
Those who came to College in 1899 will remember their classmate, Geo. Dick, and will join with us in congratulating him on the happy event which occurred on Monday evening, December the 14th, when he took unto himself, "for better or for worse," Miss Nellie Anderson, of Chicago. Mr. and Mrs. Dick will reside at Hensall, Ontario.

We were favored a short time ago with a visit from Mr. Robinson, of Salmon Arm, B. C., where he has a fruit farm. He has as neighbors an associate and a graduate of this College, in the persons of Bowman and Percy Suckling, both of whom entered College in 1898. Mr. Robinson is, himself, an ex-student, coming from Walkerton to Guelph some few years later.

R. M. Menzies, who came to College in 1884, has still kept in mind and made use of the agricultural training he received here, although he has departed from the strict and straight path of agriculture. He is in business in Victoria, B. C., but is also a breeder and exhibitor of prize-winning poultry.

At a meeting of the leading oat growers of the state, an Iowa grain growers' association was organized along the lines of the corn growers' association, to aid in the improvement, by breeding and selection, of the oat

crop, with Professor H. G. Bell as Secretary. Professor Bell is an oats specialist, having supplemented his practical experience by a long study of the subject. He is in charge of the small grain work at Ames, and was coach of the winning team which carried off the trophies at the recent national corn exhibition. From the enthusiasm manifested at the first meeting, and from the happy selection of offi



PROFESSOR H. G. BELL, AMES, IOWA.

cers, it is a foregone conclusion that the oats growers' association will soon come to rival the corn growers' association in prominence.

While attending the annual convention of the Agricultural Societies of Saskatchewan, held at Regina, Presi

dent Creelman met quite a number of graduates and ex-students of this College. L. G. Bell, B. S. A., '93, one of Qu' Appelle's best farmers, was in attendance, as was also Norman M. Ross, B. S. A., '98. Ross is in charge of the Forest Nursery of the Dominion Government, at Indian Head, and superintends the distribution of trees to farmers. His illustrated talk on Prairie Reforestation was one of the features of the convention. Malcolm Geddes was present, in the interests of "Farm

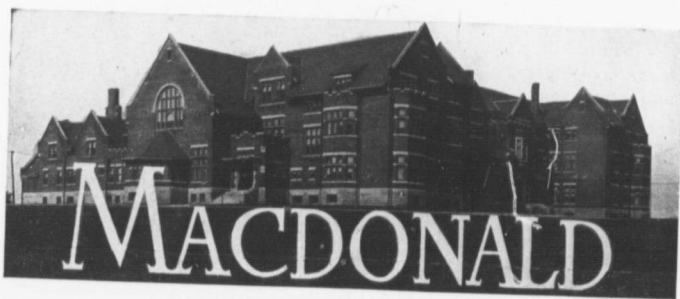
was in charge of the horse department of the Short Course. Hopkins is Veterinary Inspector in Western Canada, under the Dominion Department of Agriculture. Dr. Rutherford, the newly appointed Deputy Minister of Agriculture, was present, and although new to the Province is rapidly making friends. Working upwards, we come to the Honorable Mr. Motherwell, who, notwithstanding the fact that the Legislature was in session, found time to preside at all evening meetings.



HOME OF GEO. H. ROBERTSON, ST. CATHARINES.

and Ranch," but he is conducting a correspondence college at Calgary. G. Curran, '08, editor of "Farm Crops," represented his paper at the convention. He is a new comer in the West, but looks as if it agreed with him. J. Bracken, who was in charge of the Short Course and Seed Fair, held in conjunction with the convention, was the life of the meeting. He knew everybody, kept the programme going at all times, and was largely responsible for the success of the convention. Dr. A. G. Hopkins, who took the first two years of his course here at O. A. C.,

A very pretty wedding took place at the residence of Mr. and Mrs. Jas. Patterson, 9 Kirkland Street, Guelph, when the Rev. W. G. Wilson joined in marriage their daughter Ida Eleanor with F. M. Logan, of Vancouver. Miss Eva Pearson attended the bride and Mr. Harold Newman, B. S. A., of Ottawa, supported the groom. Mr. and Mrs. Logan left the city immediately on their way to Nova Scotia, where they will visit Mr. Logan's relatives before proceeding to their home in Vancouver.



Winter Mail Service in Prince Edward Island

BY T. C. JAMES, CHARLOTTETOWN.

IN TWO PARTS—PART I.

THE problem of winter transportation of mails and passengers between P. E. Island and the mainland is one of the numerous questions that confront the Dominion of Canada. Lying in the Gulf of St. Lawrence, with its red sandstone shores laved by its sparkling waters, P. E. Island is one of the most delightful summer resorts in the world. But when winter locks these same waters in its icy grip the problem of passage becomes serious. Northumberland Straits do not freeze across or the difficulty would not be so great, but during the winter they are filled with floating ice sometimes in long level fields, miles in extent, sometimes in huge boulders, sometimes in smaller pans which, driven by the fierce winds and a three knot tide twist into all sorts of shapes, pile one upon another, and grind each other into fragments.

One hundred years ago the people of P. E. Island were shut up in blissful ignorance during the long winter months. Battles might be lost and won, kingdoms rise and fall, great men die, but no sound reached them in their isolation.

At length some adventurous spirits essayed communication at the South side of the Island, where it approaches Nova Scotia most nearly. In an open boat, pushing their way between the floating ice cakes, they managed under favorable conditions to make a crossing occasionally from Wood Islands to Pictou Island, and thence to Pictou town, in all a distance of about 23 miles. Needless to say it was with much risk and difficulty that the voyage was accomplished.

About 1826 attention was turned to the Southwestern point of the Island, where, between Capes Traverse and

Tormentine, the distance from P. E. Island to New Brunswick is somewhat less than nine miles. Here the regular winter crossing was at last established, and various improvements made from time to time. Despite all efforts hither to made by means of ice steamers, the Capes route remains the last resort, when northeast and east winds render the harbor of Pictou inaccessible to steamers.

The mention of ice-boats, to most people, calls up a vision of the flat plat form on skatelike runners, which, pro

these boats the mail bags are placed and lashed securely. The crew usually consists of four hardy men, one of them being captain. When, as is now al ways the case, there are more boats than one in the expedition, a captain is in charge of the squadron, and the course is set under his direction. Though the land is always clearly in sight on both sides (except in case of snow storms), much judgment is re quired to pick the best ice, allow for the force of wind and tide, and a hun dred other things which mean all the



MUCH HARD WORK IS EXPERIENCED IN THE CROSSING.

pelled by a sail, skims the level ice at almost any speed. To a P. E. Islander, familiar with the Capes route, it suggests a boat about fifteen feet long, with a somewhat flattened bow, built as lightly as is consistent with strength, sheathed with tin, partly flat-bottomed, and furnished, instead of a keel, with two runners like the runners of a sleigh, extending about two-thirds the length of the boat and shod with steel. Thus you have a sort of amphibious creation, equally fitted for rowing in water, and being dragged over ice as occasion may require. In

difference between an easy and pleasant trip and a heavy disagreeable one. Passengers of the male sex, together with these boatmen, pass a leather belt over one shoulder (these belts being attached to the boat by a light chain), and with one hand on the gunwale of the boat, start on their adventurous voyage, dragging the boat as they tramp over the ice. Ladies are accommodated with a seat in the boat, where, covered with furs, they enjoy a delightful mixture of rowing match, rough sleigh ride, and a nondescript experience made up of climbing ice

hummocks, racing over level fields, sudden descents into water, and equally sudden hoists out again. When the day is fine and the ice clean and level the trip is very enjoyable, but when the ice is covered with deep snow into which you sink at every step, the journey is fatiguing. Sometimes as you travel along you meet with thin ice, and without any warning your foot goes through. But you are attached to the boat and your only risk is that of a wet foot, which in the rush and warmth of the exercise no one minds much. On coming to a strip of water,

and he sank to the neck to be speedily pulled out by means of the towline in his hand. The chief obstacle encountered is lolly, that is snow and ice crushed to powder. This is at times three or four feet in depth, so thick that it is utterly impossible to propel the boat through it, yet so soft that one sinks in it almost as readily as in water. If much of this is encountered, and sometimes it stretches from half a mile to two miles, if there is no way round it, the trip must be abandoned, and the boats return to their starting place to wait for a more favorable op



CROSSING AT THE CAPES—HALF WAY OVER—A HALT FOR LUNCH
AFTER FOUR HOURS' HARD WORK.

the bowmen fall back and as the boat is launched all hands scramble in as best they may, and either row, if the water is clear, or pole with boat hooks if there is much floating ice till they reach the next field. Then oars are taken in and the bowman jumps out on the ice towline in hand, and holds the boat steady till all hands scramble out on the ice. Then the boat is hauled up, the straps are resumed and the journey goes on as before. The writer remembers on one occasion that the bowman jumped on what he thought firm ice, but it proved to be only snow

portunity. The same thing happens when a heavy gale clears a wide stretch of water and raises a heavy sea. Our ice boats are not good sea craft and dare not face very rough water. If, however, the lolly is only a strip one boat will be pushed off as far as possible from the solid ice, another pushed in behind her, then the crews scramble over the rear boat into the front one and push and pull the rear boat till they get her in front, when the same manoeuvre is repeated till the strip is passed over. The tide, if the passage is a long one, greatly increases the dis

tance to be covered in crossing, and sometimes the boats travel 15 or 16 miles before they reach the farther shore. The distance to be crossed is considerably shortened by the fact that the solid ice (called the "board"

ice, French *borde*) forms for a mile or a mile and a half on each side. The time taken in crossing varies from two hours and a half to ten and twelve hours, anything under four hours being considered a good trip.

(This Article concluded in April Issue.)

Domestic Science in Rural Alberta

E. BLENNER-HASSETT.

In a well-regulated bachelor's "shack," on the plains of Western Canada, one will find worked out, one of the most unique systems of Household Science and Administration to be found anywhere. In this institution the bachelor acts as host, cook, hostess, maid, etc., all in one. He has built his own mansion, and so knows all its construction from cellar to attic. He has planned its heating, lighting, ventilation, decoration, equipment, and seen to every detail.

The main, and only building is 12x14 feet, about fifteen feet at outside and has a shanty roof. None of the underlying principles of sanitation have been neglected. Air space is provided by digging out a hole slightly smaller in dimensions than the building, and about six feet deep, and this serves, also, as a store-room for potatoes and such other vegetables as his treeless garden produces and the gophers have not eaten, as well as being easily accessible by a spring and jump from a trap-door in the floor. A three by five window, never hampered with blind, in either end and these, with a door, the pipe in the roof and

cracks where the improperly-cured lumber has sprung, furnish the ventilating system and provide for a free circulation of air at all times and in all directions.

As to heating—the sun on the broad roof in summer provides far more than he needs and in winter the little sheet iron stove, set right below the hole in the roof, which acts as chimney, provides a heated area, varying from one to two feet, around the stove and also serves as a range for his cooking.

Simplicity and utility are the points aimed at in the furnishing of this home. The stove mentioned, a table with no useless polish or spread, a camp-bed, a trunk, two nail kegs and four chairs are all it boasts, except, of course, a hammer and a boot-jack, and sundry cooking utensils.

Nor is the aesthetic entirely neglected in providing the useful—calendars, both great and small, dating any where from 18—to present date, hung from three-inch nails, adorn the walls at most regular intervals, also bits of rare bric-a-brac as saddle, bridles, bits of old harness, slicker and frying pan,

of ancient time, are artistically arranged about.

Beside building and equipping his house other very important things confront my lord, for he realizes that man must eat and if he eat in that land he must cook—what?—Oh, mostly bread! Ah! many and sad are "The Songs of a Sourdough" before he masters the art of bread-making. He purchases a box of Royal Yeast, carefully consults the directions by light of his tallow dip, and following the directions sets the sponge, covers it with his sheepskin coat, to keep the temperature right, rises in the morning to find a beautifully light sponge but a desperately sticky coat, and as he makes the dough, at times the thought of his coat seems to loom up before him and he stretches the gluten with unnecessary vim. Perhaps, also, adjectives act as a lightening agent.

He tries an experiment on cooking cereals and, as the most simply prepared takes rice: empties about a quart into a saucepan, covers with water, and sets it on the stove to cook. After a while the dish seems too full, so he dips out some: again it is too full! dips out more; fills the plates, saucers, cups, frying pan—everything, in a wild effort to keep apace with the rise in rice. At last it subsides—though everywhere he looks is boiled rice. He lives on rice for days, till he hates all that looks like it.

His egg experiments, are not much more successful. Heating a pan smoking hot, he carefully breaks the egg and stands in stupid wonder gazing into the empty pan from whence the egg has flowed in all directions, and mutters, "I am— — sure mother always fried meat that way!"

But all his efforts are not doomed

to such sad results, and he can soon cook an appetizing meal. He has a dozen little devices no other housekeeper ever dreams of which are great conveniences:—In serving meals he serves the fried potatoes from the pan; uses granite for all his dishes because more substantial than china; uses same cup and plate for a week or two, then washes it to start a new week on; uses a gopher's hole outside the door for a sink, rather inconveniently for gopher, but very handy for him); carefully gathers soiled clothes in a sack and washes them monthly, half-yearly or never, depending on conditions and state of repair. He also uses a barb wire fence for clothes-line (sometimes a chinook blows them away, but that is fate and must be submitted to); or turns his socks with top down when heel wears out and mends his socks—never!

Nor is the ethical side of his nature forgotten. He has his music books and friend—and when the thermometer registers away below, he can turn to his library of a few choice volumes; his magazines and Family Herald, with the Primrose corner so interesting to him, and there regale his mind and bring himself into touch with all the best of the outer world, or if, weary of this or too tired to enjoy it, he takes to stage—by standing the table into the arena of the heated area, then mounting his chair on that, and so—here providing his own orchestra music to help pass the night.

Here in his wild, lonely home he has all that man needs to build character: friends (few, but true), books, music, nature and his God, and they have done their part and we see his life of sterling character; laying the foundation of our great Western laws, where

it takes strong natures to stand as the pioneers of that mighty land as our fore-fathers were of this:

"Men who do things just for the doing,
 letting babblers tell the story,
 Seeing through the nice veneer that
 makes the soul,
 Have you seen God in His Splendor,
 heard the text that nature renders
 The simplest things, the true things,
 the silent men who do things?
 Then listen to the wild, it's calling
 you!"

The Social Question.

The much postponed sleighride of the Normal Class, '10, was at length realized on the evening of February 6th. Huge racks were procured and loaded with men from College and members of the class. After a moon light drive about town and the surrounding country the party halted at the residence of Mr. and Mrs. Pringle, where a delicious supper was extremely acceptable. Finally, after a few dances the guests drove home, all reporting a jolly evening.

On Saturday afternoon, January

31st, the Houskeeper Class, '09, entertained the Faculty and Students of Macdonald at tea. The hostesses received in the sitting-room on the second floor, which was prettily decorated in red, and which presented a most cheery and hospitable aspect to those who came in from outdoors. In the tea-room the members of the class, Misses Blythe, Maddock, Daniels, Rutherford and Julyan were busily attending to the wants of the guests.

During this term many pleasant small teas have been on record. Among others the Misses Hadwyn, Smellie, Ames, Bonnell and the members of Two In One Class were delightful hostesses.

The first snowshoe party of the season was held on the night of February 5th. Beautiful weather and favorable amounts of snow were enjoyed, and the party composed of Macdonald girls and men from the College, report an excellent time. During the evening a halt was made, and beside a huge bonfire the company made merry over toasted marshmallows. Songs and tales came to an end at last, however, and the weary party retraced their steps to Macdonald, tired but happy.



Among Ourselves

Literary.

The meeting of the Literary Society on January 30th, was a very entertaining and pleasing occurrence of its kind. Stump speeches from the girls were the most engrossing subjects brought under notice, and the speakers are to be congratulated upon the fine showing they made.

Miss Whitney opened proceedings with a most amusing and very instructive (?) address upon "Hints to Future Western Housekeepers." As Miss Whitney's remarks were the result of experience along the line of her subject they were forcibly expressed and attentively listened to. Following Miss Whitney came Miss Davidson, who, hampered by the limits of her subject "Nothing," made but a few though excellent remarks.

Miss Peebles being asked to make a few remarks upon "Laughing," contented herself with a demonstration and Miss Fleury responded to "Imitations," with a clever caricature of a notable personage. Miss Hadwyn's remarks upon "Helps to the Injured," were in keeping, and well to be remembered. The closing speech on "Lemons," which Miss Helen Bankier made interesting, was listened to with appreciation.

During the interims musical numbers were, each and all, well rendered. A piano duet by the Misses Shand, a violin solo by Miss Freda Rogers, and a solo by Miss Edna Hartley completed the evening.

On the evening of February 14th, Miss Mabelle Stuart read a very inter-

esting essay upon "A Dream," at the Y. W. C. A. meeting. Miss Edna Hartley sang in her usual sweet and charming manner.

Y. W. C. A.

The Y. W. C. A. meeting of the 16th of January, was addressed by Miss Ferguson, who spoke of, as usual, help ful and practical things, and whose address was intensely interesting. The hymns were accompanied by Miss Jean Flavelle.

Mr. H. Allan, a guest at the Convocation, was able to meet with and speak to the girls on the evening of the 23rd of January. Mr. Allan, who is much interested in Bible Study advancement, confined his address to that subject. Many helpful hints were thrown out and encouragement to the leaders of the Bible Study Classes given. As always, Miss Elfreda Rogers' violin accompaniments were appreciated.

At the next meeting Miss M. B. Daniels gave a most exquisite reading, "Blind Bartimaeus," which was very much enjoyed. The story known to all so well was told in beautiful and touching language, and appealed to all. Miss Flavelle and Miss McKeen accompanied the hymns.

A Peep Into the Past.

The study hour was over: It was eight o'clock and the girls at Loretto Abbey were thronging the dormitory.

But two of the fair maidens were bent on far different affairs than the mundane practice of getting ready for the night and when for a moment the presiding nun, Sister Camelita, turned

her back there was a sudden vacuum where a moment before had been two zealous inmates. Down a secluded, seldom used staircase of the old monastery they fled; out the one time postern door into the dim moonlight. Then a hasty rush across the courtyard, a dive behind some outhouses to fetch up, panting, at the door of—the chicken house! “Get a small one,” came a hasty whisper from one of the conspirators, and an irate click from a dim shape a moment later, brought forth another whispered command, “Grab it by its feet and swing it slowly.” Silence for a few moments while the chicken threatened to break into vigorous remonstrance, then, “No go! It’s too young. Grab another.” Easier said than done, but in a few seconds, a decided objection being made evident in a corner showed another victim. Better luck this time, and in a few moments the pair retraced their steps with a peacefully sleeping chicken under control. Up the stair and as far as the chemistry room, where a momentary shake by the bearer gave rise to an unlooked for clatter, and the “Sleeping Beauty” opened its rose-bud beak in a piercing clatter. “Heavens, here comes Sister Carmelita!” “What on earth can I do with the brute?” “Throw it over the bannister! Hurry!” To the ears of the fleeing couple as they hid behind a convenient piano came a dull, sickening thud with hearty remonstrances in the language of poultry—not fit to be printed, evidently. Probably Sister Carmelita wonders to this day where the poor fluttering hen descended so forcibly from. But Polly Magee’s dreams are occasionally disturbed with the thought of what she missed through that chicken awakening before it

reached a secluded place beneath her covers, and dimly wonders what the—she would have done if it had surprised her in the night.

W. M. F.

A Rather Expensive Feed.

By M. A.

“Well! All the foolish people aren’t dead yet,” remarked the sage house keeper as she eyed the pale and trembling juniors. Now, I am of an inquiring turn of mind, so I urged her to disclose the feeling which prompted that remark, and thus she did relate:

“Any one might know that when the six o’clock car came up and a throng of girls laden with baskets of grapes, and suspicious looking square cardboard boxes and bottles of every description, and contents, meant something more than any ordinary six o’clock supper. I knew it did, so at ten o’clock, I was hot on the scent, and I smelled it a long way off, too, and of course when I hung around they had to ask me in!

“What we didn’t do that night would not make a good novel, and what we did do — well — those olives! and that cake!!

As all good things to eat often come to a speedy end, this was not the exception to prove the rule. Pretty soon the camera came into play and we all climbed on the couch to have a flash light taken. Things always take so long to arrange when every body is talking at once, and no sooner had we assumed our party expressions, awaiting the flash, than thump! bang! c-chunk! down went the bed and we poor mortals with it. No party expressions left after that, but such as we had we placed in evidence, and the snap shots taken.

That was a Jonah night for us alright, for lo and behold! what do you

think we discovered? Only this, it was Friday night, in Room 13, there were thirteen of us, and, worse and worse, that blooming couch cost us thirteen dollars.

An Initiation.

Speaking of boarding school, said J—, "reminds me most forcibly of initiation night at a western college, some years ago, I was among a number of expectant juniors who, with reason, dreaded what was due them before they could be termed one of the Elete. My anticipations were amply realized one night, when shortly after midnight five figures stole into my room, and seizing me, blindfolded and bore me on ward and upward. Upon reaching the attic through the darkness was seen a double line of phantom shapes that would put an Indian war dance to shame. With a mad shove I was hurried down the aisle of girls, my flight being marked by resounding smacks as each girl demonstrated with a genuine ebony hair-brush: Surviving this ordeal I was formally ushered into a large square room, empty of all save a

staring circle of gaunt features, with one, as big as life, and twice as natural, in the centre. From a buffet was produced an appetizing mess of delightfully (?) large oysters pounded to a pulp and served ice cold, with castor oil dressing. There was no use dodging, so with an agonizing gasp down my portion went, with the aid of half a dozen willing assistants!!!

To my sorrow the building was large and roomy, and four flights of stairs, straight and long, soon met my gaze. At the top awaited a toboggan in the form of a mattress and in a few seconds my strapped-on form was well on the way to — —? This slight (?) noise brought out the Faculty, the "Doc," in full evening dress, demanding me to respectfully rise, which under the circumstances was impossible.

A cold plunge brought my part of the proceedings to a grateful end, and I was allowed to crawl home—and die! to the touching peals of Chopin's "Funeral March."

AT THE WINDOW.

How thick about the window of my life

Buzz insect-like the tribble of petty frets:

Small cares, small thoughts, small trials and small strife,

Small loves and hates, small hopes and small regrets.

If 'mid this swarm of smallnesses remain

A single undimmed spot, with wondering eye

I note before my freckled window-pane

The outstretched splendour of the earth and sky?

—*Agnes Ethelwyn Wetherald.*

Much Ado About Nothing

The seven wonders of Macdonald Hall:

1. The magnificent voice of Miss—
 2. The conversational powers of Miss L——.
 3. The 'Stings' of Miss H——.
 4. The ills of Miss T. I. M——.
 5. The room-mate who never borrows pins or hair pins?
 6. The borrowing propensity of Miss H. W——.
 7. The wisdom of the seniors.
- The eighth wonder—The President.

Miss H. (teaching)—"Mutton is always best when it's about three years old."

Pupil—"Does that mean that it has to be killed three years before it's good to eat?"

First Home-maker—"Why is a blouse called a waist?"

Second Home-maker (ripping out tucks)—"Because it's a waste of time making them."

Why are the garments made by the Home-makers always given to big or little sisters?

Miss C. (pulling out crop in cooking class)—"For goodness' sake, this chick en has a blister in its neck."

Miss M.—"Isn't that a pretty directory skirt?"

Miss C.—"My, but it's slow on Friday night, just sitting in the drawing room, both in a chair."

Advice to O. A. C. Students At the Rink.

When the band begins and you happen to be talking to a girl you do not wish to skate with, put on a desperate air, lift your cap, cry madly, "Where can I get a drink?" and dash out of sight.

Find the Owner.

"Too much fag."

"Ah! sa b'ess her."

"My good man."

"Be still, oh my heart!"

"Gee whizz kid."

"Say, fellahs."

"You make me sick."

"Cutie pie."

"Fiddle baby."

"Boo! What does us care for she."

"And he said!" "Who said?" "Larry said."

Miss Y—ng(wiping dishes, after finishing punch)—"Gee, this glass is icy hot!"

Miss M.—"What colored coat had he on?"

Miss —"Black, which was green with age."



He who knoweth not, and knoweth not that he knoweth not.

—Is a Freshman.

He who knoweth not, but knoweth that he knoweth not

—Is a Sophomore.

He who knoweth, but knoweth not that he knoweth

—Is a Junior.

He who knoweth, and knoweth that he knoweth

— Is a Senior.



S. Neville—"How does Baker make his hair stand up in so fierce a manner?"

Le Clair—"That will be good subject for your fourth year thesis. You can experiment on your own."



Harley—"There is no money to be made by feeding chickens on light sand. They will, however, do very well on clay."

McAleer (To Sinha who has reached across the table)—"I am surprised to see a graduate of Calcutta University perpetrating such a breach of ete quette."

Sinha—"But I have been in this country some months, I am Canada-iced, Canada-iced."



Freshman—"Can you tell me whether the swimming contest will be held upstairs or down?"



Mr. Le Drew (Economics)—"Of course, in a case of that description, it would be necessary for me to give you my note."

A. C. Baker—"It would have to be backed pretty well."



Mr. Le Drew (Economics)—"What kind of metal is used to strengthen gold coins?"

Gordon—"Alloy."

The Heroes of the O. A. C.

You may talk of the heroes of olden days,

And of present-day heroes, too—
But right in this College are greater men

Than history ever knew.

You may talk of John D. Rockefeller's wealth—

Why, his millions are only a joke,
When you think of the fact that each student pays

Two dollars for every smoke.

Now, Daniel was brave in the lion's den,

(And that only lasted a while),
But the man who could *room* with
Thunder Present

Has Daniel skinned a mile.

Archimedeas and Euclid were wise old guys,

But I've just been wondering whether

The man who could pass the Surveying Exam.

Wasn't smarter than both together.

In the olden days mourners shrieked and groaned,

And wept till their eyes were red,—
'Twas naught to the grief that the Third Year showed

When they heard "Adonais" was dead.

There were Amazons fierce in the days of yore,

Who rode forth to fight and to slay—
But watch the Mac girls in a ground hockey match,

And the Amazon bunch fades away.

Old Demosthenes was an orator great
But even his voice would seem weak

When compared with the splendid orations we hear

When Dutch Hoffman gets up to speak.

Alexander the Great was a scrapper of note,—

Many men by his strong arm died,
But he'd surely get licked if he played in a game

With Tommy Clark on the opposite side.

From Auld Scotia's shores great musicians have come,

Sweet singers o'erladen with fame;
But we've one among us who ne'er had a peer.

And Sandy Maclaren's name.

* * *

Though their names are not written on history's page,

Though their deeds are not known to fame—

Though the world may not ring with their praises loud,

Yet they're heroes just the same.

They continue to eat and still pass their exams.

So let's drink with three times three
To the unknown hero-band that dwells
In our midst at the O. A. C.

—R. F.

◇ ◇

Mr. Thom—"For information on gasoline and hot-air engines, read Johnson's work on steam engines."

◇ ◇

Orvis (criticizing at public speaking)—
"Mr. Orser does not pronounce his words very extinctly."

◇ ◇

L.—"Can you tell me what the "S" stands for on the American coins?"

Ross—"Schartow!"

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WE HAVE hundreds of artistic designs made from the finest quality of soft steel by skilled mechanics who are experts at the business and who never produce an inferior article. All our ceilings are coated with *white zinc enamel*. No cheap trash made by us, but we can supply you with reliable, perfect fitting, easily erected, artistic, and exceedingly durable Metallic Ceilings, that will give enduring satisfaction, at prices that are no higher than inferior imitations.

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(Signed) MADDEN BROS.,
Tinsmiths and Hardware Merchants.

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Manufacturers Toronto and Winnipeg.

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Ornamental

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you are thinking of covering and we
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Begin your operations in all things by establishing a good foundation. In nothing is this more essential than in the production of crops. In this case the proper Foundations to use are SIMMERS' SEEDS.

They are "ALL QUALITY."

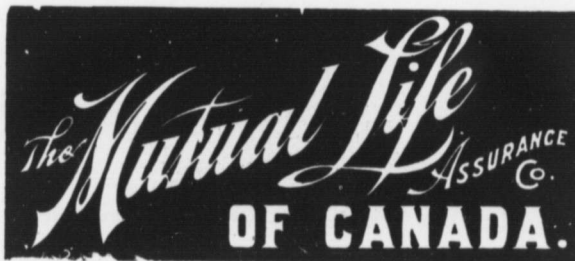
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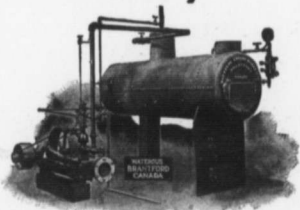
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go best on*

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TIRES**

**Conversation Overheard During a
Hockey Match.**

While a Macdonald and Guelph girl were struggling for the ball, a young lady who was most interested in the game announced in a stage whisper.

"Well, for goodness sake! Just look at that for combination, two girls are trying after the same ball!!"

◇ ◇

Mr. Fulmer—Ferric Oxide is used as an anecdote in arsenic poison.

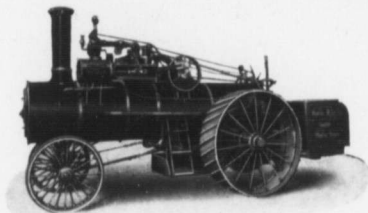
◇ ◇

Spry (scratching his cranium)—Mr. Jarvis, will cockroaches kill bedbugs?

◇ ◇

The Experimental Dept of this Institution is a strong advocate of Chevalier barley, as good whisky can be made from it.

**WATERLOO ENGINES
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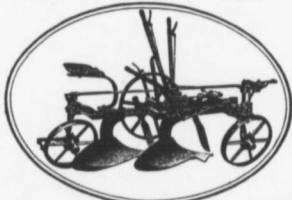
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Has all the merits of the Beaver Gang, and is the fastest and easiest sulky plow made for heavy and hard work. Beam is extra heavy high-carbon steel, very strong. Wheels absolutely dust-proof, always under driver's positive control, and arranged so plow adjusts itself automatically to any unevenness of the ground. Extra large land-wheel makes it an easy plow to handle. New lever and spring-lift raises the plow with little effort. Supplied with bottoms to suit any soil. Cuts 7 to 9 inches wide; depth cut regulated by fractions of an inch. Write for details.

LIKE every Cockshutt implement, these plows are built to stand harder usage than they likely will ever have to stand. That surplus strength doesn't show in the price; it *does* show in everyday use in the field. Add to it the value of over thirty years experience in designing practical farm-implements, and you have the certainty that your plow will draw lighter and work faster and better if it bears the Cockshutt name.

THE COCKSHUTT LINE built right to farm right, includes not only more than 120 styles of plows ranging from light garden plows to hugh 12-furrow engine gangs, but also all styles of seeders, cultivators and harrows. Write us for details of the kind of implements the business farmer ought to buy.

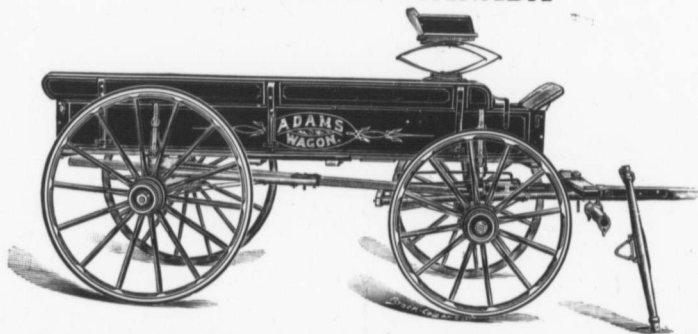
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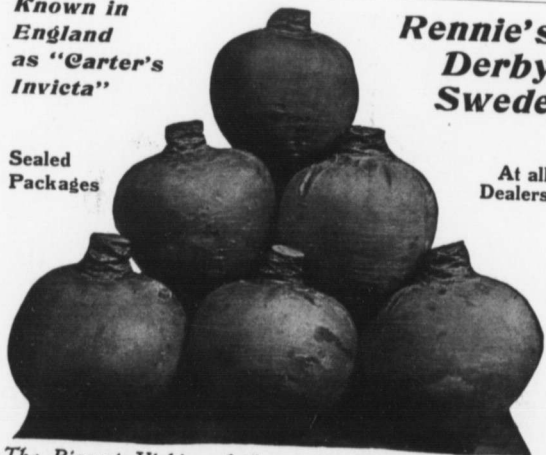
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ANALYSIS ARE MISLEADING.

The best Stockmen of Canada have made practical tests of Herbageum and it has not failed. We mean such men as D. C. Flatt, John Orr, Telfer Bros., Matt. Richardson & Son, R. H. Harding and others of international reputation as stockmen. An analysis does not show any great food value in Herbageum, but it must be borne in mind that Herbageum is not used for its food value. Its aromatic qualities enable the animals to thoroughly digest their ordinary food and by so doing, extract from that food its maximum of food value. For this reason analysis are misleading.

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The feeding of farm stock requires good judgment as well as good food. The food given may be of the very best and the ration properly balanced, but if it lacks the aromatic qualities of a good pasture the best results cannot be obtained. The best substitute for those qualities is Herbageum, it is not a food and practically has no food value in itself, but given regularly with the ordinary food ration the very best possible results obtainable from the food given will be secured. Herbageum is recommended by the best breeders for dairy cattle, calves, sheep, pigs, poultry and horses.

HERBAGEUM.

Herbageum is not a stock food. An analysis will show little food value, but when fed with ordinary food grown on the farm it makes the food easily digestible, and thus adds greatly to its value. Impure blood and nearly all the ills of animals arise from improper digestion and assimilation of the food. Herbageum makes animals healthy by assisting them to digest and assimilate their food. As a blood purifier and tonic for all classes of live stock it has been used by farmers throughout Canada for twenty-three years. It contains no drugs and cannot injure any animal.

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"A man he was, to all the ladies dear."
—Fred Edgar.

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The well-known fence expert, E. L. Dyer, of Toronto, has written an instructive little manual that tells things every fence-buyer ought to know before he buys. How to test wire—how to build fence. Readers of the O. A. C. Review have a limited opportunity to get a copy of this useful book by sending ten cents (stamps or coin) to Mr. Dyer, King Street and Atlantic Avenue, Toronto; but, as the number of copies available at this nominal price are few, it would be as well to write for it at once, and be sure to mention that you are a subscriber to The O. A. C. Review.

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Make the dealer give you a foot-long piece of the horizontal wire from the other kind of fence—and a piece from a Page Fence.

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Try to bend them—both of them.

The Page wire will be found to have taken such a temper that it will cut glass. The other wire will bend like sheet-tin and easier.

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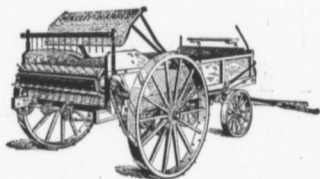
And that test also proves other fence-wire to be merely "hard drawn" that softens if you try to temper it. Such wire must stretch too much in service—must make only saggy fences—must give out in short order.

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And you will see, too, that this great strength makes it possible to stretch Page Fence tighter—and to use fewer posts to hold it tight. The saving in posts figures 5 to 8 cents a rod—and yet the Page Fence will be a stauncher fence.

Let us send you a booklet that proves why Page Fences wear best and tells how you can prove fence-quality before you buy it. Get the booklet from the nearest place of the Page Wire Fence Co., Ltd., Walkerville, Toronto, Montreal, St. John, Vancouver, Victoria.

"PAGE FENCES WEAR BEST"



POINTERS ON SOIL FERTILITY

Amount of Manure Required

It is, of course, impossible to give any definite rules on this point, but tests conducted by Agricultural Colleges, Government Experts and others have proved that a light coating applied by a Manure Spreader gives much better results than a heavy application by hand, thus causing a given amount of manure to cover much more land and acre for acre the land will yield more with the smaller amount applied with the spreader.

Top Dressing of Field Crops

The Manure Spreader has made possible the top dressing of field crops which in a majority of cases gives the best results; for the first rain carries the fertilizing constituents down into the soil directly to the roots of the plants, the top coating serves as a mulch to prevent drying out and also, in the case of fall sown crops, as a protection in winter.

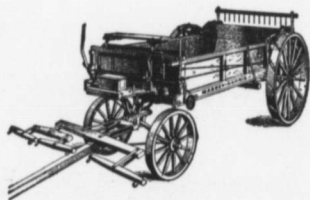
Manuring a Meadow

This can be successfully accomplished by using a Massey-Harris Manure Spreader. It cannot be done satisfactorily by hand as the spreading would be very uneven and many large chunks would be left to find their way into the hay, rendering it almost, if not quite, unfit for use.

On Pasture Land

A light coating of manure can be applied with this Spreader so as to greatly improve the pasturage without causing the cattle to refuse to graze over it as would almost surely result from hand spreading. Many pastures which were almost worthless have been reclaimed in this way.

**Massey-Harris
Co. Limited
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Canada**



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Right Price**

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EQUIPMENT
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If a manure spreader were of value only as a labor saver, it would be indispensable for that one purpose. But when its aid in producing big crops is considered, you can readily see its importance.

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The Corn King and Cloverleaf spreaders are made so simple, strong and durable, that one of them will strongly appeal to you.

The International local agent will tell you all about the
I. H. C. spreader handles. If you prefer, write for catalog.

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THERE are few national institutions of more value and interest to the country than the Royal Military College at Kingston. At the same time its object and the work it is accomplishing are not sufficiently understood by the general public.

The College is a Government institution, designed primarily for the purpose of giving the highest technical instructions in all branches of military science to cadets and officers of the Canadian Militia. In fact it is intended to take the place in Canada of the English Woolwich and Sandhurst and the American West Point.

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Whilst the College is organized on a strictly military basis the cadets receive in addition to their military studies a thoroughly practical scientific and sound training in all subjects that are essential to a high and general modern education.

The course in mathematics is very complete and a thorough grounding is given in the subjects of Civil Engineering, Civil and Hydrographic Surveying, Physics, Chemistry, French and English.

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In addition the constant practice of gymnasiums, drills and outdoor exercise of all kinds, ensures good health and fine physical condition. Seven Commissions in His Majesty's regular army are annually awarded as prizes to the cadets.

Three Commissions in the Permanent Force will be given annually, should vacancies exist, to the graduating class, viz.:—Every year one in the Infantry; and each alternate year:

One in the Engineers and one in the Horse Artillery.

One in the Cavalry or Mounted Rifles and one in the Garrison Artillery.

Further, every three years a Commission in the Ordnance Corps will be given to the graduating class.

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The total cost of the three years' course, including board, uniforms, instructional material, and all extras, is from \$750 to \$800.

The annual competitive examination for admission to the College will take place at the headquarters of the several military districts in which candidates reside, in May of each year.

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



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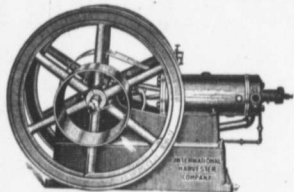
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the I. H. C. engine—a reliable helper
—the best hired man.

Because it is always a convenient source of economical power—works right day or night, summer or winter, for anybody—you or your boy.
They are built on right lines, and made so simple and easy to understand that nothing but neglect or misuse can put them out of action.

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Famous Air-cooled Engines in 1 and 2-horse power.

Also Famous sawing, spraying and pumping outfits. A complete line of Famous self-contained engines mounted on skids or ready for mounting by the purchaser.

Call on International local agent for catalog and particulars, or write the home office.

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(Incorporated)
CHICAGO, U. S. A.

OFFICIAL CALENDAR



OF THE
DEPARTMENT
OF
EDUCATION

April:

1. Returns by Clerks of counties, cities, etc., of population, to Department, due. [P. S. Act, sec. 73]. (On or before 1st April).
8. High Schools, second term, and Public and Separate Schools close. (Thursday before Easter Sunday).
9. Good Friday.
12. Easter Monday.
13. Annual Meeting of the Ontario Educational Association at Toronto. (During Easter Vacation).
15. Reports on Night Schools due (Session 1908-1909). (Not later than the 15th April).
19. High Schools, third term, and Public and Separate Schools open after Easter Holidays. (Second Monday after Easter Sunday).

May:

1. Arbor Day. (1st Friday in May).
21. Empire Day. (1st school day before 24th May).
24. Victoria Day (Monday).

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Microscopes, All Styles.	
Microscope, Dissecting.....	\$2 50
Magnifier, Tripod.....	45
Linen Tester, Magnifier.....	25
Dissecting Set, 5 instruments in case.....	1 25

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Supplies, Art Supplies, Manual Training
Supplies, Maps, Globes, Charts,
Atlases, etc.

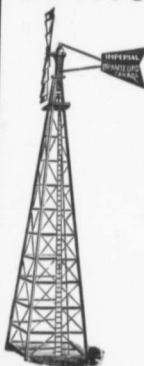
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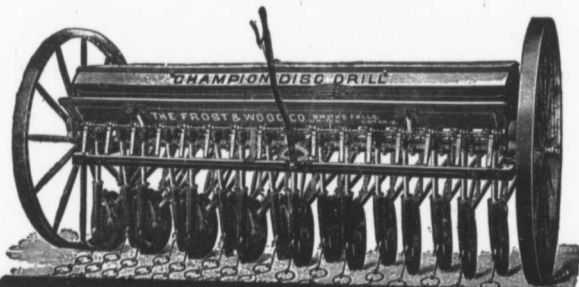
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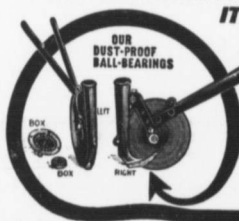
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The People's Store

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We take much pleasure in extending to the lady students of the Macdonald Institute a cordial invitation to visit our store.

You will find our place of business interesting as an evidence of modern dry goods. It would be impossible in this space to describe our immense stock of goods, but will only mention in a general way some of the departments.

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Millinery Department—Now in full swing, with all the latest styles.

Ladies' Ready-to-Wear Department—Is now at its best. "Novi-Modi" Costumes, Swell Jackets direct from Berlin, Germany and London, England. Skirts and Blouse Waists in all the newest designs. A visit to our store will well repay you.

BENOR, SCOTT & CO.

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