

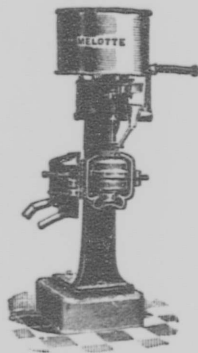
Vol. XVIII.

No. 3.

The
O. N. G.
Review

DECEMBER,

1905



Melotte sizes 1 to 6.
Capacity
400 to 1,300 lbs.



Cream Separator Facts

TALK No. 3

These "TALKS" have already dealt with two essential features of Separator Construction, SIMPLICITY of CONSTRUCTION and SPEED.

CLEANLINESS

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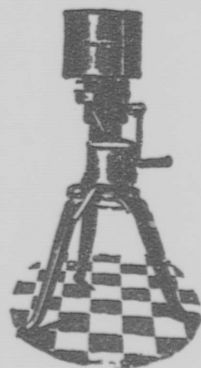
There is no Cream Separator on the market which comes up to the "Melotte" for ease in cleaning and cleanliness in operation. In designing the "Melotte," the same attention has been given to this matter as to the other two indispensable requisites of high-grade Cream Separators, namely, ease in turning and clean skimming. The "Melotte" bowl is shallow and wide. It opens in the centre, so that every part of it can be easily cleaned, and every part of it and the skimming device can be seen to be clean. The long, narrow bowl of the high speeders opens only at the end, so that it is very difficult to clean it, and, practical speaking, impossible to see whether it is clean. The difficulty of cleaning it will be apparent when the milk distributor and the interior arrangements of the bowl are examined. The former consists of a metal cup with a dozen or more divisions radiating from the centre, forming over forty small corners. Besides this, there are a number of small holes for the passage of milk and cream. In actual use, it is probable that these parts would not be thoroughly cleaned during the whole course of the year. The consequence is, *that tainted cream is likely to be produced at any time*, according to the mood of the microbes permanently resident in these secure retreats, the butter made from such cream quickly becoming rancid and marketable. Sizes 1 to 6 "Melotte" Cream Separators are the only machines having bowl casings lined with porcelain enamel, besides which there is no material so suitable for the purpose, none so durable, or that can be so easily cleaned.

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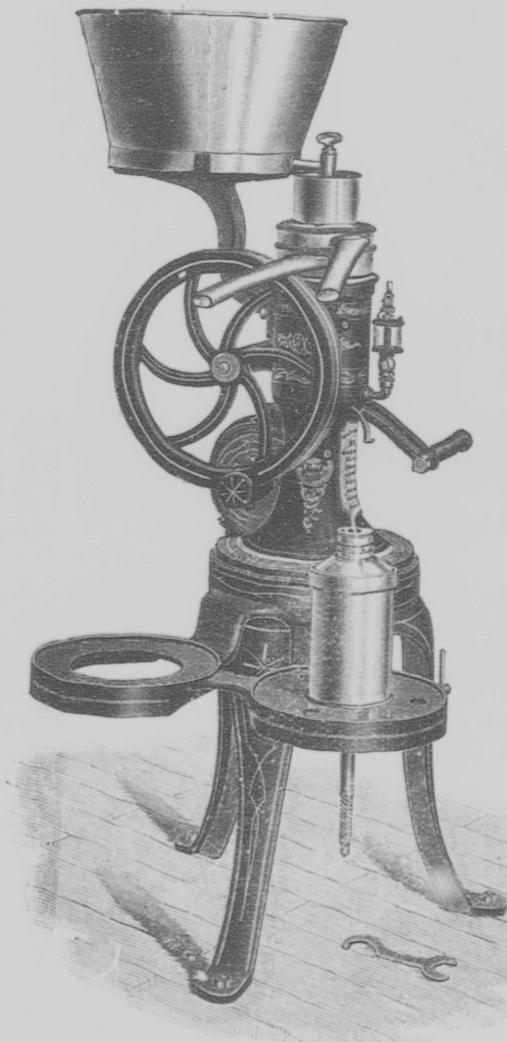
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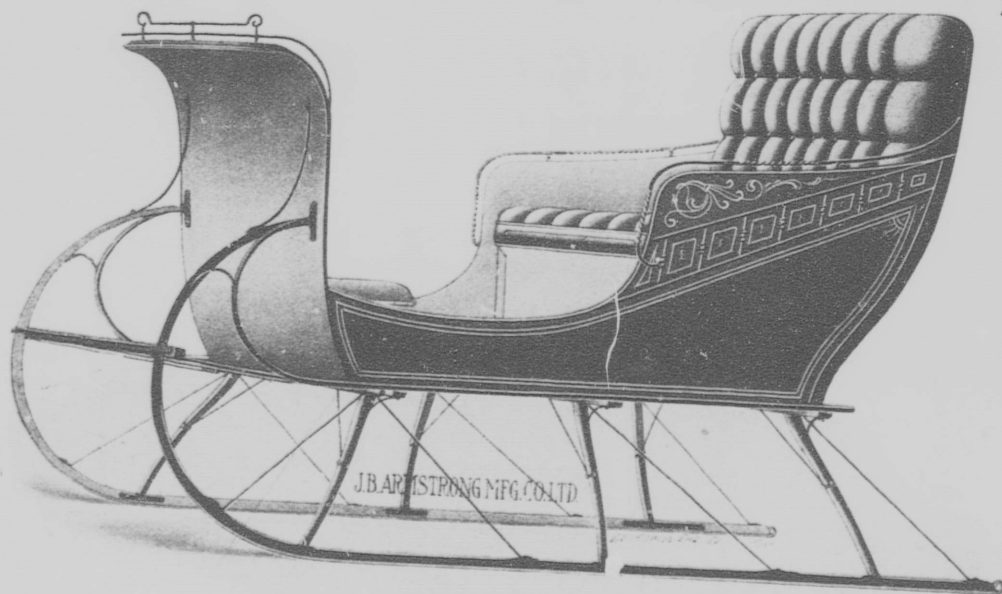
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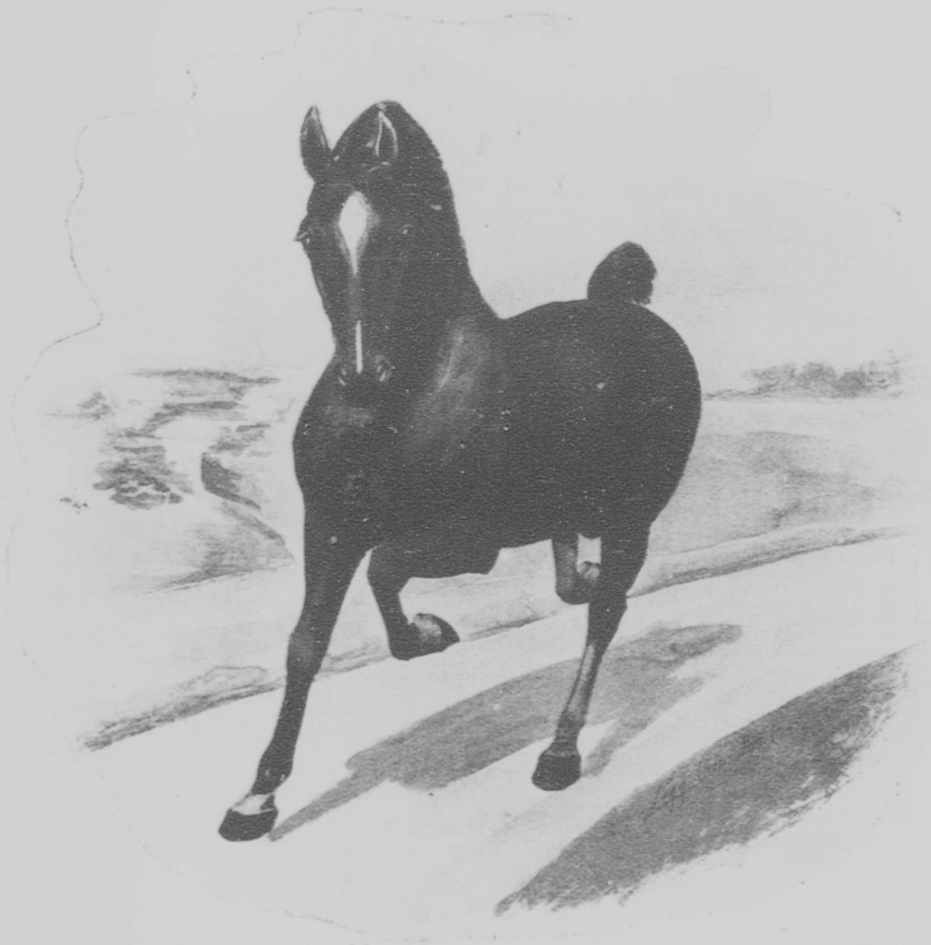
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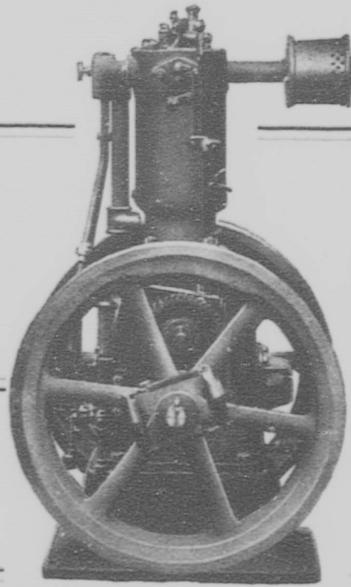
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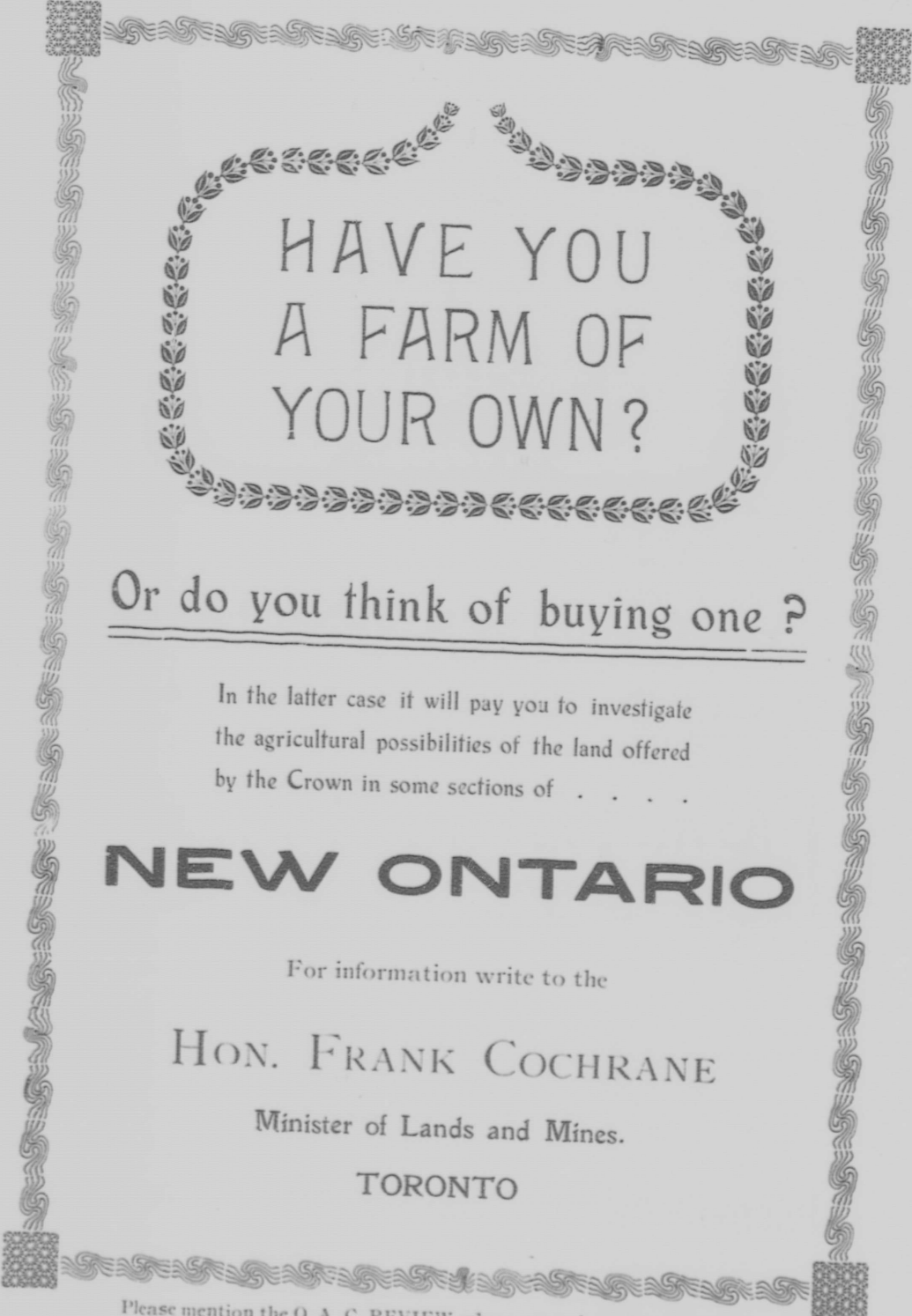
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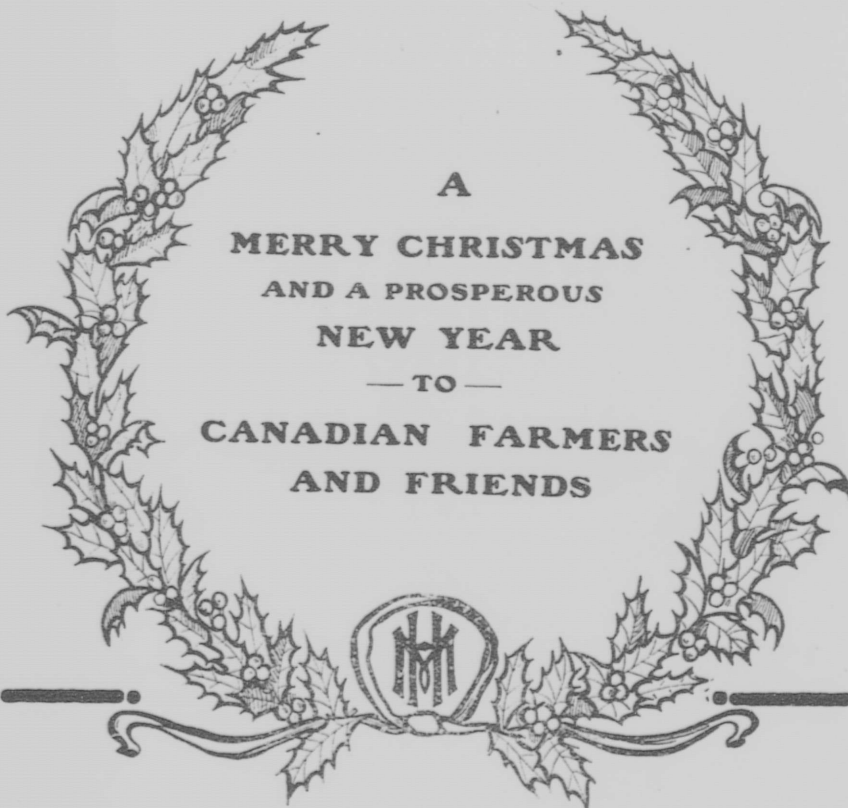
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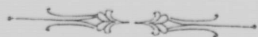
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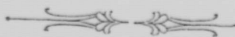
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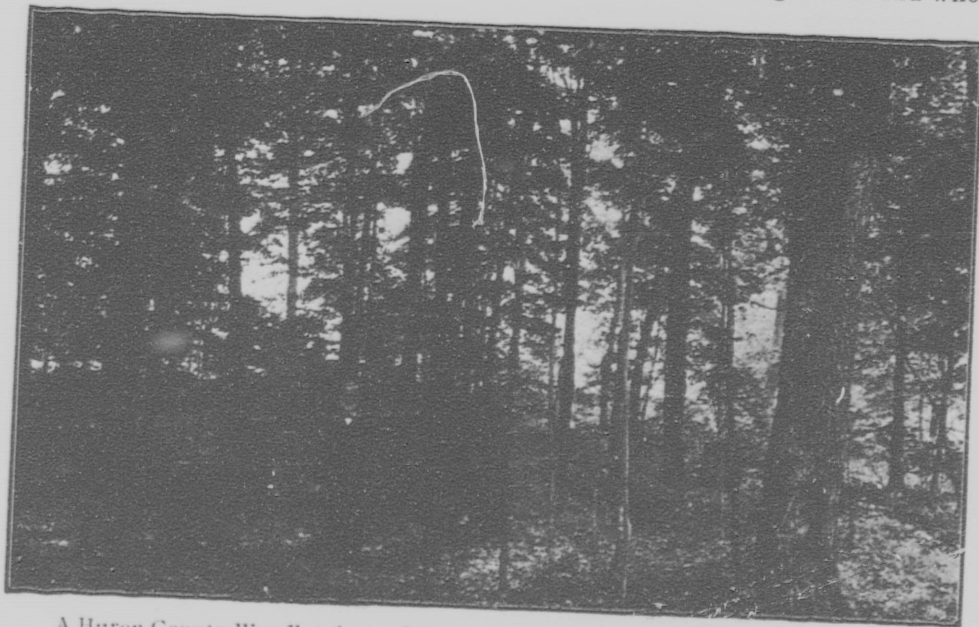
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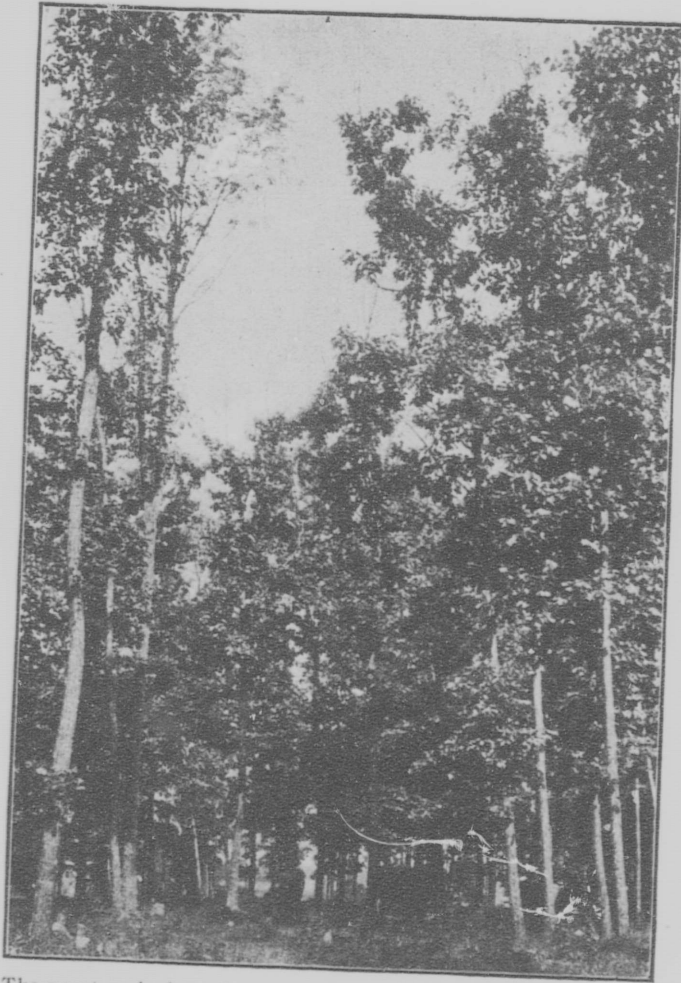
The Grazing of the Woodlot.

By JUDSON F. CLARK, Ph.D.

NO student of the varied productions yielded by soil may learn so much of value to his profession from nature's own methods as the forester. How different are the crops produced by the agriculturist, the orchardist, and the gardener, from anything found in nature, and how different are their methods from the methods of nature! On the contrary, the forester finds the most ideal conditions as regards forest soil and soil cover in the natural forest, and nature has produced unaided single trees and whole



A Huron County Woodlot, into which the cattle were admitted about 13 years ago. At the time there was a good reproduction of all kinds of trees. Now, all young trees have been destroyed, except the ironwoods and an odd elm.



The great majority of trees in this Woodlot are dying at the top. There is also an absence of reproduction to fill up the gaps, and a marked decrease in the rate of growth in diameter.

stands which, in the perfection of form and quality, may well defy human bettering.

It does not follow, however, that the forester is superfluous, for Nature, good forester though she be in some respects, has regard only for the "fittest to survive" of the trees which chance to be present. Unfortunately, the fittest to survive may be, and often are, of little use to man. A second disability under which Nature labors as a practical for-

ester is that when her crop is mature she cannot clear the ground for a new one, but must wait for years, decades, possibly even a century, for the mature trees to give place to the new crop by the slow process of decline. These features of natural forestry account for the vast difference between the annual value of the product of a forest growing under natural conditions and one under the care of man. The amount of timber which may be annually produced by a square mile of forest, or may at one time stand on a square mile when grown under the care of foresters, is a matter of astonishment, and almost incredibility, to the logger accustomed to the conditions in the wild woods.

But the forest which has passed under the care of man may or may not be improved by the

change. Unfortunately the farm woodlots are, as a class, not improved by what attention they have received. This is due to unwise use of the axe, to fire, and to grazing. It is this last and perhaps greatest curse of woodlots that I am asked to discuss in this paper.

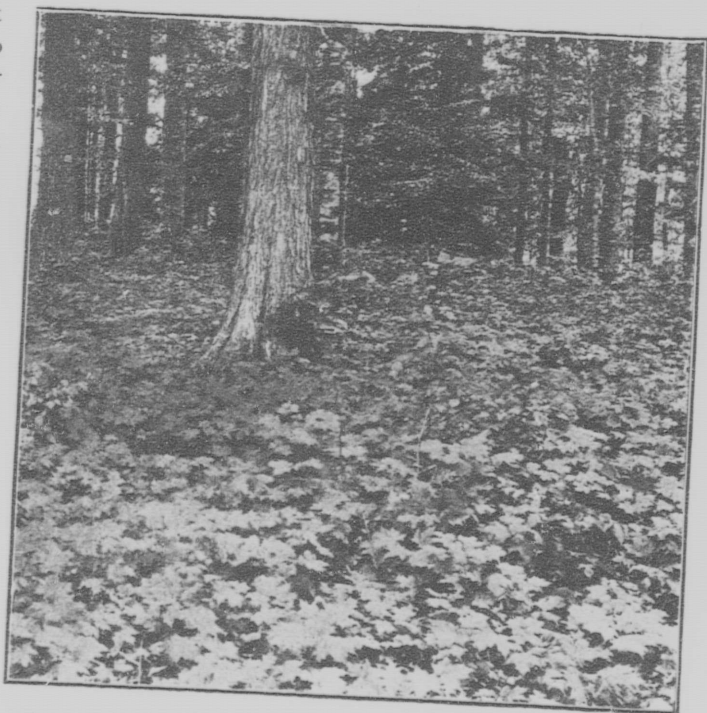
The grazing of woodlands by game or domestic animals is, without exception, more or less injurious. The amount of injury in any given case will depend on the kind of live stock grazed, the rela-

tive abundance or scarcity of food, the quality of the soil, the kind of trees, and the age of the stand.

Of domestic animals goats are by far the most injurious to young woodlands; next to these must be placed the fine-wooled sheep; then the coarse wools, horses and cattle. In older stands it does not so much matter as to the kind of stock, for the injury is then limited to the soil and its covering, the trees being beyond the reach of the browsers. Hogs are not injurious to woodlands except when it is desired to get a reproduction by natural seeding, in which case they must be excluded until the young trees have become well established. They may, indeed, be of great value in a woodlot when the trees are attacked by insect pests by the destruction of pupae in the soil.

The most obvious injury to woodlands by grazing is the destruction of the young trees which, if the woodlot is to be permanent, must be present to replace the mature trees as they are removed from time to time. If the woodlot has not been heavily grazed there may be a fair representation of young trees present, but on examination it will be found that they are almost exclusively of inferior species. Fig. 1 represents such a woodlot. Any casual observer would say that there was a splendid reproduction

of young trees. As a matter of fact I found only three young trees on the several acres examined which were worth anything for woodlot purposes, practically all the small trees being of ironwood. It is indeed a matter of prime importance that all kinds of live stock



A sugar bush which had been grazed for many years, but which has recently been protected from live stock. The reproduction of sugar maple is simply ideal.

prefer the foliage of such valuable trees as the tulip, basswood, maple, ashes, and oaks to that of the hop-hornbeam, blue beech, sassafras, beech thorn, and the like, and therefore wherever grazing is practiced at all the young trees of the best species suffer, giving an undue advantage to the less valuable kinds. Where the stand is entirely of broad-leaved species the injury is greatest, for domestic animals do not, as a rule, willingly browse the foliage of evergreens.



A line fence between two Huron County Woodlots. The Woodlot on the left has been grazed many years. Grazing was discontinued on the Woodlot on the right nine years ago, and the abundant natural reproduction has already restored natural conditions.

Many of the latter are destroyed, however, by being unintentionally eaten with the grass, which they closely resemble, during the first two or three years of their lives, and others are destroyed by the treading of the hoofs, especially on hilly ground. The unfavorable conditions for a seed catch, due to the compacting of the surface soil, the exposure to drying winds, and the competition of grasses, all of which are directly caused by grazing, further limits the possibility of a satisfactory reproduction.

The injury to the vigor of growth of the trees forming the farm woodlot is a much more insidious evil than the destruction of the reproduction. No farmer knows how rapidly his trees grow from year to year, and consequently cannot possibly tell whether the grazing has or has not decreased the rate of growth. Careful measurements have demonstrated that grazing does greatly reduce the annual amount of wood pro-

duced by growth. Just how great this decrease in production will be depends, of course, on local conditions. As an average figure it is safe to say that few woodlots which have been heavily grazed for ten years produce more than half their normal production, and in many cases decidedly less. This loss of vigor in the trees may be most readily seen by examining a woodlot which grew to its full height under natural conditions, and which was subsequently grazed. It is a matter of a few years only when the changed conditions manifest themselves by the death of the tops of the trees. Figure 2 illustrates a case in point.

The decreasing vigor of growth exhibited by trees where grazing is practiced is due chiefly, but not wholly, to the increasingly unfavorable moisture conditions obtaining in the soil. The available moisture is unfavorably influenced by

(a) Increased air motion due to the

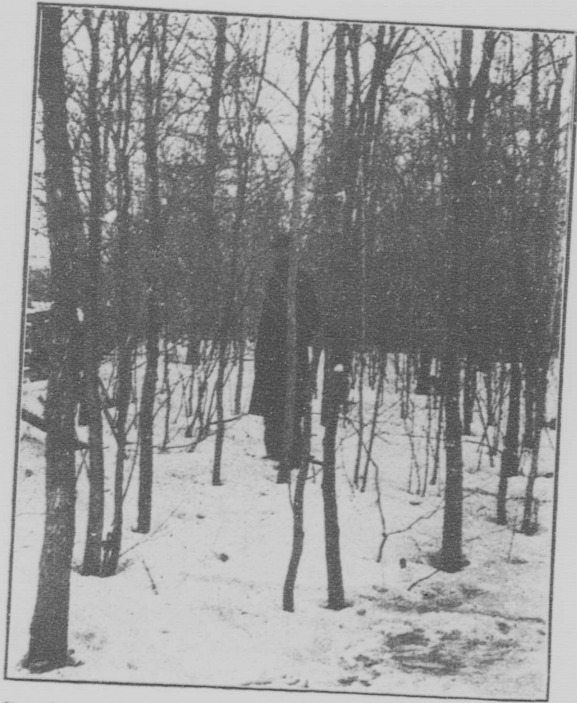
absence of an undergrowth, at the surface of the soil, which dries the soil by direct evaporation, and increases the transpiration of the soil cover.

(b) The absence of the mulch of decaying leaves which is so characteristic of all natural forests, and which is so efficient a check to evaporation from the soil.

(c) The presence of grasses and other moisture-robbing weeds—a result of the absence of the mulch and the admission of light to the soil, this latter a result of the absence of an undergrowth of young trees.

(d) A decrease in the humus content of the soil, the combined result of an abnormal amount of light and heat reaching the soil. This decrease in humus results, of course, in lessened powers of absorbing and retaining moisture.

(e) The compacting of the soil so as to cause a more rapid run-off, and consequently a decreased absorption of water during heavy rains—a most important point, especially on hilly ground, as will



Previous to 1893 this Woodlot was heavily grazed; since then the cattle have been excluded. The photo shows how a former open spot has been filled up with desirable young trees. Reproduction such as this could not, of course, be expected where the ground is heavily sodded.

be appreciated when it is recalled that a large proportion of the precipitation during dry seasons falls in the form of thunder showers.

Companionship With Nature.

Let us be much with nature; not as they
 That labour without seeing, that employ
 Her unloved forces blindly without joy;
 Nor those whose hands and crude delights obey
 The old brute passion to hunt down and slay;
 But rather as children of one common birth,
 Discerning in each natural fruit of earth
 Kinship and bond with this diviner clay.
 Let us be with her wholly at all hours,
 With the fond lover's zest who is content
 If his ear hears or if his eye but sees;
 So shall we grow like her in mould and beauty bent;
 Our bodies stately as her blessed trees,
 Our thoughts as pure and sumptuous as her flowers.

—Lampman.

HOW refreshing to the mind and soul it is, in this busy age of bustling commercial enterprise, this age of iron, of money and of money making, to turn a page of one of the great and loving observers of nature. The poets, the artists, the naturalists who have seen and appreciated the beauty and wonder in form and color of the aspects presented by bountiful mother nature, teach us how to discern and enjoy the beauty which exists in such profusion around us.

How truly Lampman expresses the heart's desire of the lover of nature; yea, it seems to me that the sonnet quoted utters the unspoken, often unrealized longing of the great mass of mankind, whether they are acknowledged lovers of nature or not. Ruskin said: "To watch the corn grow, the blossom set, to draw hard breath over the ploughshare and the spade, . . . these are the things that make man happy." All may not agree with this; we are not all the same in our likes and dislikes; but the idea contained is, I think, that to be truly happy, natural man in his normal condition should be in complete harmony and correspondence with his natural environment, and man's natural environment is the many-sided nature around him. But how few of us, even those who live in the country where nature's grandeur, beauty, and majesty abound on every hand with all its sublimity and purity, how few of us appreciate our heritage to the full. We have eyes and we see not, ears and we hear not. Alas! we are of those who "Labor without seeing, that employ her unloved forces blindly without joy." Through Spring, Summer, Autumn, and Winter we are out in the fields, and the glorious everchanging panorama of beauty which the shining orb of day presents to our view, gorgeous sunrise, ethereal blue sky, fleecy clouds, opulent sunsets with the tender gloaming after effects, these we do not see, therefore we do not appreciate, therefore we do not exult in. We do not observe, we do not realize, we do not delight ourselves in God's handiwork in the book of nature.

The man who forms the habit of observation, in its widest sense, lives in a world that grows wider and richer, and finds in it an inexhaustible source not only of increasing knowledge, but also of fresh wonder and delight. Notwithstanding the fact that Wordsworth, Thompson, Shelley, Burns, Tennyson, and even great Shakespeare himself, have shown us in a thousand places how the various aspects of nature, from the infinity of the star-bespangled sky to the dainty little flower, the daisy and the celandine, or in the case of Ruskin, a blade of grass, have enriched and beautified their life's experience, we fail to profit by the lesson. Even the passionate headstrong Byron was led to exclaim,—

"There is a pleasure in the pathless woods;
There is a rapture by the lonely shore;
There is society where none intrudes,
By the deep sea and music in its roar.
I love not man the less, but nature more,
From these our stolen interviews in which I feel
That I can ne'er express yet cannot all conceal."

Yes, Byron, with all his passions, felt a balm and sweet restfulness when contemplating the sublime and soothing aspects of nature.

In his "Tintern Abbey" Wordsworth writes respecting the landscape around the old historic building that he was revisiting,—

"These beauteous forms,
Through a long absence, have not been to me
As is the landscape to a blindman's eye:
But oft, in lonely rooms and mid the din
And cities, I have owed to them,
In hours of weariness sensations sweet,
Felt in the blood, and felt along the heart;
And passing even into my purer mind
With tranquil restoration."

Such rapturous experiences belong to all of us, if we would only realize it. As the greatest writer of all has said :

"There is music in trees,
Books in the running brooks,
Sermons in stones, and good in everything."

But, owing to our lack of observation, we hear not the music of the trees, we understand not the sermons of the stones, we peruse not the books in the running brooks, and on the whole we take little good out of anything : as a result our lives are dull, dreary and gray. As a young Canadian poetess recently expressed herself in Harper's :

"Out in the noisy street I fare,
With all its dust and hideous cries;
Lonely and slaving at my task,
As long as daylight fills the skies."

This is the cry of thousands of Canadian men and women, not only of those dwelling in the city itself, but even of those who live and work on the farms—

"Lonely and slaving at my task,
As long as daylight fills the skies."

How dreary, how sad : no compensation for all our labor other than a few dollars, and not even this if the season proves unfavorable. Yet, if we only would take an interest in some of the many varied features of Dame Nature, our lives

would inevitably become bright and happy, instead of sad and dreary. Burns was a farmer, but his happiest moments were not when he was counting his cash returns from the soil, but rather when contemplating some object of beauty observed whilst turning over the sod or bringing in the harvest. Hogg was the "Ettrick Shepherd," lonely on the moors and mountain side with his sheep in all kinds of weather, yet how his observations of nature made him sing. Such experiences, such enjoyment in nature are not confined to the old poets. A short time ago, in a letter which I received from a young fellow in the Old Country, I found these words:

"I have just been watching the sunset from off the Wrekin. I cannot describe it; but as I watched the sunlight topping the hills and trees with a golden glory, saw the mists stealing, stealing up the valleys wrapping the landscape around as with a winding sheet, the hills in the distance looking dim and ghostlike, the trees blue and green in the shadows—Turner's blue and green I always call it—as I saw these things I thanked God I was alive; thanked him for giving me the nature that takes an interest in these things. I love them, I love this world and all it contains: the trees and flowers, sea and sky, sunlight and starshine. I love it all and the God who made it, and I pity those people who cannot appreciate God's works as seen in nature all around us. I like to go now in the evening, just as the leaves are beginning to fall, 'a solemn stillness reigns all around, a great peace seems to be brooding o'er all the woods,' and as I sit in the Escale woods the Wrekin towering dim and blurred above the treetops, the cares and vexations of the workingday grow small and trivial: and money and bread and cheese don't seem the only things worth striving for. Thoughts I cannot speak, but only listen to, flood in upon my soul, and sitting in the stillness under earth's darkening dome, I feel I am greater than my petty life with its paltriness and pride. Hung round with those dusky curtains the world is no longer a dusty workshop, but a stately temple wherein men may worship and where, in the dimness, our hands may touch on God's."

Exultation in our surrounding, such as this, is an experience worth all the pains taken in training ourselves to observe the various aspects presented by earth and sky in summer and winter, spring and fall; and I believe the power to appreciate the beauties of nature is inherent in the great majority of us. Where is the child that cannot be interested in the flowers of the field and hedgerow, the birds of the air, the caterpillars, moths and butterflies that exist in such profusion. Early one morning in the spring, whilst returning from a walk in the country, I met with two little lads of some nine or ten years of age. Just as I was nearing them, they arrived at a small hawthorn bush on the twigs and thorns of which globules of a heavy dew were resting. The bright rays of the sun were striking these glistening dewdrops, and they were scintillating more brilliantly than the finest diamonds cut by a master hand. The glee and unfeigned delight of these youngsters as they beheld this striking, though very common spectacle, was an intense pleasure to behold. "Don't touch it! don't touch it!" they cried one to another as they stooped to examine the begemmed bush more closely: "my! ain't it pretty? ain't it fine?" were the unsophisticated expressions that burst almost unconsciously from their

lips. They were evidently filled with pleasure perhaps more intense than was experienced by Browning when he conceived the song of Pippa :

"The year's in the spring;
The spring is at morn; the morn is at seven;
The hillside's dew pearled,
The lark's on the wing,
The snail's on the thorn, God's in his heaven,
All's well with the world."

(What a beautiful suggestion of Browning's this is : Pippa, who is a poor blind orphan girl, earning her living by working long hours every day in a factory, and on this one holiday of the year, walking out to feel the sunshine that she cannot see, and by its peace yielding influence being constrained to sing the song from the depths of her heart. Browning knew the benefits that accrue from an intimate acquaintance with nature.) Those two boys are typical of the average boy and girl. The interest and delight which they evidenced in viewing the spectacle of the dewdrops on the thorn is no more than is common to impressionable boys and girls of their age. But alas ! the demands and customs of modern life soon make themselves felt in their lives as they grow up to be youths and maidens. They cease observing and taking interest in the common every day aspects of nature existing around them in profusion, which all may enjoy : and as Robert Louis Stevenson would say, "They become like other respectable married people with umbrellas." The effulgent glory of the sunrise, the transcendent beauty of the sunset, the majestic grandeur of the hills, the boundless extent of the plains, the valleys in verdure clad, the rugged oak, the graceful birch, the pure white daisy, the golden buttercup, fail to elicit any response from their heart strings. Their lives are out of tune and the chords jangle instead of vibrating with pleasure and delight as in the days of childhood's simplicity. And thus we find that Wordsworth's words are true :

"Accuse me not of arrogance, if, having walked
With nature far as frailty would allow,
And offered my soul a daily sacrifice to truth,
I now affirm of Nature and of Truth that their Divinities
Revolt offended at the ways of men, philosophers
Who, though the human soul be of a thousand
Faculties composed, and twice ten thousand interests,
Do yet prize this soul and the transcendent universe
No more than as a mirror that reflects to proud self-love
Her own intelligence."

But a brighter day is dawning in Canada. Lampman with his close observation, hearty appreciation of, and glowing exultation in nature's many glories was the harbinger of this dawn. The present system of nature study in the schools is ushering in the day. The children of our schools, the youths and maidens of our colleges are having their faculties trained to notice and take an interest in the many forms of life, both plant and animal, as never before. With such judicious training, the lives of these will become richer, broader, fuller, more enjoyable and interesting :

"Their bodies stately as her blessed trees,
Their thoughts as pure and sumptuous as her flowers."

DAN. H. JONES, '06.

The Extermination of the Mosquito Plague in New Jersey.

By JOHN B. SMITH, Sc.D.
Professor of Entomology in Rutgers College, New Jersey.

NEW JERSEY has always had the reputation of being a mosquito-ridden State, and not without some show of reason. The country did not seem to be so very different from other places where there were few or none of the pests; but it was certain that for some reason, until recently undiscovered, even the dry pine regions were swarming with mosquitoes. It became accepted then, that every swamp, every river valley, and every bit of low meadow land was a breeding place for the insects, and any suggestion that it might, perhaps, be possible to control them, was looked upon as the vamping of a mad-man, or—what is much the same—an impractical enthusiast.

It took me a year to convince myself that there was really a chance to do practical work, and by that time I had learned that much of our supposed knowledge was merely inherited misinformation, and that, as the foundation

for any satisfactory work, it was necessary to have an accurate knowledge of the problem to be dealt with. My first application to the legislature was, therefore, for an appropriation to make a study of the problem. It cost \$10,000 and three years to complete the task; but it was worth it.

We found that instead of breeding everywhere the species were really very local and needed definite surroundings; we found that instead of always laying their eggs on water, some always laid them in the mud, where they might lie for months, retaining their vitality and ready to hatch when water covered; we found that instead

of hibernating as adults many lived through the winter in the egg or larval condition, and that adults were the exception instead of the rule; we found that some species bred only in salt marshes, and that they would develop as readily in sea water as in a spring; and we found, what in our State proved of the very highest importance, that in-



Filling the marshes with refuse from the cities.

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The Breeding Pool on Cape May, in which 10,636,904 mosquitoes developed at one time; the sixth brood of the season.

stead of being great home-bodies, some species migrated for many miles, and that over 90 per cent. of the specimens in a locality might be of a species that bred from 20 to 40 miles away, so that local work would be almost or quite ineffective. The southern portion of New Jersey is very largely a low, sandy plain, which originally met the shore of the Atlantic in a flat, shelving beach. The action of the currents formed a line of bars parallel with the coast, from one-half to five miles seaward, and the space between this outer bar and the main land silted up and became marsh-land. The bars increased in width and are now sites of numerous summer resorts like Atlantic City, Cape May, and many of minor importance. On some of these marshes conditions are such that mosquitoes breed in vast multitudes, and from these places they fly inland, sometimes twenty miles in a single night. We also demonstrated that the life of an

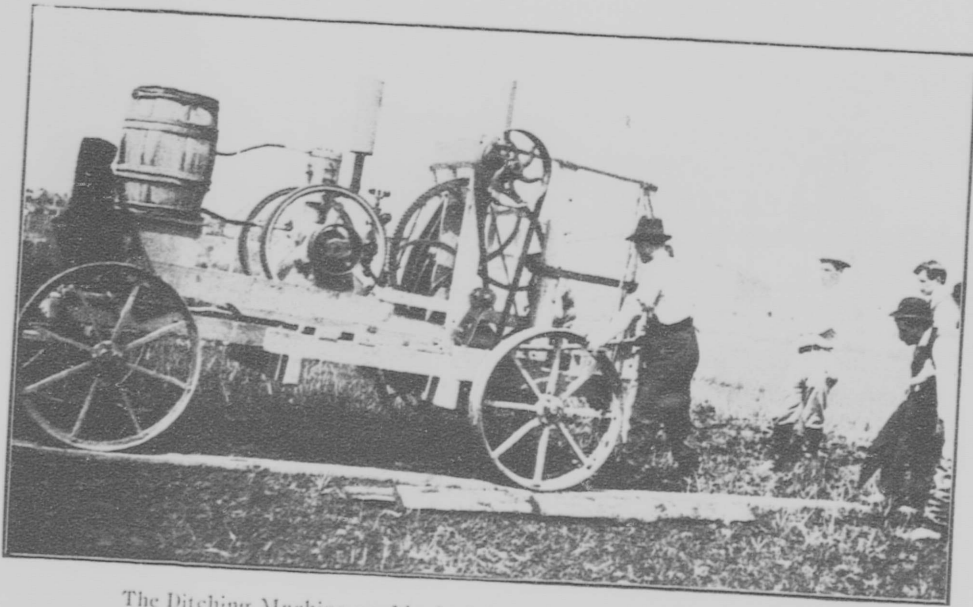
individual mosquito lasted, not a few days only, but might extend to months. Places that had been believed to be veritable pest holes were found to be safe, and that really breeding places were relatively few; but that from them the output might be very heavy. As an illustration, we found that a pool with an area of 1,864 square feet contained at one time not less than 10,600,000 wrigglers, and that was the sixth brood of the season!

With all these facts at hand, and with the absolute certainty that mosquitoes could not breed except in water, we are ready to plan our campaign. In the first place, by an amendment to our health law, "waters in which mosquito larvæ breed" are declared to be nuisances, subject to abatement by local boards of health, like all other nuisances. Under this law several cities and towns have, through the action of local officers, rid themselves of all mosquito breeding

places within their limits, and, everywhere, the boards have absolute power to deal with breeding places of all kinds, if they choose to avail themselves of it.

On the salt marsh the problem seemed serious, until experiments proved that they could be drained of surface water very cheaply and effectively. Instead of digging broad shallow ditches we dug deep narrow ones—2½ to 3 feet deep and

Having demonstrated the practicability of controlling the development of the pest, it was necessary to stimulate local bodies into action, and so the State Legislature appropriated the sum of \$10,000 to aid all communities that began work against salt marsh mosquitoes to the extent of twenty-five per cent. of the cost of the work. This is the law that is in effect at the present time, and



The Ditching Machine used in draining large marshes in New Jersey.

from 6 to 8 inches wide. Such ditches never grow up from the bottom, and as the surface of a marsh is like a huge sponge, surface water was running off into these deep ditches at all times. The cost did not exceed an average of one cent per running foot, and when a ditching machine was used did not even reach that amount on good territory. Of course ground varied; but in our largest experiment, the City of Newark drained 3,500 acres of salt marsh for \$5,000 so thoroughly, that in 1905 practically no mosquitoes developed on it.

under it, it is expected, that a large area of marsh land in the most densely populated sections of the State will be improved during the summer of 1906.

Of course drainage is not always possible, and sometimes filling must be resorted to. This is done at some of our shore points by means of hydraulic dredges, which pump sand from a river or creek bottom, and spread it over the marsh land. Many thousands of acres have been improved in this way, and have made valuable property. In some cities the waste ashes and rubbish, other

than garbage, is used for filling. The City of Brooklyn, N.Y., for instance, uses flat trolley cars with huge iron tanks to carry material to the marshes near Coney Island, lessening the surface that produces the supply which often becomes offensive at that popular resort.

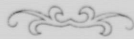
Mosquitoes are nuisances at best, and carriers of disease at worst: they are not known to serve any purpose useful to man, unless it be claimed that they devour organisms of pollution in stagnant water. In that case, however, it must first be admitted that stagnant water is either necessary or desirable; if not, the reason for the mosquito disappears with the stagnant water that permits of its existence.

Oil to kill mosquito larvæ finds no place in our scheme of permanent im-



A typical breeding pool.

provement. It is effective and excellent to obtain quick results and to destroy a brood while permanent work is in progress; but its results are always temporary, and while it is an excellent ally, it is not a reliance.



Here's to the land of the rock and the pine:

Here's to the land of the reefs and the river!

Here's to the land where the sunbeams shine!

And the night that is bright with the North-Light's quiver!

Here's to her hills of the moose and the deer;

Here's to her forests, her fields and her flowers;

Here's to her homes of unchangeable cheer,

And the maid 'neath the shade of her own native bowers.

—William Wye Smith.

Farmers and Politics.

By W. C. GOOD, B.A.

ONE of the most unfortunate consequences of the bi-section of our people into more or less arbitrary political parties has been the degradation of politics: and, largely as a result of this, we have a deplorable amount of popular apathy, and a foolish restriction of discussion. Farmers Institutes are forbidden to "talk politics," and the attitude of a great many otherwise fairly intelligent citizens is somewhat like that of one of my farmer neighbors who, when asked if he were going to vote, replied: "No, Sir! All these politicians are d— scoundrels, on both sides: it's all up with a decent man when he gets with that set." Now, of course, this man's attitude, in a nominally self-governing community, represents the very acme of disloyalty; and it is highly desirable that the false conceptions and baneful conditions which give rise to such should be abolished.

Strictly speaking *politics* is the science of city government, derived from *polis*, the Greek city and commercial unit. It has since been enlarged to include the general science of government. Unfortunately, however, the term is loosely and popularly used by us to signify partisanship in government, with all that that often means. It is high time that we remember its original and proper meaning.

In the evolution of Democracy one well marked tendency has shown itself in the very rapid extension of the duties and privileges of citizenship. Universal suffrage has been often conceived as the one thing necessary for social salvation, and, as a consequence, the power of government has been bestowed upon those who are neither fit nor willing to take a share therein. I do not mean by this that the average Autocracy or Aristocracy is to be preferred to the average Democracy. By no means. Democracy marks Society's "coming of age," and contains the germs of all future progress. I simply mean that the same abuses and evils that accompany aristocratic and autocratic governments also accompany democratic governments; and that political devices and machinery are of no use without a corresponding suitability in the human beings that utilize them. To bestow the franchise upon one who is neither intellectually nor morally fitted to

exercise it wisely can hardly be regarded as a step in advance, and one cannot but see many evils in modern society which result therefrom. This much, however, may be said in favor of the indiscriminate extension of the franchise, in favor of universal suffrage; it emphasises in an extraordinary and unique way the necessity for the development of the average individual—for educating his intellect and his heart. When once the franchise has been widely extended it becomes practically impossible to restrict it; and the only remedy for the evils which incidentally follow this extension lies in the better education of the average individual citizen. The consciousness that in this is to be found the only salvation for Democracy has stimulated public spirit and public effort as perhaps nothing else could, and, in the face of apparent failure, this constitutes the one great argument in favor of Democracy.

In addition to the enlightenment of the individual one thing more is necessary. The political machinery through which the individual citizen finds social expression must be sufficiently plastic to admit of adaptation to society's needs: it must give adequate and equal opportunities to all, to the progressive as well as to the conservative. Otherwise it becomes a clog and a brake upon the wheels of progress and, imposing rigid impediments, suffers change in violent revolution instead of in gradual evolution.

I do not propose in this article to discuss needed changes in our political machinery. That, with the editor's consent, I shall do at some future time. I do propose, however, to indicate some of the lines along which it seems to me necessary that the individual voter, and in particular the average Canadian farmer, should be educated in order that our boasted "free" government may be a government *of, by and for* freemen, and that the latent glorious possibilities of Democracy may be in some degree realized amongst us.

In the first place it is necessary that each citizen be impressed with a keen sense of his responsibilities as a sharer in municipal, provincial, and federal governments. That power should be possessed and conferred without a corresponding sense of responsibility for its wise use is in every regard a calamity; not less so in the exercise of one's franchise than in the use of one's shotgun. No substitute for this sense of responsibility can be had, and not only is it a positive crime to obscure this issue, it is also a positive duty to inform and clarify the public mind and the civic conscience, and to intensify the feeling of responsibility for the wise use of the privileges of citizenship.

In the second place, and as a consequence of the foregoing con-

siderations, every man should regard it as one of his most serious duties to become acquainted, in so far as he finds it possible, with public or political questions. In so doing it is necessary to study these questions on their own merits, quite irrespective of what persons or what parties may have pronounced thereupon. I know that none of us can be quite impartial, or can divest ourselves entirely of the forces of family or party tradition; but unless we *aim* at such an ideal we shall never be of much use in helping to decide wisely the various social and political questions that shall confront us. I take it that this is a matter in which we all suffer not a little from self-delusion: we fancy we are impartial and non-partisan when we are not; and, therefore, I judge that a vigorous and persistent effort will be required before we can cope successfully with reactionary and narrow tendencies, and forces of habit and tradition.

As an illustration of this I shall mention one question which it is of prime importance for the Canadian farmer to consider on its merits, to wit the Tariff. Nothing could be more unfortunate than that the Tariff, which is purely a question of political economy, should be made a matter of class strife and greed, party ascendancy and office holding, and general unholy rivalry. There is no more ominous condition than that exhibited in the recent sessions of the Tariff Commission, where, with few exceptions, each industry appealed for increased special favors for itself. A house divided against itself cannot stand; nor can a nation prosper if its various industrial classes are at warfare with one another. Self-defence is sometimes necessary, but offensive parasitism is destructive alike of self and country, and I fear that in our efforts to "build up" the nation we are destroying all that is worth having,—truth and honesty both in public and private life, class unselfishness, and equitable legislation. One thing, at all events, is beyond controversy, namely, that if the Tariff be regarded as a means of personal, class, or corporate enrichment at the public expense, then fair argument and wise decision become alike impossible from the very beginning. No injustice can long stand unquestioned, and if the Tariff is to be settled right, considerations of justice must be paramount. No permanent settlement can be made unless the Canadian farmer and the Canadian "manufacturer" rid themselves of selfishness and party traditions and 'judge righteous judgment.'

Just now American Democracy is bewailing the extraordinary prevalence of political corruption, of "graft," and of various schemes for private filchings from the public treasury. Boss rule in American cities has been not less autocratic and baneful than the authority of Emperor or Czar in Europe; but rarely does the average citizen so regard it, being content, in the general struggle for existence and perquisites, to let public matters look after themselves. It seems as though some extraordinary pressure or stimulus is necessary before the average individual wakes up to a realization of his own (and his

fellows) dependence upon social and political action for his private welfare. The better the harvests and the more materially prosperous the people are the less disposed do they seem to offer serious opposition to invasions of public right, and unrighteousness in public life. The time comes, however, as it has come in Russia, when long continuance of unrighteousness in social action cripples the individual, brings his efforts and his harvests to nought, and introduces a period of literal starvation. Matters do not always come to this pass. Nevertheless they are in a measure always thus tending, if only people could see the relation of cause and effect.

In addition to the general apathy of the public towards questions in which they are vitally concerned and in the settlement of which they have a duty to perform, another source of evil lies in the undue and selfish prominence of corporate wealth in legislative bodies. To those who have followed the course of American politics for the last few years it will be no exaggeration to state that wealthy corporations are regularly taxed to swell campaign funds, and, in return, are given special legislative powers. Both in Canada and the United States there has been a most extraordinary and ominous growth of the funds used for election purposes, and it is but too deplorably true that this money is contributed by those looking for legislative favors. This species of blackmail and bribery is peculiarly modern, and is one of the greatest and most pressing dangers which American and Canadian Democracy must face. I do not think that the average Canadian farmer, engaged as he is with problems of the soil and of the crops, with heavy and exacting duties connected with his daily occupation, half realizes the magnitude which this evil has already attained, or the terrible dangers which menace him thereby. He does not even realize that his own strenuous efforts are rendered nugatory by reason of the inequalities and injustices that his political ignorance and indifference sanction. The Canadian farmer must come to this realisation, must open his eyes and see things as they are, or there shall be no salvation for him, no matter how well he can grow crops and stock. Such has been the lesson of all history, and it behooves none of us to be indifferent to its teachings.

Another thing the Canadian farmer must do. He must cast off the shackles of political partisanship and learn that the only justifiable political parties are those associations of individuals having common political purposes. Traditional and arbitrary partisanship must be seen as it is, in all its naked absurdity; and the picture of fifty honest farmers going to the polls and nullifying the votes of fifty other fellow farmers having identical political interests and purposes must become a thing of the past. Incidentally I do not hesitate to affirm that the political machinery which virtually compels such folly must give place to something better adapted to our needs. This, however, I shall not further enlarge upon in this article. Partisanship or partyism, then, must disappear in the further evolution of Democracy, as it has disappeared already in the most advanced democracies; and, both as cause and consequence, the "party system" of government will disappear

also. The silent half concealed forces of education are at work, and in good time all obstacles and impediments will be swept away as nuisances that cannot further be tolerated. Time-honored customs, modes of thought and action, will give place to those not less honored by reason and expediency; and these in turn, when they have outlived their usefulness, will be displaced by others.

I said that the Canadian farmer does not realize the extent to which his economic and financial position is influenced by certain political conditions for whose existence he is largely responsible. I shall explain this statement in some detail because I conceive it to be of prime importance, that we should all see the facts as they are; and I take the liberty here of urging upon those in authority the necessity for giving elementary instruction in economic and political science in our agricultural colleges, in order that such relationships as I have mentioned may be discerned.

Take for example the relation between the railways and the public. Railway corporations have been among the largest contributors to campaign funds, and consequently have drawn very heavily upon the public treasury. The subsidies in cash and land, granted to railways by municipal, provincial and federal authorities have been enormous; and all these grants are paid by the average citizen or from the public domain. What has been the result? Looking at the dark side of the picture one may specify three things: creation of millionaire railway magnates, corruption of legislators and legislation, and high discriminatory rates. I do not think I am unfair to the railways, nor am I exaggerating the facts. At the same time I do not forget the services which they have rendered to the country. These services could be rendered, however, and can yet be rendered, without any of the actual accompanying evils, if only the average citizen would awake to a proper relation of the nature and function of railways as common carriers and public service corporations, and of the past and present relation of railway corporations to our "free" government.

As a second example one is reminded of the great financial associations—Insurance, Banking and Loan Companies—by recent investigations in New York. These investigations have shown that the institutions mentioned contribute systematically for the real, though partly disguised, purpose of bribing legislatures and misleading the public; and that they play into one another's hands. The banks, too, have been notorious in furthering stock-gambling operations, whereby the unsuspecting public are legally relieved of their earnings. It is impossible here to go into details: the evidence is available to all who wish to be informed. One thing, however, I should like to say in passing about our banking institutions in general. It has always seemed to me a strange policy for us to authorise these private associations to issue *fiat* currency on their own credit, and to collect interest thereon, when the nation might as a whole, with much greater security and propriety, do the whole business itself and appropriate all

the earnings. Strange things of course have reasons, and a reason for this condition of affairs was suggested some time since by a man who was supposed to know something about bank legislation when he said: "It's a case of 'you scratch my back and I'll scratch yours'." Whether or not this be so I cannot say.

Another class of corporations which have, through the tariff, a great influence upon the economic condition of the average citizen are the organized industrial associations. These bodies of men are unfortunately almost always seeking for special legislative favors, on various pretexts and so long as the average Canadian farmer remains ignorant of the significance of these favors, exercises his franchise without any regard thereto, or pursues a similar course himself, he will simply feel the pinch and not know what is hurting him or how to relieve the pain. His annual income will be affected to the extent of hundreds of dollars. In saying this I am not here assailing the doctrine of protection. I am merely urging that such political questions be considered with unselfish intelligence and be completely separated from other political questions and from political parties with which they have been accidentally associated. There is no political question which so deeply touches the pecuniary interests of the average citizen as this one of the Tariff, and the Canadian farmer, instead of avoiding discussion thereon, should take every opportunity of informing himself and of discussing the matter with his neighbors.

There are many other matters of a similar nature which it is essential for the Canadian farmer to study with an open mind,—questions that have to be answered one way or another, questions whose answer means dollars to him, and, more than that, life and liberty and progress. For example, is it desirable that railways, telephones and telegraphs be nationalised? Is it desirable that the government should aid, and in a large measure conduct the forestry business? What methods are best calculated to open up new and fertile territory? Should railways be subsidised with land grants? Should state aid be given to construct and maintain highways? Such questions must be discussed and decided in some way, and it has proved a sorry business, to be at the absolute mercy of legislatures. No permanent cure can be had except the average man takes sufficient pains to inform himself in regard to these matters, and is sufficiently patriotic to answer his country's call and to do his duty as a citizen.

In conclusion I should like to emphasise again the urgent necessity there is for the Canadian farmer to awake to a proper realisation of his situation and duties. It ought to be impossible, in this ostensibly free country, for the designing politician to set one half of the population against the other half and, during their senseless bickering, to pick the pockets of both. Unfortunately that is largely the situation at present, and it will be the situation so long as the Canadian farmer confines his attention exclusively to his farm problems, and, in his capacity as a citizen, allows himself to be used as a blind tool by those rapacious plunderers who, not less in evidence in modern Democracy than on the old time highway, are ever ready to persuade him to disgorge.

Estate Management as a Profession.

By MALCOLM ROSS, B. S. A.

IN every agricultural college, in addition to the fortunate young men who, on leaving, have good homes and fine farms to return to and develop, there are many who have no such prospects, nor have they capital with which to purchase land or to go into business. Frequently among these are to be found the most hard working and brilliant men of the class, and to them the question of what special profession will be the most profitable in after life is a serious and ever recurring one, and it is for the purpose of helping some of these that this article is written.

When the writer was at college such men frequently obtained employment at Guelph, or under the Department of Agriculture of Ontario, or under some of the many American Agricultural Stations, occasionally at fair remuneration, but more frequently in very minor positions where the returns were not adequate, either in direct pay, or in available valuable experience for the years of study and hard practical work that had been performed. Others again less fortunate drifted into various occupations and became "drummers" or agents for firms doing business in connection with agricultural interests.

There is now a line of work which is open to such men and which offers a greater opportunity for an ambitious and well qualified man than either of the above mentioned employments. Unfortunately at present this work is seldom or

never to be found in Canada, it is the profession of Estate manager or superintendent.

Never before in the history of America or Europe has there been such rapid accumulation of great wealth by comparatively few men, and that this condition of affairs will increase even more rapidly there can be no question. These men having become wealthy are naturally seeking for means whereby they can derive permanent benefit from their riches and a very large and increasing proportion of them have decided, as did the capitalists of Europe long before them, that no possession offers more permanent pleasure and, frequently, profit than can be derived from the ownership of land.

These men having unlimited means usually experience no great difficulty in selecting and purchasing land that meets their requirements as regards situation and surroundings; this step having been taken they are then confronted with the perplexing question of its development. Cash returns are seldom desired though there are exceptions to this, but as a rule the idea is to provide a country home for the family where they may spend the summer and entertain their friends.

In 99 cases out of 100 these men have no idea of the difficulties and intricate questions by which they will soon be confronted. A landscape architect is usually first consulted. He visits the land for a preliminary fee of from one to two hundred dollars and some weeks

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later submits blue prints showing a magnificently planned estate with beautiful roads, park, gardens and so forth. What is not reserved for these purposes will probably be devoted to a farm, and this portion is again handed over to some so-called agricultural engineer for development. In the meanwhile the architects are designing plans for a large mansion which will usually embody some special features contained in some of the old palaces, castles or chateaux visited by every wealthy American who goes to Europe.

From this time on there are endless consultations with these various heads, who, with contractors of all sorts, are ever ready to offer new suggestions and ideas, accompanied by estimates which demonstrate in an unquestionable manner that for the expenditure of a few thousand dollars the owner will obtain features on his estate which will afford him endless pleasure, and which will make it superior in finish and perfection to any other in the country. Needless to say the advisor knows that these suggested features will necessitate many further expenditures which are at first sight unforeseen: his object is of course to give satisfaction to the employer but at the same time to effect a standing advertisement to himself.

The owner, at first, spends much time on his estate and is, of course, intensely interested in the wonderful changes made in the course of two or three years. The architects having completed their work drop out, and later the landscape architects and agricultural advisor declare their part completed.

The owner then finds himself surrounded by extensive pleasure grounds, large greenhouses, gardens, farm buildings such as he had never even dreamed of, and the many other constituents of a

country estate, without having any knowledge of the practical requirements of any one of them. The landscape man has probably left an expert gardener in charge of his department, and the farm is probably left in charge of an acquaintance of the agricultural man. It is still necessary to spend very large sums of money to bring the various departments of the estate into conformity with one another and this is the point at which the serious difficulties are encountered. They are real and must be faced. The simplest way is to give the foremen a free hand to act as they think best, and this means that men without the necessary previous business or practical experience are entrusted with the carrying out of projects involving large expenditures which require much exact knowledge and experience in their performance to secure the best results. Each expenditure seems somehow to necessitate a further one and at length instead of the estate proving to be a source of pleasure, it is one of endless annoyance and apprehension, and some day the owner or his medical advisor decides that something must be done to alleviate the worry and anxiety. Being a business man he at once concludes that it is only necessary to offer a good salary and by so doing secure a general manager who will shoulder the worry and responsibility. Where, however, is such a man to be found? None of the owner's friends know of a suitable man; (probably they are in the same quandary) and resource is had to the advertising columns of papers which are likely to be read by prospective managers. Applications are received by the score and personal interviews are arranged, each one being more or less discouraging; one applicant may be an expert greenhouse manager who imagines he can

also look after the farm and breeding stock; another is an expert dairyman who guarantees to organise a dairy the butter from which will assuredly bring a dollar a pound in New York, but does not know a white pine from a hothouse palm; another has farmed all his life and so thinks that he ought to be able to produce peaches, strawberries, roses and orchids under glass during winter, and could, without doubt, turn out a carriage and pair to win a blue ribbon at the New York Horse Show, but he has had no experience in making contracts, keeping a complicated set of books, or controlling an electric light or refrigerating plant.

The writer knows that before he applied for his present position the owner of the estate advertised continuously for six months, without success, for a general manager.

What then are the qualifications necessary for such a position, and where can a man make himself competent to take up such work?

First, it is essential to possess an unlimited amount of general information on all subjects pertaining to country life, with a thorough understanding of the underlying principles of *all branches* of agriculture, horticulture, civil and mechanical engineering, architecture and silviculture.

Second, to possess good executive ability, to know how to select foremen and others who will carry out orders and instructions implicitly and without questions.

Third, to possess such qualifications of a good business man as will enable him to organize a thorough and complete system of accounts and bookkeeping, in order that it may be ascertained at any date what the past expenditures have

been, on exactly what objects the money has been spent, what results are being obtained, and to what extent the estate has been increased in value by these expenditures; this will necessitate an annual stock-taking when all property must be inventoried and valued; these accounts and inventories, with proper management, will become every year more and more valuable, as they will increase in accuracy and will afford a more definite and dependable foundation on which to base the estimates for the following year's work.

In order to more fully grasp the necessity of thorough competence in an estate manager in every detail of the work, it must be remembered that if he suddenly finds himself without a bookkeeper, head gardener, or farm manager (each of whom is drawing a monthly payment of from sixty to one hundred dollars) he must be able to supervise the detail work himself, to make any necessary change and having secured a new man, to instruct him in every detail, so that the work may be performed without noticeable alteration or failing which might cause annoyance to the owner of the place.

Where can such a man obtain such a varied education? Certainly not on any one place nor in any one district.

There is probably no place where the general principles of such work can be more easily and thoroughly secured than at the O.A.C., but what can be obtained there, must, at most, be considered supplementary.

After grasping the elementary but fundamental points, a man must travel and use his own observation, read widely and carefully, storing up in his mind every scrap of knowledge of any and every kind which bears on practical subjects,

no matter how unconnected they may appear with everyday experiences, for they will, at some time or other, shed light on some obscure problem.

Whenever any construction work is seen, railroad or skyscraper building, manufacturing, or any kind of contracting, every detail should be observed in order to note the general systemisation, the actual organization of the various gangs of workers and the detail performance of the most insignificant portions of the work in hand. More will be learned in ten minutes' close observation of such than in a week of lectures and books.

No chance should be missed to perform any actual manual operation, as, at any time, it may be necessary to show an ignorant but willing workman how to execute some work that might otherwise necessitate the employment of an independent trades union man at \$4 or \$5 a day.

Secure any opening on an estate no matter how small it may be, as long as it will afford opportunities for advancement in position or experience; as soon as the position fails to provide a field for advancement steps should be taken to secure one elsewhere. In this country no man who can do anything of any kind well and who is ambitious can fail to continually and steadily improve his position. In the meanwhile he should observe closely everything going on around him; if employed on the farm he should find out and notice what is being done in the garden, on the grounds, roads and elsewhere. If fully occupied during the week much can be gathered by a regular inspection of everything in spare time, all changes and improvements being noted.

Any Guelph graduate should be competent in a couple of years to secure

some position as farm or garden foreman where he can be under the direction of the general superintendent, who will save him from serious errors in the performance of work that may be new to him. As soon as he feels competent he can secure a position as manager on some small place, and as experience is gained larger and larger places can be secured with the idea of ultimately securing the control of several estates as is the custom in England.

It is evident that capable men for such positions cannot be found easily, and therefore when one is found, a liberal salary must be paid. Of course the amounts vary very much and there is no standard whatever by which they can be calculated. An owner who devotes some time to the business transactions of his estate will, of course, not pay as much as will the man who expects to be relieved of all troubles and annoyances connected with the place. Roughly it may be stated that the cash payment runs from one to five thousand dollars, and in exceptional cases to very much more. In addition however the manager gets a comfortable and usually modern house, horses, dairy and garden produce, etc.

This profession affords more varied interests than perhaps any other. Frequently the manager is permitted to develop any special feature that he may specially desire such as horse or cattle breeding, some special piece of landscape adornment, the growing of some special hothouse flower, in fact anything that will ensure the improvement of the place and which can be made a success, but above all and without any question whatever the specialty may be, it must show results of the highest excellence and of a standard of perfection that can-

not be surpassed on neighbouring estates.

A very brief description of the more prominent features of the estate now in charge of the writer, will give some idea of what is to be found on the modern American estate.

The mansion, built in the Italian style of architecture surmounts a slope of 70 feet terraced down to the sea level, the frontage being probably 60 feet longer than that of the college. The terraces and immediate surroundings of the house are treated after the manner of the grounds of an Italian palace which necessitates a number of formal flower beds and a large number of trimmed evergreens such as bay trees, box retinospores, cedars, and so forth, which require constant attention to force them to maintain certain definite shapes.

The glass houses about a quarter of a mile from the mansion are of considerable extent and comprise a number of houses devoted to special purposes, three containing European varieties of grapes from which fruit can be supplied for about six months of the year, two are reserved for peaches and nectarines, three for roses, three for carnations, two for chrysanthemums and tomatoes, and two for forcing such vegetables as cauliflowers, lettuce, beans and peas during the winter. There is also a fern house and a large conservatory for palms and foliage plants. In the basement near the furnaces is a mushroom cellar and a cold storage room for keeping flowers and fruit.

The rose, cut flower, fruit and vegetable gardens cover about four acres. The fruit garden is sunk and surrounded with a nine foot wall to afford warmth and protection. It contains only the choicest varieties of European fruits and

the trees are trained to dwarf pyramidal form.

The lawns, shrubberies, and other grounds devoted to landscape treatment comprise about one hundred and twenty-five acres. Included in this department is a nursery containing from one hundred and fifty thousand trees and shrubs, of almost every desirable variety, which being bought by the hundred or thousand, when only a few inches high or else propagated in the glass houses, are carefully cultivated until they are sufficiently large to plant out in the grounds; they then are often worth as much each as was paid for one hundred of the young plants; thus a considerable economy is effected.

The private stable has accommodation for twenty-six horses kept for riding or driving. It includes large coach room, offices, harness rooms and rooms for the men.

The power house contains a 40 h. p. gas engine, generator, two dynamos, storage batteries for lighting and pumping and for charging automobiles and an electric launch.

Farm buildings are of a most elaborate and costly character, with stabling for thirty horses and forty cows, blacksmith and carpenter shops, boarding house for the men, and a special stable for use during milking only, (this has black cement floor, white glazed tile walls and enameled iron and varnished wood fittings), the whole being electrically lighted, steam heated and fire proof.

The creamery, built at an expense of \$30,000 is probably unique. The exterior is composed of large blocks of grey stone brought from a considerable distance, the freight probably costing as much or more than the stone. At the

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front is a wide tiled porch overlooking a pond on which swans and ornamental fowl are kept. The interior is lined with white porcelain tile throughout, the utensils are constructed of polished copper and nickel, the tables, shelves, and doors are of heavy plate glass and all supports and metal works are nickel. In the centre there is a tile tank which contains a flowing spring and this is now utilised for cooling and keeping the milk.

The most interesting feature of the farm land is a marsh which is being reclaimed. It contains 90 acres of land all of which is from one to three feet below mean high tide level; it is now being drained, the drains being provided with automatic gates which are closed by the rising tide and which open as it goes out; in the event of long continued storms which would not allow the water to get sufficiently low there is a large centrifugal pump which is operated by electricity for taking off the drainage water. The soil is composed entirely of a peat-like material formed from the decomposed roots of salt-marsh grass and will afford much room for experiment in the way of cultivation and fertilising. At present it is so soft that the horses have to be fitted with marsh shoes to prevent them from becoming bogged when working on it.

The expenses and responsibilities incurred on such a place may be partly realised when it is stated that the monthly pay roll, exclusive of house servants,

averages \$3,000 and the feed bills over \$800. It is hoped that the last item can, by proper management be almost eliminated. This does not include the cost of the general supplies such as stone for macadamising and repairing roads, machinery, building material, etc., which amount to nearly as much more. All this money is spent without any idea of obtaining any cash returns, and essentially for pleasure purposes.

It can readily be understood that an estate manager, who wishes to make a reputation for himself, must be a man of the highest principle, for as a rule his expenditures and accounts will not be too closely looked into or audited, and he must be proof against many temptations, for there is seldom a firm with which he will transact any considerable business that will not make tempting offers to him under the guise of commissions in order to ensure further orders.

The profession is not one that will enable a man to become wealthy but it is one in which probably a greater part of his salary may be saved than is possible in other ways of making a living. In addition it gives a healthy out-door life, a continually changing series of interesting experiences and associations and an opportunity to perform a real and permanent benefit to mankind, for what is there in the old world that is a more perpetual source of delightful remembrance and pleasure to its people than its old and beautiful private estates?

Beyond the Walls.

(A DAY DREAM.)

I WALKED amid the crushing throng ;
Along the city's stifling street.
'Twas summer, and the dusty pave
Gave back the fierce relentless heat.

The gorgeous piles on either side,
Close fitted, massive, towering, tall,
Shut out the purifying air,
The street seemed like a fetid hall.

I paused a moment, lost in thought,
Beside a monumental stone,
Watching the human tidal wave ;
And harking to its monotone.

The rushing trolley loudly clanged its bell,
The panting motor blared its warning note,
The steel shod hoof tapped out a loud tatoo,
The curbside vendor strained his weary throat.

The crystal fronted shops displayed their wares,
Which idle strollers worshipped as they passed,
Or paused a moment in an aimless way,
To view some relic of historic past.

Now as I watched, my memory drifted back,
To other days, to fairer, sunnier scenes,
Where nature in her summer glory dressed,
Shed o'er the earth her rare and radiant beams.

I heard her gentle music, on the air
The drone of insects and the hum of bees,
The low of cattle from the pasture green,
The song of birds, from out a thousand trees.

I smelt the fragrance flowing from the mead,
Where busy laborers toil'd amid the hay,
I heard the noisy jolting of the wains,
That bore their burdens o'er the dusty way.

I felt the fresh invigorating air,
That bore upon its wings the gift of health,
That precious boon ! and yet how oft we see,
This blessing offered at the shrine of wealth.

I felt the glowing radiance of the sun,
That shone from out the spotless azure sky,
I saw the cool green shade beside the stream,
Wherein the calm, contented cattle lie.


I saw the fields like heaving emerald seas,
Stretching afar in undulating grace,
Dark shaded hollows gliding o'er the plain,
With sunlit ridges following fast in chase.

What can compare with those fair rural scenes ?
Not the vain city's flaunting and deceit,
What music rivals those sweet country strains ?
Not the wild tumult of the crowded street.

Oh ! let me breathe the pure untainted air,
Far from the city's crowded marts and noise,
And near the heart of nature find a place
Among God's noblemen, mid pure rural joys.

KERRY O'BYRNE.

Tuberous-Rooted Begonias.

EARLY a century has passed since the tuberous-rooted variety of Begonia was first introduced to the notice of floriculturists, the earliest recorded having been brought from South America and Japan about the year 1810.

The first introductions of these now popular and attractive plants were of a very inferior type, and it was not until about fifty years later that they began to attract the attention of plant and flower-lovers. About the year 1860 several new types of the tuberous-rooted Begonias were brought into England, chiefly from Peru and Bolivia. From these later imported varieties chiefly, have been derived the splendid single and double specimens of these plants to be seen not only in green houses, conservatories and windows, but also in flower-beds and borders in the summer time.

There is probably no one class of decorative plants that has responded more generously to the skill and science of the plant-breeder than has the tuberous-rooted Begonia. Possibly the development of the chrysanthemum may be an exception in this respect, but both the chrysanthemum and begonia have given us ample evidence as to the possibilities that can be attained in plant-breeding by intelligent and persistent effort. When one considers that from the original type of chrysanthemum whose flowers were only about an inch in diameter, have been developed the beautiful

specimens of these popular autumn flowers now seen in all their beautiful and attractive forms and colors, as well as the immense size of the flowers, one can partially realize the almost unlimited possibilities yet to be attained in the higher development of type and form in plant-life in general. With the tuberous-rooted Begonia the development may not be quite as marked as with the chrysanthemum. A comparison, however, of the inconspicuous and inferior flowers of some of the earlier introduced types of this Begonia, contrasted with the gorgeous and symmetrical flowers now seen in a collection of these plants, will give one a good idea of the decided progress made in the development of the tuberous Begonia. There is still room for advancement in the matter of the development of higher standards and types of plants and trees, not only in decorative plants, but also in plants of more economic importance, such as cereals and roots, as well as in fruits and vegetables. It is gratifying to notice that this very important and hitherto comparatively neglected feature in all branches of horticulture and agriculture, is receiving increased attention in all countries where these industries have attained to the greatest degree of perfection. Grand results in the mysterious and uncertain realm of plant-breeding, both by selection of type and by hybridization, have already been accomplished. There is still room, however, for scores of public benefactors like Luther Bur-

bank and others, in this immense field of experiment and research. Plant-breeding should—and doubtless will—receive more attention than it has hitherto had, for within the secret recesses of the multitudinous forms of plant life to be found, doubtless lie many surprises that will have a tremendous influence and effect, not only on the production of plants of greater decorative beauty than

raised from seed, as their propagation from cuttings or by divisions of the tubers require great skill and care to succeed with them, as well as the aid of a greenhouse. Growing the tubers from seed also requires considerable skill and care to secure the best results possible, as the seed is very minute, and the young seedling plants are easily destroyed in the earlier stages of growth. The



SEEDLING TUBEROUS-ROOTED BEGONIAS.

at present, but also of better types of our economic and food producing plants and trees. The science of plant breeding is still in its infancy, so far as systematic and intelligent experiments are concerned. A wide and hitherto unexplored field is still open for the patient and persistent student in this line of scientific research.

METHODS OF CULTURE.

Tuberous-rooted Begonias are usually

seed should be sown in March or April in a shaded position in the window or greenhouse, in a temperature of 65° or 75° Fahrenheit. Use plenty of drainage in the bottom of the flower pot or seed pan. A compost of equal parts of fine sand, loam potting soil and leaf mould well mixed will be suitable to sow the seed in. The seed when sown should be barely covered with the fine dry soil as recommended. Water the seed carefully with an atomizer spray. Keep the

soil moist but not soddened. Transplant the seedlings as soon as they are large enough to handle, into shallow, well-drained boxes, or in flower pots. Plant about $1\frac{1}{2}$ inches apart. As soon as the plants are large enough, pot them into $2\frac{1}{2}$ or 3 inch well-drained pots, using a compost of one part sand and three parts of enriched loamy potted soil. The plants will scarcely require to be potted again the first season. If they should require re-potting, put them into pots two sizes larger and use the same compost as last mentioned. It will be best to grow the young plants in the window all the summer, or in a cold frame in a shady position out of doors after the middle of June. The after treatment and culture of the seedling plants will be the same as recommended later on in this article for large tubers.

The accompanying cut shows a small part of a collection of these Begonias raised from seed in the College greenhouses this season. The seed was sown in April and the photo taken early in November. In the collection are some very fine specimens. The seed was obtained from Sutton & Sons, England, a firm that has done a great deal to raise the standard of many varieties of our most popular flowers, as well as of fruits and vegetables, by careful and expert methods of the hybridization of different varieties.

CULTURE FROM DORMANT TUBERS.

The best and easiest method for an amateur to grow these Begonias is to purchase dormant tubers in March or April at the florists, or at the seed store. Good sound firm tubers are necessary to be successful with them. The tubers should be started into growth in fine sharp sand, or in very sandy potting soil,—I prefer pure sand. Shallow

boxes or pots should be used, with about an inch of broken flower pots, coal cinders, gravel or charcoal placed in the bottom of the pot or box for drainage. Place the pot or box in a temperature of 65 or 75 degrees. The tubers should be planted so that the top of the tuber is only barely covered with the sand. Be sure to place the tubers the right way upwards. Usually the tuber has a slight hollow on the upper or top side, but it is often difficult even for a practiced eye to tell sometimes which is the top or bottom of the tuber. Water the sand or soil well once after planting. Withhold water afterwards until the sand appears dry on the surface. Avoid keeping the sand too wet until growth has well commenced. In four or five weeks after planting, the tubers should show signs of rooting. When the small fibrous roots are about an inch in length, pot the tubers into five or six inch pots, using the same drainage and good loamy potting soil. Re-pot into larger pots later on, if necessary, being careful not to break or disturb the roots. The plants may be grown in the window, or may be planted out of doors in light soil, about the middle of June, in a partially shaded and well sheltered position, where the sweeping winds cannot reach them. Plenty of water at the roots is necessary when the plants have become well established in the pots. Sprinkling the plants overhead is not advisable except in very hot dry weather perhaps, and then only slightly.

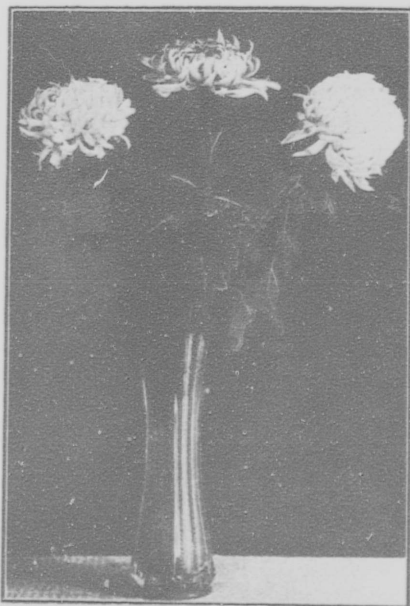
RESTING PERIOD.

As soon as the foliage of these Begonias shows signs of decay, which is usually soon after they have done flowering, less water should be given them, until the foliage has become quite yellow, when water should be withheld alto-

gether, and the soil allowed to become quite dry. When the foliage has entirely decayed, the pots or boxes, with the tubers in them, should be stored in a cool room or cellar, where a temperature of about 40 or 45 degrees prevails. Leave them here without giving them any water, until March or April, when the tubers should be shaken from the soil they are in, and started in sand as before recommended. Tubers that have been planted out during the summer should be taken up early in the autumn before frost, packed in sand or dry earth,

and put away as recommended for tubers grown in pots. Pot tubers can be treated in this way, if thought desirable. Tuberous-rooted Begonias make good summer flowering window plants when properly grown. The main essentials necessary for success with them are, to plant them in fairly light soil, to give them good drainage, partial shade and shelter when growing, and to allow a decided period of dormancy or rest during the winter months.

W. HUNT.



Value of Institutes.

By F. W. HODSON, Ottawa.

FARMERS' Institute meetings are valuable from the fact that they bring farmers from various parts of a district together and allow them to compare notes. Frequently we find a man who is not a success, we will say, in growing roots. Such a person may attend a Farmers' Institute meeting where root growing is the subject discussed. He may there learn the experience of say five successful root growers, whose practices extend over a period of ten years; thus the unsuccessful man has the advantage of fifty years' experience in root growing. Lecturers and farmers relating their experiences should detail their mistakes as well as their successes.

At Institute meetings during the last ten years large numbers of farmers have learned to express themselves well. Before the Institutes were established in the Province of Ontario it was a rare thing to find a farmer capable of expressing himself freely and forcefully at a public meeting. Now we have numbers who are capable of doing this. The power of speaking publicly is a valuable asset to any class of men. There are many other organizations attended by farmers, but none of a distinctly educational character. It should be the aim of the Superintendent of Institutes, the lecturers, and the officers, to maintain and intensify this feature of the Institutes. This should be the chief, and in many cases, the only object of an institute organization. In order to aid the

educational work each institute whose funds will allow, should subscribe for one or more agricultural papers for each of its members. It is supposed by many that only the persons who attend the Institutes are benefited. This, however, is not the case. The farmer who attends Institute meetings and weighs well the advice given by the lecturers and adopts such of it as meets his requirements will grow better crops and better stock than the man who does not attend. Because he farms better he will be more successful and his methods will attract the attention of the less successful man and the man who does not attend the meetings, and they will copy from him and thus the influence of the Institutes is spread among a large number.

The success of a local institute depends largely on the secretary. The secretary is or should be the chief officer and managing director of the institute. If he understands his work and is diligent and earnest the institute will flourish wherever situated.

The next most important adjunct is the selection of the speakers. An institute with a good secretary and carefully chosen speakers will be successful and the meetings will be largely attended. The local institutes are responsible for the speakers. Each local institute is requested to report on forms furnished for the purpose particulars regarding each speaker. If these forms are properly filled in and forwarded to the provincial superintendent of institutes this officer

learns exactly how each speaker has done his work. In this way he can weed out undesirable men and retain the services of those who are suitable. The essentials of a successful institute speaker are that he has been successful in the lines that he attempts to teach: he should be a fluent speaker, but some of the best men now engaged by the Dominion Department were very indifferent speakers when they began, but they were good farmers and knew their particular specialties well. First they commenced by reading a paper and answering questions, then they began to speak offhand. As well as being successful farmers the lecturers must be students. A lecturer must keep up with the times and must always be a little in advance of his audience: he must not be a politician and must not be chosen because of his political affiliations, but because he is a man of honesty and integrity and has suitable attainments as a farmer. Each speaker shall thoroughly acquaint himself with the work done along his particular lines by the Dominion and Provincial Experiment Stations and the officers of the Departments of Agriculture. On no account should he contradict or minimize well established and accepted work done by the officers and institutions above referred to; such a course leads to confusion and damage.

The local institutes should specialize. The officers should determine the class of stock, grain and fruit best suited to their district and choose men who are capable of teaching such subjects. For instance, in a dairy district dairymen should be employed, not only this, but the dairymen who can teach the peculiar branch of dairying best suited to the district. If heavy horse breeding is a leading industry, then a man capable of

teaching this branch should be chosen. It is much better to breed one class of horses, cattle, sheep and swine in a district than to have a dozen different sorts. The live stock of Great Britain has become famous because this course is practiced. In Herefordshire you will find little else but Herefords; in Shropshire little else but Shropshires; in the dairy districts of Scotland Ayrshires, and so throughout Great Britain. This plan has many advantages.

In order to obtain the services of local men it is an excellent plan to give prizes for essays, these essays to be read at a certain hour during the meeting and thoroughly discussed. Plenty of time should be given for discussion after the reading of essays or after a speech is delivered. Essays should not occupy more than from twenty minutes to half an hour to read, and lecturers should not occupy more than thirty minutes in delivering their addresses, though answering questions may frequently occupy as long a time.

There is a demand in many institute districts for something new. This is a mistake. We should first find what our respective districts are best suited to produce. In order to determine this we must study our environments and our markets. When we have studied these we must bend all our energies and know all there is to know about the business. Study, research and experience will give us additional information each year, which can be discussed with advantage. Institutes conducted in this way may be called "Experience meetings," and will bring out a great deal of useful information.

Generally speaking the winter months are the best time to hold institute meetings, but summer meetings may be held.

Fruit meetings may be held in orchards where practical demonstrations in spraying may be given. Short courses in stock judging may be held at stock farms. Examination of growing crops and lectures on cultivation of the soil have met with first rate success in some of the provinces. An interest frequently neglected by institute officers is the County paper. Institute officers and speakers should pay a great deal of attention to their county and agricultural papers.

The editor should be induced to attend the meetings and every speaker should have prepared a short synopsis of his paper, which may be handed to the editor and to which additional notes can be added if necessary. Reports of meetings should also be sent to the weekly papers not

represented. This will generally secure a publication, but we cannot expect the editors of the county papers to attend institute meeting and give reports unless they are treated with more or less liberality. These gentlemen make their living by the publication of a paper, including the advertising; this is their means of support, therefore we should not expect the editor to give us free space any more than he should expect a farmer to give him free wheat, potatoes, meat, apples and milk.

In every case the exact programme of the meeting should be published on the posters, the time at which an address or paper will be read, and the name and address of the speaker. This programme should be strictly followed.



Is it raining little flower?

Be glad of rain.

Too much sun would wither thee,

'Twill shine again.

The clouds are very black, 'tis true,

But just behind them shines the blue.

Art thou weary, tender heart?

Be glad of pain.

In sorrow sweetest things doth grow,

As flowers in rain.

God watches; thou shalt have the sun,

When clouds their perfect work have done.

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The O. A. C. Review

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SUBSCRIPTION RATES

Annual Subscription—Students, \$1.00; ex-Students, 50 cents. Single copies, 15 cents.
Advertising Rates on application.

Editorial.

It may seem strange that, after having for two years tried the experiment of publishing an elaborate Xmas REVIEW, and having been signally successful, we should choose to sacrifice the small share of satisfaction and comment it produced, in favor of an ordinary December issue. For those who wonder at this procedure we wish to lay bare our ideal of a college magazine,—an ideal which it is our intention to follow as closely as humanity may.

A perfect college magazine—we do not say paper, they are in a different class—should aim to keep that portion of the world fortunate enough to receive it, thoroughly in touch with all the workings of the college, as well as the profession for which it stands. In this

way can it help the students more than by the publication of trivial doings, such as their sickness or visits home, for a well edited and well illustrated monthly portraying college life, ambitions and results, can advertise its Alma Mater as can no other medium save the graduates, and since all the prestige of the institution is the immediate gain of the individual student it requires no logic to prove that the student publication is in this way the student benefactor. Also, every person understands that the experience derived from the management and publication of the college magazine is one of the most valuable features of the graduate course, especially in the case of agriculture, a profession in which there is a steadily growing demand for broadly trained versatile men.

These two worthy results, advertising of the college and the class of students and the prospect of gaining a thorough insight into journalistic life, are enough to fire the brain of any ambitious student so as to cause him to lose sight of the fact that as the work increases, interests deepen and results grow large a gradual transition is taking place. From spending a certain portion of his time upon his college course, and utilizing his spare moments for business and editorial duties, he comes to find himself regarding these latter as the chief ends of life, and working in a few lectures on the side.

There were two causes for this alienation of a student's interest from his work. The one was the growing size, quality, business, and circulation of the magazine, requiring more attention, and the second, not so generally recognized, was the continual sword of Damocles, in the shape of a Xmas number which each succeeding management thought they should publish as a monument to their ability as newspaper men, and as a goal for the aspirations and aggravation of their followers. These Xmas numbers grew far beyond the expectations of a college publication, and coming as they did at the busiest season caused a two-fold injury by monopolizing the time of the students before examinations, and by making such a big hole in the finances in the middle of the season that during the winter term it was always found necessary to forsake lectures again to go after advertising to cover up the deficit, thus demoralizing both the academic work and financial schemes of the board of management.

One difficulty was so successfully bridged over by the employment of a business manager, that THE REVIEW

staff have this year resolved to try to further ease the paths of the editors by the discontinuance of a special Xmas number in favor of a system of uniform publications, presenting no fluctuations or slumps, causing less worry, but showing as much as ever the evolutions of "grey matter."

Since this stand is taken to prove that in spite of the abnormal development of THE REVIEW, it has not yet reached the point where it controls rather than is controlled by the students—we trust that all our supporters will agree with our policy.



When things are in the formative period moderation is well known to help instead of hinder, and even when a more mature stage has been reached it is not bad practice to make moderation our guide. There is a danger, however, of too wide an extension of the maxim, and it is this fault if any which has prevented THE REVIEW from dealing with the question on which it is the purpose of this paragraph to make comment. That a clubhouse for our junior professors and lecturers has now become a dire necessity is a fact patent to all acquainted with the existing circumstances at the College. It was a similar necessity that compelled the senior members of the faculty some years ago to build houses for themselves hard by the college grounds. Since those days expansion has taken place and young men have been added to the staff in every department to act as lecturers, demonstrators and assistants. Unfortunately, the solution to their difficulty cannot be found where their seniors found it. Their salaries, their positions, and the nature of their work make it impossible to settle here. They

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will be moving out as opportunity offers and others will be taking their places. In the interest of the student body, the College, and the cause of agriculture in general, it is "up" to someone to find accommodation for those men. At present their conditions, in some respects, are not far short of degrading, and to this statement we would invite investigation at any time. We claim it to be an unsound principle of economics for a college or an institution of any kind to disregard the needs of its officials. It is true that the primary object of a college is to serve the student body, and woe to him, be he officer or professor, who does not recognize that fact. At the same time the student body is never best served when their teachers are unable to demand that respect which the dignity of their position requires. This, it is impossible to maintain with the present accommodation at the College, and knowing that, as we do, we consider it our duty to ring in the alarm.



It is said that a word to the wise is sufficient. If so, we hope that all who are sufficiently wise to esteem the privilege of using the library in the evening will consider our little word of warning.

**Just a
Word.**

This fall the library has been open four evenings in the week for the benefit of the junior officers and the two senior years. Everyone appreciates the favor, of course, and the advantages of the change are many. The chances for self-improvement by general reading, for collateral reading on the various subjects of the curriculum, and for study itself where all the conditions are conducive to study, are too self-evident to need enumeration here. Notwithstanding all this, the fact remains that very few students are seen in the reading room after supper and even the officers who so enthusiastically endorsed the petition are conspicuously absent. In consequence this innovation, which is largely of the nature of an experiment, cannot long be viewed satisfactorily by the President, and it is probable that in a short time the old order of things will be resumed. After having been granted a privilege which means so much to us, it is certainly a reflection upon our intelligence to lose it again so easily. If we wish to retain the right to get the most good possible from our valuable library there is only one way to make our wish evident, and it is to be hoped that the one way will be adopted by more before it is too late.

Alumni.

A Retrospect.

THOSE ex-students of the O. A. C. who remember the inception of the "O.A.C. Review" must have watched its gradual growth and development with a considerable degree of pleasure. THE REVIEW commenced in the right way. At first it was but a very small organ, unpretentious in its make-up and unassuming in character. To-day it is acknowledged to have taken its place in the forefront of all American College journals. Its career, however, has not been without its trials. In a recent letter Prof. A. T. Wiancko, of Purdue University, Indiana, remarks: "There was a time when THE REVIEW received much adverse criticism, and dropping it was even considered, but it is now occupying and filling a place that must be highly gratifying to its promoters. I am always proud to exhibit it before our people here, as representative of the O.A.C., its students, and its work."

In this issue we are pleased to present

portraits of many of the ex-editors of THE REVIEW, the men whose energy and foresight have made it what it now is.

It was in 1889 that the first copy of THE REVIEW appeared. Its first editor was Professor H. H. Dean. He has re-

mained attached to the College Staff since graduation, and his good work in connection with Canadian Dairy interests is so well known that it needs no comment from us.

Professor Dean was followed in 1890 by C. F. Whitly, who is also working in the Dairy interests in an official capacity in Ottawa. His time during the past summer has been largely taken up with cow-census work.

In the following year Professor F. C. Harrison was appointed editor.

For some years Professor Harrison has been Bacteriologist at the O. A. C. Recently, however, he has been appointed to a similar position at Sir William Macdonald's new College at St. Anne, Quebec, and he will shortly leave us to take up his duties there.



H. H. DEAN.



F. C. HARRISON.

Professor G. E. Day is another of our Professors who was in former years an editor of THE REVIEW. His term of office was during 1892.

In 1893 the post of editor was filled by J. J. Ferguson, and it was under his direction that the first Special Illustrated Xmas number was produced. Upon graduating in 1894 Ferguson took charge of the Maplehurst Stock and Dairy Farm,



G. E. DAY.

between times doing Farmers' Institute work. In 1899 the Michigan State Board of Agriculture elected him to take charge of the Dairy Department at the Michigan State College. The following year he resigned from the Dairy department, and was elected assistant in the Department of Animal Husbandry, of which, in the following summer, he was placed in charge. Shortly after this he was placed at the head of the then new Bye Product Food Department of Swift



J. J. FERGUSON.

& Co., where he now is. Ferguson was Secretary of the Jury of Awards on Swine at the recent Exposition at St. Louis, where he received a special medal in appreciation of his services. He is also now the President of the Zenner Disinfectant Co. of Detroit.

Only one of the men who have acted in the capacity of editor of the THE REVIEW has taken up agriculture as a profession. That man is W. A. Kennedy, who is farming at Apple Hill, Ont. He was editor in 1894.

T. F. Patterson was noticed in our issue of last month as being interested in the Patterson Lumber Co. of Vancouver. During 1895 Patterson was at the helm and guided the course of *THE REVIEW*.

In the following year the leadership of the College paper fell upon J. C. Macdonald. For a short time after graduating Macdonald was Fellow in Biology at this College, after which he took a post-graduate course at Cornell. Since then he has been connected with agricultural journalism, being for five years agricultural editor of the *Mail and Empire*.



J. C. MACDONALD.

He now fills a similar position on the *Montreal Family Herald and Weekly Star*.

H. R. Ross, more familiarly known as "Hank," guided *THE REVIEW* during '97-'98. He was for some time connected with the *Maritime Farmer*, but recently was appointed Secretary-Treasurer of the Sussex Packing Co. of Sussex, N.B. We are pleased to hear that Ross has now recovered from his attack of typhoid fever.

The editor for '98-'99 was W. J. Price.



H. R. ROSS.

He has just completed a course in dentistry, but we are sorry to say that we cannot state his present whereabouts.

Coming to the year '99-'00 seems to be approaching modern history, for in that year we find that B. S. Pickett, our late Secretary, acted as editor-in-chief. As we stated in our October issue, he has left us, and is now taking post-graduate work at Illinois.



B. S. PICKETT

E. J. MacMillan, one of the brilliant students of the class of '00, edited *THE REVIEW* during the year '00-'01. After graduating he returned to his home in Prince Edward Island, and at once became identified with progressive agriculture in the Island Province. Here he held the positions of Secretary for Agriculture, Superinten-

dent of Farmers' Institutes, and also that of Lecturer in Agriculture at Prince of Wales' College. In 1904 MacMillan was appointed Agriculturist at the Experimental Farm Bloemfontein, Orange River Colony, where he now is.

During '01-'03, Jas. Murray filled the position of editor-in-chief. Since graduating Murray has been connected with the Seed Department at Ottawa. Upon the formation of the Canadian Seed Growers' Association he was appointed to look after its Western interests, and he is now to be found at Winnipeg.



D. T. ELDERKIN

ways, THE REVIEW was able to reach more of those interested in things agricultural, at the same time making itself felt as a stronger influence for progressive agriculture. In this year, too, the paper itself was enlarged, and the Christmas number became an important feature. Since, graduating Elderkin has been connected with the Live Stock Branch, Department of Agriculture, Toronto. "Billy" Gunn has carried his business enterprise with him, and is now manager of the *Farming World*.



E. J. MACMILLAN.

D. T. Elderkin succeeded Murray as editor-in-chief. During his term of office several innovations were introduced into THE REVIEW. For the first time articles from contributors outside of the O. A. C. were extensively used. In addition to this new feature W. H. Gunn, then the Business Manager, gave the paper a great impetus by extending the sphere of its advertisers from Guelph to places outside. Thus, in these two



JAS. MURRAY.

During the meetings of the British Association in Cape Town, South Africa, last summer, the Association visited Bulowayo, and the Victoria Falls of the Zambesi. We hear that Dewar and Galbraith accompanied the Association upon the trip.

J. R. Oastler, '97, is now managing Sir Wm. VanHorne's farm at Minister's Island, St. Andrew's, N.B. He reports that he is doing well, and is much interested in his work.

M. N. Ross, '08, who has been connected with the Vanderbilt estate in North Carolina, has recently gone to Locust Valley, Long Island, N.Y., where he is managing another large estate.

G. I. Christie, '02, recently of the Iowa Experiment Station, has been appointed Assistant Agronomist at Purdue University, Lafayette, Ind.

J. C. Readey, '04, is Secretary of Agriculture for Prince Edward Island. In addition he lectures in Prince of Wales College, and is also in charge of the Provincial Farm. In these various and important capacities Readey is doing much to advance the cause of scientific agriculture in the Island.

P. G. Mills who took third year work in '02-'03 and then spent some time in the Nor' West and B. C. is now managing a farm near Sussex, N. B. P. G., though quite enthusiastic over the West and its possibilities, still thinks that there are bright prospects to be found in the East, even so far east as New Brunswick.

S. J. Goodliffe, '99-'00, is farming near Sussex, N.B., and making a specialty of pure bred stock.

Peters, '97-'98, is doing well upon his father's farm at Long Point, N.B., where he gives special attention to dairying.

Thos. Ross, B.A., '99-'00, has had charge of a number of school gardens in Prince Edward Island during the past summer. He is now teaching in Prince of Wales College, Charlottetown, P.E.I.

G. F. Jones, who took special work in the spring of '03, has charge of the Macdonald Consolidated School at Hillsborough, P.E.I. The school opened this summer with a large attendance, and the consolidation of the school districts there seems to be a success.

Ashley T. McAuslan in renewing his subscription to THE REVIEW wishes to be remembered to the boys of '05. McAuslan's address is—Friends Colony, Battleford, Sask.

Robt. A. Keppy, '98-'99, writes in a similar strain. He says: "I wish to renew some of the old acquaintances through the paper, and also to keep in touch with the doings at the College." He may be found at Spence, Ontario.

[THE REVIEW is undoubtedly the best medium by which ex-students are able to renew friendships formed at the O. A. C. during the "good old days." Oft-times it is the only medium. Ex-students! send along those subscriptions, and get into touch with your old classmates.—ED.]

"Heck" Galbraith, '03, is at present in Alberta working in the interests of the Scrauton Correspondence School. "Heck" is considering the advisability of entering the matrimonial state and allowing the wife and children to improve upon his homestead while he scatters the seeds of knowledge.

Leonard Hankinson, '01-'03, of Gravesend, Elgin Co., has just returned home from a visit to the West.

W. V. Harcourt, '00, is foreman on the Indian Head Experimental Farm.

T. B. Henderson of last year's graduating class has recently been appointed Chief Clerk to the Department of Agriculture for the new Province of Alberta. The Department has of course but recently been organized. Although its field of operations is new, yet it is a wide one, and Henderson will no doubt fill his portion of it with credit to himself and to his Alma Mater.

A letter recently received says: "M. C. Brownlee, '03-'05, is west of the 110th meridian. He is looking for a farm in

the land of the fall wheat and chinook winds.

W. Campbell, '87, is another old boy who has made his home in the West. He was in the class with our worthy President, and is now located in Calgary, —the metropolis of the West; and although not engaged in agriculture remembers with pleasure his experiences at the O. A. C.

"The new province will soon have a majority of the ex-students and from the bottom of her heart, Alberta prays that it may be so. She loves those boys from Guelph,—she really does."

It is not difficult to recognize the optimistic "Bob" in the above.—ED.

J. T. Ware, '02-'03, has returned to his farm in Welland County where he is carrying on operations very successfully. "John Thomas" has for some years taken a very active interest in plowing matches, having been very successful in this most important of agricultural operations. This past year he has further added to his reputation by winning three firsts and also a gold medal.

We are in receipt of an interesting letter from W. J. Thompson of the class of '96. Thompson is special foreign representative of the fertilizer department of Swift & Co., Chicago, and is travelling in the interests of that department in the West Indies. Recently he has spent three months in Trinidad and Barbadoes investigating the question of fertilization methods for cocoa. In this connection he has brought before the Trinidad Agricultural Society an extensive scheme of co-operative manurial experiments to be carried on by the cocoa planters of that Colony, the experiments to be conducted under government supervision, the materials used to be various by-products of the packing house. At the present time Thompson is on his way to Cuba via Venezuela and Jamaica.

W. D. McCrimmon, associate of '93, has succeeded to the homestead of a large dairy farm at Glen Roy. He is a progressive farmer and finds time for local Farmers' Institute work. He is upon the directorate of the county fair, is in-

terested in the Glengary Mutual Fire Insurance Co., and is also Secretary of the Glengary branch of the Farmers' Association.

Jas. Benning, '94, is now the owner of the fine herd of Ayrshires founded by his father, David Benning, of Williamstown. At present he is in charge of the herd of Canadian Ayrshires recently purchased by the Japanese Government for importation into Japan. The herd has arrived in Japan, and much favorable comment has been passed upon the members of the herd, upon their dairy qualities and healthiness. Benning will spend some time sight-seeing before he returns east again.

Alex. McPhadden, '96, has taken up a homestead in the Saskatoon district, and it is his intention to go west next spring. At his home in Dominionville he has taken an active interest in local agricultural matters, having been for two years President of the Farmers' Institute there.

Duncan Ross, '97, is in possession of his father's farm near Martintown, and also of a brand new wife. THE REVIEW extends its congratulations, and trusts that his possessions may bring him increased happiness and prosperity.

S. A. Northcott, '03-'04, a member of the year about to graduate, has settled down upon a farm at Taunton, Ont. He has achieved fame in that he is the first man of those who entered in '03 to take unto himself a wife. His change of state, however, rests easily upon his shoulders, for he says, "I am not dead yet." Moreover, he advises all the boys "to go and do likewise."

In a previous issue we erroneously stated that Mr. A. B. Cutting, B.S.A., '04, is at Cornell. At that time he was in the Niagara fruit district observing and studying the questions of packing, shipping and marketing, as practiced by some of the leading growers in that locality. Since then he was engaged for a short time by the Department of Agriculture, Toronto, and now he is connected with the Horticultural Publishing Co. Toronto, publishers of the Canadian Horticulturist and the Canadian Florist.

College Life.

The Y. M. C. A. of our College.

TO most of us is familiar the summary of human developments quoted by many of our best writers and thinkers, viz., that true and perfect development includes physical, intellectual, and religious or spiritual growth. It is this three-fold development which should characterize the ideal of every student of our college who strives for perfect manhood. The efforts of the Young Men's Christian Association of the O. A. C. is directed to the development of this latter phase of the students' life. The progress which has marked the advance of this student organization requires no comment. The work of the several departments in the present term has met with gratifying success. The increased interest on the part of the students bespeaks their appreciation of the efforts of all the departments.

The Sunday morning bible classes on each of the flats have proved both interesting and helpful. This study is intended to give the faithful student a comprehensive view of the teachings of the Gospels.

The music committee, too, has made the Sunday afternoon chapel service much more attractive by supplying special music for each service.

The following are the Y.M.C.A. officers for the following term :

- Hon. President—Prof. J. B. Reynolds, B.A.
- President—J. W. Crow, '07.
- Vice-President—W. Baker, '08.
- Cor. Secretary—P. S. Angle, '09.
- Rec. Secretary—G. H. Cutler, '09.

Treasurer—W. A. Kerr, '08.
 Organist—R. W. Mills, '07.
 Chair, Missionary Com.—H. Clowes, '07.
 Chair, Bible Study Com.—D. M. Rose, '08.

Count that day lost whose low descending
 sun,
 Views at thy hand no worthy action done.

Reception to Freshmen.

Our genial professors evidently have taken it upon themselves to develop the social natures of our Freshman and Sophomore classes. On Friday evening, Nov. 10th, "A" Division of the First Year were welcomed to the beautiful home of Professor Hutt. On the following Wednesday, Division "B" of the Freshmen were privileged to spend a few pleasant hours at the spacious home of Professor Day.

In the series of social evenings given by the ladies of the staff, it was "up" to the Sophomores on the evening of Nov. 22nd. The reception took place at the home of Mrs. Creelman, and was a thoroughly enjoyable affair.

All the evenings were spent in games, tricks, and various other forms of amusement, with a pleasant little "feed" thrown in, a part which college boys always appreciate. To all who attended, the evenings were ones of genuine pleasure.

Professor Hutt, B.S.A., of the Horticulture Department, and a number of the students from the College, attended the Provincial Horticultural Exhibition held in Toronto in November. One of the good results of the exhibition was the

forming of a Provincial Horticultural Association to work in conjunction with the various Horticultural Societies throughout the Province.

Union Literary Meeting.

The second monthly meeting of the Union Literary Society, held in Massey Hall on the night of Nov. 11th, was a complete success. Besides many other choice and appreciated numbers on the programme, the inter-union debate be-

In a short but very interesting address, Professor Reynolds, the Honorary President of the Union Society, gave his impressions of the primitive conditions in those parts of New Ontario, which he was privileged to visit during the past summer. For much of the musical part of the programme, the members of the Society must thank their city friends. In the presentation of the characters in "The Cattle Thief" Miss Davis fully sustained her reputation as an elocutionist.



IN THE EDITORIAL SANCTUM.

F. H. Reed.

R. S. Hamer.

H. R. MacMillan.

G. G. White.

tween the Maple Leaf and the Senior Societies, was perhaps one of the most interesting features of the evening. The subject for discussion was: "Resolved, that the franchise should be extended to women." Messrs. Cutler and Angle of the First Year for the negative were awarded the decision but only after a prolonged deliberation on the part of the judges. The Maple Leaf Society are to be congratulated on their success, all previous Union debates having been won by the Senior Societies. For the affirmative Messrs. W. Baker and D. H. Jones rendered two very able addresses but were unfortunate in the presentation of their arguments.

Mr. H. S. Arkell, M. A., of the Agricultural Department, who kindly consented to act as critic, rendered this phase of the programme a welcome pleasure to his audience by his words of praise or kindly criticism.

After the judges' decision had been given, the meeting was turned into the hands of the Athletic Association, it being the occasion for the presentation of the prizes to the winners in the Cross-country Run and to the members of the O. A. C. Fire Brigade.

The evening was indeed a pleasant one to all who attended and we feel that the success of our Union Literary meetings, (with such an able staff of officers)



WORKING AGAINST TIME—READING PROOF.
J. P. Atkin F. C. Nunnick.

is a permanent fixture among the many organizations here at college.

The energy and zeal with which the Maple Leaf Society of the present term has centred its efforts in the development of its literary inclinations is highly commendable and should produce much talent worthy of competing in the oratory contests during the coming winter term. That the Freshman Class are deeply interested in things literary is readily apparent from the following excellent programme rendered by that society on the evening of Nov. 18th.

PROGRAMME.

1. Irish Song—R. J. Allen.
2. Speech on Ireland—W. Ryan.
3. Canadian Song—R. H. Jenkinson.
4. Speech on Canada—A. C. Lawrence.
5. Events of the Week—E. L. Hodgins.
6. Scotch Song—H. C. H. Barnes.
7. Speech on Scotland—A. McLaren.
8. English Song—R. C. Treherne.
9. Speech on England—Turney.
10. Rule Britannia — Messrs.

Allen, Jenkinson, Barnes and Treherne.

11. Critic's Remarks.

God Save the King.

We regret very much to learn that Messrs. H. W. Scott, '06, and F. C. Hart, '06, have not sufficiently recovered from an attack of typhoid to enter college again this session. We hope their absence may be only temporary and wish them a speedy recovery. Mr. J. F. Monroe, '06, succeeds Mr. Scott as President of the Athletic Association.

Western University vs O. H. College.

That the literary ability of our O. A. C. students is not to be despised was clearly shown on the occasion of the inter-collegiate debate between the Western University of London and the College on the evening of Nov. 24th. Under the auspices of the Union Literary Society, a C. P. R. special was run from Guelph to London, arriving in the latter city about 6 p. m. Over one hundred from the college, besides many from our sister institution, the Macdonald Institute took advantage of the outing.

At the Station we were met by a contingent of London students, who piloted us to the University. The few hours left at our disposal were spent by the



PREPARING COPY.

D. M. Rose.

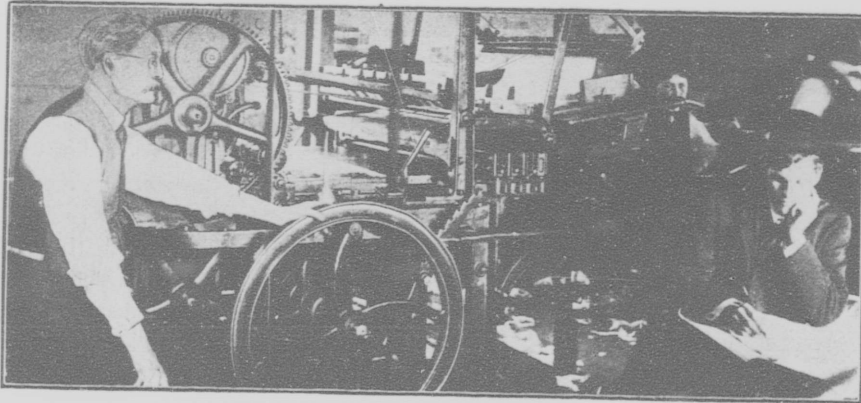
D. H. Jones.

C. R. Klinck.

boys in a joyful parade of a few of the main streets of the city, the ladies being entertained at the Tecumseh Hotel.

When the evening's performance commenced shortly after eight o'clock, the auditorium of the University was packed to the doors with an attentive audience. The programme, though short, was

Before leaving London, the students were entertained in the dining hall of the University, where full justice was done to the "goodies" supplied. We trust that during the coming term we may again be privileged to meet the students of some of our other universities in Ontario.



PUTTING THE "REVIEW" THROUGH THE MILL.
J. E. Smith.

warmly appreciated, the debate, of course being the most interesting feature. The subject for discussion was:—"Resolved that the ascendancy of Japan in the Far East will produce a retrograde movement in the world's civilization." Messrs. H. B. Smith and W. A. Munro of the O. A. C. for the affirmative were awarded the decision by the judges, defeating their opponents by only nine points out of two hundred. Mr. Smith's arguments perhaps carried more weight than any of those of the other speakers, his chief point being that the inherent and hereditary characteristics of a nation, and not the newly acquired, are the ones which will determine the influence of that nation for good or evil. For the negative, Messrs. Landon and Cornish rendered two excellent addresses but were unfortunate in the presentation of somewhat lighter arguments.

American Association of Farmers' Institute Workers.

Last month President G. C. Creelman and the writer had the pleasure of meeting with a body of men who may be regarded as the leaders of agricultural thought, not only in the U. S. but throughout the North American continent. This was the occasion of the tenth annual meeting of the American Association of Farmer's Institute Workers, which convened in the city of Washington, D. C., on Thursday, the 9th of November, at 2 p. m. and continued its sessions for three days.

The organization and establishment of the system of farmer's institutes that are now being held in every State and Province may be safely regarded as the very key to the success of the greatest industry on the continent of America.

Since the incipency of this organiza-



E. THOMPSON, B. S. A., Lecturer in Biology.

tion ten years ago the scope of the work has been gradually extending until at the present meeting, delegates and representatives were present from every section of the U. S. as well as a number from our Canadian Provinces.

The election of officers for the ensuing year, which was held at the last session resulted as follows:—

President—G. C. Creelman, B. S. A., M. S., Ontario Agricultural College, Guelph.

Vice-President—W. W. Miller, Director Experimental Station, Columbus, Ohio.

Secretary-Treasurer—Professor John Hamilton, Scientist Department of Agriculture, Washington, D. C.

Executive Committee—J. G. Lee, Commissioner of Agriculture, Baton

Rouge, La.; Prof. W. Amos, Maryland; Dr. H. Hall, Aurora, Ill.

The delegates were subsequently introduced to President Roosevelt at the White House by their new President, Mr. Creelman of the O. A. C.

The election of our genial President of the Ontario Agricultural College to the administrative responsibility in an organization which is representative of the interests of such a large mass of the American nation, must be not only a source of gratification to himself, being in itself a personal compliment, but also to Canada and the Ontario Agricultural College. It is interesting to know that Pres. Creelman has held the office of Sec'y.-Treas. of this Association since its organization a decade ago, and the present honor bestowed upon him is but a further tribute to the liberality of our neighbors, that a Canadian should be chosen to fill an office, the honor of which so many of them would have appreciated.

The Agricultural students, meeting at Chicago for the International Fat Stock Show, are inaugurating a pleasant innovation in the guise of a banquet, to be addressed by representatives from each college. Mr. John Bracken, '06, is the spokesman for the O. A. C.

The team competing this year are H. A. Craig '06, G. G. White '06, H. B. Smith '06, J. Bracken '06, and W. A. Munro '06.

Athletics.

Our Out-Door Champions.

IN the Fall of 1903, the class of '06, with the enterprise that has characterized the progress through the college, donated a cup to be presented to the winners of the annual tug-of-war. It may be that the boys of '06 believe in a practical application of the old adage referring to good deeds and their reward, or they may have been reluctant to trust their gift into other hands, or else there is a large streak of meanness in their com-

and they were runners-up for the Hockey, and from all appearances their Senior year will form a fitting climax to such a splendid record, as they have won the Tug-of-war, Football and Team race competitions, secured two of the championship medals and won 11 out of 24 firsts on Field Day.

If there is ever a time, when the strains of "See the Conquering Hero Comes" should make themselves heard,

that occasion is manifest at the approach of Kerr of '08, Grand Champion on Sports Day and winner of the Doherty-Dryden cup for cross-country running.

In the mind of the novel reader, Kerr's quiet and unassuming appearance would most certainly stamp him as



THE START FOR A RECORD BREAKING CROSS-COUNTRY RUN.

an athlete; whatever reason may commend itself to their contemporaries, the fact remains that they have retained their hold on the cup ever since its inception.

As Freshmen the boys of '06 won nothing, but were runners up in every team competition and created such a scare in the ranks of the older classes that their way was paved to victory in after years. In the Sophomore year they won the tug-of-war and gained the Hockey Cup by a brilliant series of victories; that year the snow prevented the completion of the football schedule. The Junior year gained the Tug-of-war and Football cups as well as the Team race

and they were runners-up for the Hockey, and from all appearances their Senior year will form a fitting climax to such a splendid record, as they have won the Tug-of-war, Football and Team race competitions, secured two of the championship medals and won 11 out of 24 firsts on Field Day.

Not satisfied with winning the cross country cup. Not satisfied with winning the cross country run, he broke the record by about 2 minutes, and so easily was this done that in the event of his return, we have no hesitation in prophesying that he will permanently retain the cup. New record, 33 min. 2 sec.

As a proof of the variety of his performances, he broke the half mile record and won the medal for the jumps at the

sports; so that whatever you may require, whether endurance, quickness of feet or precision of judgment, you will find champion Kerr, "all there."

To quote the words of a prominent man—"We all love Jack," not the extravagance of feeling to which that term is usually applied, but the admiration of men for a man. Jack Bracken, from the moment of his advent, has stood out head and shoulders above his fellow students in the realm of Athletics. He won the cup given for the most points scored among the Freshmen at the out-door meet and had the honour of competing in the weight-putting at the Varsity sports. He has always entered heartily into the out-door competitions, and this year won the medal for the weights. He has gained a place on every team that his year has entered in the inter-year contests and has always been a source of strength to the team.

However, in after years when the talk turns to football, Jack Bracken's name will be brought into the conversation, his phenomenal runs will be discussed and the fact that he was the back-bone of the team during his college career will be remembered. The beau-ideal of a football player in build, he would have been the star player in much faster company than has been his lot to play with, and it is fairly certain that he would have been welcome on the Varsity campus. This is Bracken's last year of football, so he says, and the college team will miss his presence as a player very keenly.

When Billy Munro entered the college as a Junior, he showed that he was capable of taking a Junior's place in athletics, as well as in classwork, by winning the mile and quarter mile runs and making his year track team. He excelled himself this year, in that besides winning



"TOM" SAVAGE,
Winner of Short Runs.

the same events, he established a new record for the quarter mile. Billy also was among the three, who distinguished themselves by beating the cross-country record, he coming in only 4 seconds behind the winner. Although he has arrived at the end of his career as a college runner and his achievements in this college have been few, he has shown evidences of the brilliancy of the old Queen's undergraduate, who captured all the runs at that Varsity a few years ago; indeed, could any one have wished to see a prettier finish to a race than his final dash down the stretch in the quarter-mile this year? Munro leaves us in the spring, but we hope that his spirit of keenly contesting every race he entered, whether losing or winning, will remain in this College, then we shall not feel the loss of men like him as much as we would do, if every atom of true sporting instinct went with them.

The last on our list is the promising young Freshman, Tom Savage, winner of the Freshman's cup and the medal for the short runs. As is expedient for a Freshie, Tom can show a clean pair of heels to any man on the college campus. However, Tom Savage's forte does not lie so much on the track as on

the hockey rink, and it is there that we will welcome his enlistment in our ranks. With a man of his calibre to add to our other talent, the pennant, that now appears as a mirage, may eventually materialize into a reality.



W. A. KERR.
Winner of medal for jumps,
and record-breaker in cross-
country run.

In our November issue we printed the schedule of the Interyear games, in this we give an account of the playing of those games.

By a wise move on the part of Executive the games were played under inter-collegiate rules, and considering the shortness of time for practice and despite the rather abrupt change in the method of playing, the football was very good.

Those who had misgivings as to the wisdom of such a step, will feel perfectly satisfied now, that the Executive showed great forethought in their decision, especially as we have gained such an insight into the game as will be of great benefit next season when we start practice for the Inter-collegiate series.

On Saturday, November 11th, the first two games were played.

The 4th year won against the first by a score of 5-1. As the score indicates, the game was closely contested, the first

year proving themselves to be men of mettle, several of them, among whom were Hoy, Treherne, Yeo and Sirett doing splendid work. However, in this game superior weight proved the winning factor; although to do the Seniors justice, their star, Bracken, was absent, but they were fortunate in securing the services of George Warner, one of the old standbys.

The second game of the afternoon was not as keenly fought out, as the third year, to the surprise of all, had a walk-over. The second year seemed unable to get in any of their plays and as they were not heavy enough to buck the line, they lost the game. In the second half they rallied splendidly, scored twice in quick time. They also looked dangerous several times, once indeed getting within two feet of their opponent's goal line, but they could not get through and had to give up the ball. The Third year scored twice in this half also, and as they had made 3 touchdowns in the first half they won out by 27-13. Barton played a splendid game for the Third year and ought to make the college team next year.

The next game was played on Tuesday, the 14th, between the Freshmen and Seniors. The ground had a thin covering of snow and the weather was not conducive to first-class work.

The Freshies held down their heavy opponents in the first half, although Bracken got away several times, only to be stopped by the rather sensational tackling of Treherne.

In the second half, weight began to tell and the Fourth Year won out by 13-2, making a total score of 18-3 in their favor. In this game Treherne showed up to advantage, several times saving with his tackling. We would advise

him to turn out regularly to practice next year, as his chances of making the college team are of the best. We cannot afford to let such a good tackle efface himself as he has succeeded in doing during the past season. He should remember that what it is possible to do for his year, ought to be more than possible, where the whole College is concerned.

On the 15th the second and third played their final game. This time the tables were completely turned, the Sophomores simply running around the Juniors.

The opportune arrival of Foster helped considerably so great being his influence among the Sophomores that the morale of the whole team was affected, causing them to play a far steadier game than the preceding Saturday's exhibition.

The final score was 24-0, ending the series in the Sophomores' favor by 10 points.

So many were the surprises brought out in the preliminaries, the final games were awaited by the students with a vast deal of uncertainty as to the outcome.



J. BRACKEN.
Winner of Medal for
Shot Putting.

The first was played Saturday 18th, the weather was ideal, being clear and just cool enough for the players, while not too cold for the spectators. The

Some men backed the weight and well-known prowess of the seasoned '06 boys, others the speed, training and Sophomore enthusiasm of the class of '08. The result was only natural under inter-collegiate rules, the heavier men won.

second year played a hard game from start to finish, and the result hung in the balance through the whole game. However, they were too light to do any bucking, and their fast men could not pass Bracken, Craig and Warner. They did manage to secure one touch-down, on a fast piece of following up by [Rowe. This was unconverted. They also made 4 points on rouges. The fourth year made 3 touch-downs, two of which they converted, and 1 rouge. The game ended with the defeat of the second year by 18-9.



W. A. MUNRO.
Winner of Medal for
Long Runs.

In this game the star player was Murray. He tackled hard, followed up well and played a hard game throughout, making several good runs, and undoubtedly excelled all his season's work. He is another man whose presence in the college next fall is very desirable.

The last Rugby game of the season was played on Tuesday, the 21st and was a decided victory for the fourth year. The second year showed a surprising lack of the staying ability, which was a feature of their first game with the fourth year. They apparently went to pieces and apart from one or two abortive attempts, made a very bad showing. Hodson made 3 splendid runs, but did not accomplish much, as he had no one to back him. On the other hand, the fourth year played a better game and did not depend altogether on their weight. Several of their men made good runs, especially Reg. Duncan, who secured a touchdown on a pretty run and another on

hard following down, making a score of 18-3.

Well, the games are over and the graduating class have won the caps and the football half of the Marshall-Harris cup.

There is one lesson to be learned from these inter-year games, and that is, we must play them at the beginning of the season, if we are to get the cream of our football talent. Several men that have come forward in these games would have given a good many of the members of the College team a hard fight for their position and that is the mildest way of stating the fact.

Before putting aside the topic of football, we wish to congratulate the Executive on the move they have made in offering caps for the winners of the inter-year games. This is a step in the right direction and we hope that it is only preliminary, as it would certainly be more advisable to provide members of *College* teams, with tokens of the honour they have won for themselves in making the teams.

The appearance of ice on the river betokens the approach of winter and the hockey season, but judging from the advanced stage in the work on the rinks, the Athletic Committee will not be

caught napping and we will be able to start practice as early as most of the city teams.

Basket-ball has been given a chance to worm its way into the hearts of the students, as there has been a special night assigned for practising the game. This is a good move as the game deserves to be popular and last year the attention paid it was practically nil, so great was the craze for baseball.

It is true that baseball allows of more men participating in the game, but it also occupies more time, whereas basket-ball, although accommodating fewer men in a single game will permit the working out of more men in an evening. Another thing, a man can play baseball a whole evening without being benefited much by the exercise it affords, whilst basket-ball is one of the most strenuous games in existence. Finally these games are taken up at a time when the students cannot afford to leave their studies to indulge in long games; at that time, they need the most exercise in the shortest available time, and basket-ball is the game that best answers this purpose.

Anyway, there is no need to quarrel about it; divide the time given to indoor games evenly between the two; then everybody will be satisfied.

Macdonald.

The Festival of Christmas.

FOR the observance of the old customs, which have gathered around Christmas Day, making it to us the festival that is, we may assuredly look to England, not forgetting, however, the important part that Germany has always borne in contributing to the legends and old time customs which surround the season.

Turning then to England, we begin the day with the remembrance of its religious significance, lifting up our hearts and voices in praise and gratitude to the Father for his unspeakable precious gift to all mankind.

Greetings are exchanged, families are reunited and many tender thoughts go out to the absent ones.

It is a custom in England among the land owners to see that all their tenants are provided with their roast of beef and plum pudding, other gifts being added suitable to each household. So that we may picture the inmates of the humblest cottages having their Christmas dinner. Holly and mistletoe being abundant in the old country, every home has a bountiful supply.

Let us take a peep into one of the homes—a picture of hundreds of others.

When the family is gathered around the festive board, where bright faces and good cheer are in evidence, music is heard from outside; a boy's sweet treble rises above the other voices—the waits have come to sing their carols. Sometimes the village is fortunate enough to

possess bell ringers to supply the accompaniment.

Dinner being over, the head of the house must start the dancing in the servants' hall; class distinction is waived, and the hoary-headed squire, in his scarlet, or pink as they call it, hunting coat, donned especially for the occasion, leads off Sir Roger de Coverley with, perhaps, a pretty lady's maid, his spouse following with the butler.

In many English homes, especially where there are children, a picture is formed with clay models of the humble manger bed, the group of the Holy Family, and the wise men presenting their gifts. The much looked for Christmas tree for the little ones is often postponed and enjoyed a day or two later.

In Germany, every household, even the poorest, has its own Christmas tree, frequently so small that it is placed in the window that all who pass by may see.

These trees, with their decorations, are allowed to remain so long in the houses that they grow to seem like ghosts of a happy past.

In Holland, St. Nicholas, in his tall peaked cap and long flowing robe, with a bundle of switches and a packet of toys, appears at each door and enquires whether the children who live within have been good or bad.

If good, the packet contains something for them, if the reverse, one of the switches is left instead.

On this side the water we have cus-



MRS. DUNBRACK, Macdonald Editor.

toms, which seem to have originated in both England and Germany.

In far off Australia and New Zealand, where Christmas visits them in the summer season, they fain would substitute, for the proverbial roast beef and plum pudding, lamb, strawberries and ices, and have their repast under a marquee on the lawn.

In both France and Scotland, New Year's Day has been set apart for family gatherings and the exchange of gifts.

As the season draws near once more, let us remember the old saying, "Christmas comes but once a year, but when it comes it brings good cheer!"

And may our hearts go out in love and friendship to all nations.

Hallowe'en at Macdonald Hall.

The students of Macdonald Hall
Decided they would give a Ball
In fancy dress, all were to go
Because this is more sport I Trow.

At 8 o'clock on Hallowe'en,
In Fair attire all were seen.
Gay peasants tripping light along
Duchess and King were in the throng.

The strains of music light and gay,
Made Hartts grow Fuller still of play.
Outside the Evans clouded were,
We heeded not the Greenwood's stir.

The Wells of joy ran deep and clear,
And Mennie a laugh rang thro' the air,
In Fitz of laughter we partook,
To see the Gardner kiss the Cook.

A summer girl in bathing suit
Walked with a Naughty young galoot ;
I tried to Warner, but in pride,
"I've drawn a trump Card," she replied.

We danced awhile so Bligthe and gay,
Then at some games began to play.
We ducked for apples (Greening's all)
Then had a Gallup up the Hall.

Wat-son came from the O. A. C.
We do not know and hope that he,
When next he comes to Hunt for sport,
Will leave his guinea-pigs in port.

At supper-time so merrie Lee,
We sipped our Ryan raspberry.
We fed the guests on cakes and coffee,
And some one had a stick of Toffey.

At last when friends had all gone home,
We went to bed in dreams to roam.
But as in sleep we calmly Lay
We thought we heard a donkey bray.

Quick to the windows many went,
Regardless of the President.
Who came to tell us that the noise,
Was only that of the college boys.

Be-Weir, my friends when this you read,
Be ready good advice to heed.
When Hallowe'en comes round again,
Be sure you go to bed at ten.

For fun, excitement and brilliancy what can equal a fancy dress ball? Should you propose this conundrum to anyone who was present at the Masquerade held in Macdonald on Hallowe'en, you will receive the unanimous response "Nothing on earth!" Those who were privileged to be guests on this occasion carried away with them the memory of a scene so charming that it will be long before it is forgotten.

Like the enchanted palace of the fairy tale, held in the thrall of sleep till brought to life by the awakening kiss of the Prince, was the transformation wrought by the sound of the gong at



Educational Sewing.

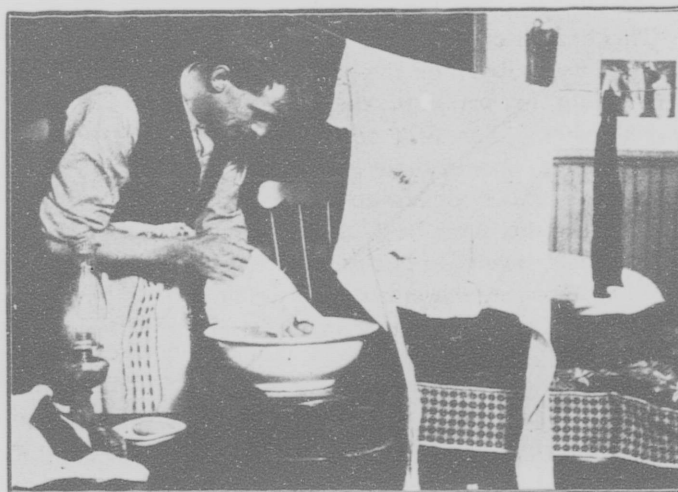
eight o'clock. At one minute of that hour halls and corridors were deserted and silence reigned supreme. At the first stroke of the gong, presto!—the doors flew open and there emerged kings and queens, nobles and peasants, old folk and babes; people of every color, clime, age and station,—all converging in a motley crowd amid exclamations and laughter, towards the door of the gymnasium.

Having passed the most imposing Butler, who stood in the doorway, and made your bow before Mrs. Fuller and Dr. Ross, who were receiving the guests, you rubbed your eyes, and tried to realize the situation. But alas! the scene refused to stand for a mental photograph. In a million kaleidoscopic combinations of form and color the picture shifted, arranged and re-arranged itself before your bewildered eyes. Queen Louise of Prussia, Cinderella and her fairy godmother, Portia, Lorna Doone, the Queen

of Hearts, Samantha Allen and Carrie Nation mingled with dainty Dresden Shepherdesses, dusky Minnehahas, almond-eyed maids of Japan, Red Cross Nurses, Highland Lassies, aye and lads too. For there were cavaliers a-plenty. Little Lord Fauntleroy, Buster Brown, John Alden, The Summer Man and the Court Jester were all striking successes. The British army was represented by brave lads in khaki, dashing cavalry officers and sporty cadets. There were football warriors too, "Knights of the Gridiron," and a sprinkling of Other Fellows.

Turning to admire an old-fashioned belle of the crinoline period, your blood froze in your veins at finding yourself confronted by an Indian chief. There he stood, gazing stolidly before him, arms folded haughtily over his breast. The next moment however he turned away and glided off with silent grace, his feathered headdress waving high above the heads of the company and you realized the significance of the phrase "the noble savage." In his place appeared Gainsborough's "Duchess of Devonshire," a very grand dame indeed with her velvet, ermine and pearls, looking every inch a duchess. Oh! why can't we powder our hair and wear beauty patches nowadays! Next your eyes rested on the sweet face of Mary, Queen of Scots, whose gentle air and queenly bearing together with her lovely gown made her one of the "observed of all observers." From the sublime to the ridiculous was a frequent step that evening, so the next moment you were holding your sides as

Humpty Dumpty rolled into view, and over his head you caught a glimpse of a Really Irishman, whose clever get-up, from the old clay pipe stuck jauntily in the ribbon of his hat to the red bandana-covered bundle slung on his shillelagh over his shoulder, (to say nothing of his red touseled hair and his black eye) was a perfect incarnation of Ould Oireland. Then there passed a whole bunch



What is Home without a Laundry.

of Nursery Rhymes from Old King Cole to Mother Goose herself. And then your sensibilities received a shock by the sight of a Killing Bowery Man making love to Martha Washington, while before you had recovered yourself you were brought to a standstill before two open sarcophagi in which were two ghastly and much be-swathed mummies labeled Melek I and Rameses II—"With Care."

But then began the music and you took your place in the Grand March, which was led by Canada and the United States. Then came waltzes, two-steps and three-steps and you caught the spirit of the hour and danced in a perfect madness of delight. What if you did waltz right into the arms of a most realistic Mephisto! What if ghosts beckoned on every hand! What if Queen Wilhelmina was dancing with a Gold Dust Twin! Everything was All Right.

After awhile there were games of the kind peculiar to Hallowe'en festivities, and then refreshments were served downstairs. That was a pleasant diversion too, and we lingered over our glasses. Then back we went to our dancing till

at ten-thirty off went the lights in the same relentless fashion they are wont on ordinary occasions. They came back presently and politely said they would stay for another hour. But the mischief was done. The guests from the city were preparing to leave and in a few minutes the last good-byes had been said and we were left like the Walrus of "Alice in Wonder land,"

"To talk of many things,
Of serenades and sealing wax,
Of skeletons and Kings,
And why the sea is boiling hot
And whether pigs have wings."

The Young Women's Christian Association has been reorganized for the year 1905-06, with the following officers in charge:

President—Miss Beamer.
Vice-Pres.—Miss McMurchie.
Sec.-Treas.—Miss Shand.
Cor. Sec.—Miss Elliott.

All the meetings have been exceptionally well attended, and a keen interest is being taken in the work.

Domestic Science in Nova Scotia.

This branch of education is comparatively a new subject on the public school curriculum in many of the towns of Nova Scotia. The first school in the Province was opened about ten years ago in Halifax, chiefly owing to the efforts of Mrs. Charles Archibald of that city, a lady well known for her great interest in all that concerns women's education, and A. McKay, Esq., Supervisor of the Halifax School. Miss Helen Bell, a graduate of one of the Scotch schools, was appointed Principal and under her the school has become one of the best in the Province.

A number of towns soon followed the example of Halifax, and in 1900 a Normal School of Domestic Science was opened in Truro, which is noted as an educational centre in Nova Scotia. This school was equipped for teaching the public school classes as well, and the students attending Normal School. The citizens of Truro, both men and women, were greatly interested in this work, which interest was shown by the numbers who visited the school constantly. On the roll this year are 191 pupils from the public school, 91 from the Truro Normal school, and 5 special students taking the teacher's course. Great improvements and additions have been made during the last three years. In 1902, Miss McCall, graduate of the Liverpool Technical College, England, was made principal in Truro, and since then the work has broadened out, and in

addition to Cookery, Home Nursing, Sewing and Laundry work are taught. Within the last five years, schools have been opened in Wolfville, Chester, Lunenburg, Bridgewater, Pictou, Stellarton, New Glasgow, Windsor, Kentville, Middleton, Yarmouth and Sydney. The teachers in all of these schools, with the exception of Middleton, are graduates of the Truro Normal School of Domestic Science. The Nova Scotia Domestic Science Schools are supported by the towns, with the aid of a Government grant of 15c a lesson for each pupil, such grant for each school not to exceed \$300. The Consolidated School in Middleton is aided by Sir Wm. Macdonald.

It is possible before many years, that schools will be opened in Amherst, Annapolis, Digby, and Westville, probably as soon as these towns can support the Domestic Science School. The cost of supporting the school and not the equipment is the main item. In Truro, Yarmouth, and Middleton, the food is bought by the students attending the classes. The money received in this way does not cover the cost, but considerably lessens expenditure, and moreover gives the pupils a greater feeling of independence.

Owing to the growth of the work, a Teacher's Association was formed in the summer of 1904, and a second meeting was held in Halifax, Easter, 1905. This association promises to become a vigorous and useful organization.

Locals.

While discussing the captive coon at Macdonald Nature Study Department, one thoughtful girl arose and asked—“Professor McCready, have you ever noticed that this coon is not so dark as other coons?”

HODGINS admiring one of the singers at St Andrew's—“He sings like a martingale.”

YEO does not sport a cane; he says a Reed does just as well.

Feather thinks he will be plucked at the exam.

Prof. Day, demonstrating the theory of Osmosis—

What is the force that elevates the sap from the root up the trunk to the leaf?

Stafford—Osmophoric pressure.

Prof. of Botany—“What has detained you so long this morning, Langley?”

Langley—“I had something to do.”

Jacobs has been to Macdonald Hall again.

This time it is intimated that while asking for the privilege of a promenade, he gave as his excuse, that he had to put the time in somehow.

Friar, (on Sunday morning)—“Can you give me two nickels for a dime? I'm going to church.”

In Dairying:

Professor—“What power would you suggest for the farm separator?”

Foysten—“Female.”

It is rumored that the Macdonald lamb had Mr. Nag-Tany up a tree in front of the Hall. His lady friends, seeing his dreadful plight, came to his rescue by calling out “Nanny, Nag, Nag, Nanny.”

Hibberd and Mackenzie have made two or three deliberate attempts to raise the Macdonald lamb.

Mr. H. Neethling of South Africa, will shortly publish a bulletin on “Cover-crops for facial protection,” as illustrated by Mr. R. Nag-Tany.

The “Duke” strolling down the hall, with a fresh cigar in his mouth, meets the Dean of Residence with—

“Please Sir, it isn't lit.”

At one of the church “At Homes”—

McLaren—“I don't think much of this card system of selecting partners.”

His partner—“Oh, don't you.”

McVannel has now been appointed assistant to the Dean of Residence, but is having a little difficulty in connection with the work, owing to a recent attack of “inflammatory rheumatism.”

THE BOYS OF THE O. A. C.

Words and Music by J. P. SEMON.

Tempo Marcia

Musical notation for the first system, including treble and bass staves with notes and rests.

2 tempo

Heres a health to our College — a toast to the staff, and hurrah for the O A

May we all stand united the students and Profs in our

Alma Mater great and free. Let us all swell the Song in the

Chorus, loud and strong Heres a jolly good toast to ourselves. For well

never repent of the time that we spent, as the Boys of the O A. C.

The Boys of the O. A. C.

When a freshman, I came to the O. A. C.
 And had paid my board in advance,
 I regarded with awe the term Sophomore
 But resolved that I would take my chance.
 And I soon learned to shirk
 All unnecessary work,
 And things that need not be,
 For a fine I preferred
 Rather than be deterred
 Playing football at the O. A. C.

Next you'll find me enrolled, in the ranks of the bold
 With the title of Sophomore,
 To this year having come I soon made things hum
 For the fair sex and freshmen galore.
 And a thesis I wrote
 On a subject quite remote,
 Such as "Cows and their pedigree."
 And I judged all the stock
 From the head to the hock
 That existed at the O. A. C.

Let us pass from the time when a junior sublime
 I belonged to the lads that cram.
 It was high time to grind so at study you'll find
 Me preparing for my great exam.
 And I soon looked so wise
 That the freshmen in surprise
 Asked the Sophs, why what is he?
 And the Sophs they replied
 To the Freshmen aside,
 He's a junior at the O. A. C.

Last a senior supreme I was proud in extreme
 Of the fame that I had gained,
 And I spoke when alone in a fatherly tone
 To a Freshie who from work abstained.
 Though I leave in the spring
 With my name these halls shall ring
 When I take my degree,
 For I've shown that I'm smart,
 And I'll proudly depart
 As a graduate of the O. A. C.

* Hart, convalescing at the General Hospital, implores the Doctor to allow someone to shave him, for the nurse says it is a ticklish operation.

Monroe—"Who was that couple that just left?"

Baker—"That was some Freshman and his girl."

Monroe—"How do you know?"

Baker—"Because, when she told him she was cold and wished for something around her, he said 'Let's go home.'"

Mr. Reed, addressing the students about cutting across corners of the lawn—"I wish you would be more careful of your short-comings."

Angle, (in veterinary) "How old is that three year-old colt?"

The following has been selected a proper and befitting class call for the senior agriculturists:

Babcock testers, crop rotations,
Big fat steers on balanced rations.
Our's the best of life's joys:
We're the '06 farmer boys.

This is why one of our down-town supporters has a full page ad. just opposite a few of our medical cards.

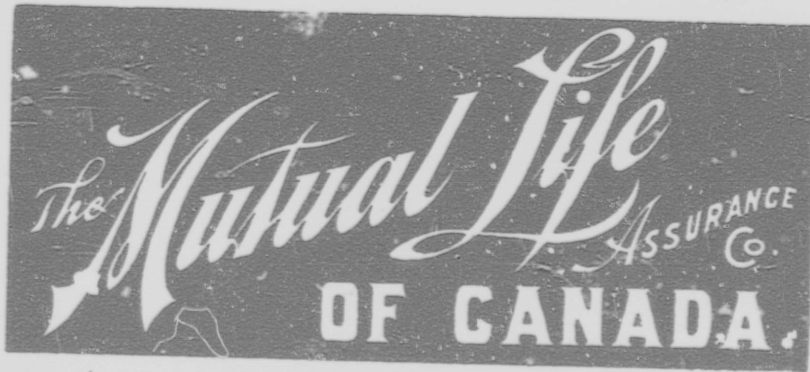
He bought her ice cream in the Kandy Kitchen,
And she ate and ate and ate
Until her heart she gave him,
To make room for another plate.

Doubtless many of our readers remember a serial story we published concerning the fate of Willie. They will all

Continued on page xviii., advertising.

EVERY ONE KNOWS

Or should know that there is no "Extravagance"
or "Frenzied Finance" practised by



The Company is managed with the utmost economy consistent with efficiency; its investments yield the largest income consistent with absolute safety; and there are no stockholders to absorb any of its profits. EVERY DOLLAR FOR THE POLICYHOLDERS.

ROBERT MELVIN,

President.

GEG. WEGENAST,

Manager.

W. H. RIDDELL,

Secretary.

GEO. CHAPMAN, - - GENERAL AGENT

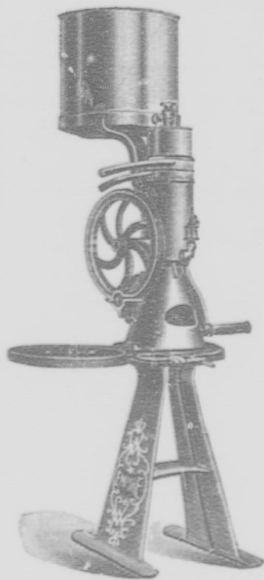
McLaren's Block, Guelph, Ont.

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

SIX COWS AND AN EMPIRE

Will make more money for you than eight or ten cows and any number of cans and pans, and with less work.

EMPIRE SEPARATORS



point the way to success in dairying and their immensely large sale in the last three years, surpassing any other single machine in America, shows that their popularity is founded on merit.

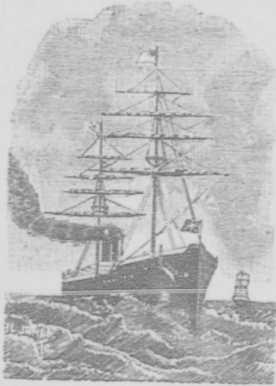


SEND FOR CATALOGUE

Empire Cream Separator Company of Canada
TORONTO, CANADA LIMITED

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

Ocean Steamship Tickets



SOLD ON ALL LINES TO ALL
PARTS OF THE WORLD.

JOHN DAVIDSON
Market Square, Guelph, Ont.

feel that we have trifled with their feelings, when we announce that subsequent research, proved conclusively that previous statements have been incorrect and that, despite the many obituaries, this is all that ever happened Willie :

Willie was a gentle lad.
General regrets
Were felt when Willie one day took
To smoking cigarettes.
Willie kept on puffing
Harder every day.
Sister took the coupons ;
She put them all away.
Willie dear has left us,
'Twas a mournful shock.
Sister cashed the coupons in
And got a mantle clock.
Now we gather round it
As the minutes fly ;
It is something lovely to
Remember Willie by.

Continued on page xxiv., advertising.

The Traders Bank of Canada

ASSETS TWENTY MILLIONS (\$20,000,000)



It is the

Farmers' Bank



Next door to

the Post Office



WYNDHAM STREET.

SPECIAL ATTENTION Paid to **FARMERS' BUSINESS**

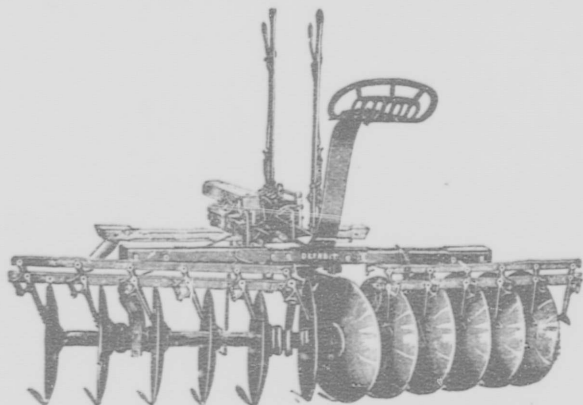
Loans Made. Deposits Received

The Most Favorable Rates and Terms Given.

A. F. H. JONES - - - - **MANAGER**

FROST & WOOD

"WINDSOR" DISC HARROW



BUILT IN 8 SIZES

A Disc Harrow is one of the most necessary implements for the farm to-day. When plowed land is gone over with a Disc Harrow it will be in very much better condition for seeding. If you have never had one on your farm, ask your neighbor what advantage it is to own and operate one. Or if your old Harrow is past usefulness, constantly giving trouble and wearing out horse-flesh, then it is time to replace it with a "Windsor."

A Separate Lever controls each section and makes it easy to turn corners, etc.

The "Windsor" is equipped with a **Patented Pole Attachment** by means of which the pole can be instantly adjusted to suit two or three horses. No other Disc Harrow is equipped with this device.

The "Windsor" is equipped with Ball Bearings, fitted in self-aligning boxes, making easy work for your horses.

Send for Catalogue of our full line

THE
Frost & Wood Company
LIMITED.

**Winnipeg, Toronto, Montreal, Quebec, St. John,
Truro, Charlottetown.**

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

The Favorite of Them All The Farming World



IS
**TOLTON'S NO. 1
DOUBLE
ROOT CUTTER**

Points of Merit.

- 1—To change from pulping to slicing is but the work of a moment.
- 2—There are two separate wheels, one for pulping and the other for slicing.
- 3—The united force of both wheels is always used in doing the work in either capacity.
- 4—The hopper is between the wheels and does not choke.

Most efficient and Largest in Capacity.

Fitted with Roller Bearings, Steel Shafting, and all that is latest and best in principle, material and construction.

OTHER SPECIALTIES—Pea Harvesters, Clover Bunchers, Haying Tools, and All-steel Seed Harrows.

Send for Descriptive Circular.

TOLTON BROS. Limited
GUELPH, ONT.

A SEMI-MONTHLY,



THE PAPER for the FARMER

whether

a **SPECIALIST** or General Farmer.

Information gleaned from the most reliable sources. Carefully edited, well printed & profusely illustrated.

One Year - 60c. Two Years - \$1.00.

A SAMPLE COPY ON REQUEST.

SPLENDID INDUCEMENTS TO AGENTS



The Farming World

90 Wellington St., W. - TORONTO

CHOCOLATES

G.B. G.B.

ARE MADE FROM THE PUREST AND CHOICEST MATERIALS.

99 DIFFERENT KINDS AND FLAVORS

The largest and best line of CHRISTMAS BOXES of BON BONS to choose from. Ask for and insist on having

G. B. CHOCOLATES

Ganong Bros., St. Stephens, N.B.

Petrie's Drug Store

Sole Agents in Guelph

The Bond Hardware Company Limited

President:

JOHN M. BOND

Vice-President:

W. GEO. BOND

2nd Vice-President:

T. A. KEATING

Secy-Treasurer:

J. S. MILLAR

If You Require Anything in Hardware or Sporting Goods Let Us Serve You.

Our Prices Are Always Right

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

LIVE STOCK

Craigieburn Stock Farm

CLYDESDALES, SHORTHORNS,
and SHROPSHIREs,

Imported and Canadian Bred.

Young Stock Always For Sale.

For particulars apply to

G. A. BRODIE
BETHSEDA, ONT.

Stations—

Stouffville, G. T. R.; Claremont, C. P. R.
Telephone service from stations to residence.

CLYDESDALES

SMITH & RICHARDSON
COLUMBUS, ONT.

Importers of Clydesdale Horses.

Now on hand a great number
of Stallions and Mares, among
them the Toronto Show winners

R. R. Stations—G. T. R.—Oshawa.
Brooklin.

C. P. R.—Myrtle.

Long Distance Phone at Residence.

Shorthorn Bulls
Shropshire Sheep
Yorkshire Swine

of the highest standard
of their respective breeds

Richard Gibson
DELAWARE, ONT.

Pine Grove Stock Farm

Rockland, Ontario, Canada

BREEDERS OF CHOICE

SCOTCH SHORTHORNS
and SHROPSHIREs

W. C. Edwards & Co. Limited

PROPRIETORS

JOSEPH W. BARNET, Manager

Dentonia Park Farm

COLEMAN P. O., ONT.

BREEDERS OF

Jersey and Guernsey
CATTLE

Stock of Both Sexes For Sale.

Photographs and Descriptions Sent on
Application.

Alva Farm Guernseys

Awarded First Prize at Montreal
for Breeder's Young Herd.

Young Animals of Merit For Sale

Pedigrees and particulars to parties
wishing to purchase, address:

SYDNEY FISHER, Knowlton, Que.

J. DRYDEN & SON

Maple Shade Farm, Brooklyn, Ont.

Home of the oldest and largest herd
of Cruickshank Shorthorns in America.
Shropshire flock founded 1871.

Stations—C. P. R., Myrtle, 3 miles.
G. T. R., Brooklyn, 1½ miles.

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

ZENOLEUM
DISINFECTANT AND DIP

USED AND ENDORSED BY
ONTARIO AGRICULTURAL COLLEGE
IN ITS SEVERAL DEPARTMENTS

THE CANADIAN GOVERNMENT
AT ITS ARMY BARRACKS

CANADIAN PACIFIC RAILWAY CO.
THROUGHOUT ITS SYSTEM

PROMINENT VETERINARY SURGEONS
IN THEIR DAILY PRACTICE

LEADING LIVE STOCK MEN
ALL OVER THE WORLD

ON SALE AT EVERY DRUG STORE
In Tins 25c. - 50c. - 90c. - \$1.50 - \$6.25

WRITE FOR FREE BOOKLETS
Zenner Disinfectant Co.
WINDSOR, Ont. DETROIT, Mich.

Scotch Collie Dogs

ENFIELD COLLIE KENNELS are now offering for sale some of the choicest Collie Pups in Canada. Dogs and bitches, about four months old.

JUST THE DOG FOR THE FARM
Can easily be trained for cattle, as they come from grand working and prize-winning stock.

Prices \$10 to \$20

Also a well bred Sable and White Brood Bitch three years old, that has produced winners.

Price \$25

Write now before they are gone.

C. A. R. WARREN,

2 Elm Ave., Rosedale, Toronto, Canada

IF YOU WANT



School Apparatus
and Supplies,

Write

The Steinberger Hendry Co.,

37 Richmond St. West,

TORONTO - - ONTARIO

ALL O. A. C. GRADUATES

Should Subscribe for
Gaelph's Leading Paper,

The Weekly Mercury

It will keep them in touch with important matters pertaining to their Alma Mater; will furnish them with full information concerning the Ontario Winter Fair; will give them the news of the Royal City, and the Farm and Live Stock News of the District.

Daily, \$4.00; Weekly, \$1.00, in advance.

McIntosh & Galbraith.

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

Books For All Readers

What a Young Boy Ought to Know	- - - - -	Stall	\$1.00
What a Young Man Ought to Know	- - - - -	Stall	1.00
What a Young Husband Ought to Know	- - - - -	Stall	1.00
What a Man of Forty-five Ought to Know	- - - - -	Stall	1.00
What a Young Girl Ought to Know	- - - - -	Mary Wood Allen, M.D.	1.00
What a Young Woman Ought to Know	- - - - -	Mary Wood-Allen, M.D.	1.00
What a Young Wife Ought to Know,	Mrs. Emma F. A. Drake, M.D.		1.00
What a Woman of 45 Ought to Know,	Mrs. Emma F. A. Drake, M.D.		1.00
The Social Peril	- - - - -	Stall	1.00
Husband, Wife and Home	- - - - -	Chas F. Goss	1.00
The Social Evil in University Life	- - - - -	R. N. Willson, M.D.	.50
Manhood's Morning	- - - - -	J. A. Conwell	1.00

Postpaid upon Receipt of Price.

Descriptive Circulars Free Upon Application.

WILLIAM BRIGGS

29-33 Richmond St. West

TORONTO

SAM LEE HING

The College Boys patronize him because he does **GOOD WORK**, and always aims to please.

He calls on Mondays,
Wednesdays,
and Saturdays.

WORKSHOP AND OFFICE ON
ST. GEORGE'S SQUARE

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

Continued from page xviii., advertising.

Mr. J. P. Smith blandly suggests that the M. H. in a Macdonaid girl's sweater represents "Hot Meals."

Kerr—(examining a butter-fly after a lecture in Botany,)—"What is this?"

Pat Clancy—"Shure and if Prof. Jackson were here, he would call it a modified leaf."

It is only apropos of the recent football excitement that we should take occasion to publish the following poetry, inspired by the last season's gridiron strife:

Sing a song of touch-downs;
A pigskin full of air;
Four and twenty sluggers,
With long and matted hair.
When the game was open,
Sluggers 'gan to fight;

Wasn't that for tender maids
An edifying sight?

Sing a song of football
Don't it make you smile?
Four and twenty players
Struggling in a pile:
When the pile is opened
Hear those awful groans.
Boys begin to creep out,
Looking for their bones.
Sections there of noses,
Patches here of hair,
But Bracken made a touch-down
And little do they care.

The College Sausage Co., managed by M. T. Treichler, announce a special line for Christmas trade.

"The College Porter" threatens to chuck his job, unless the lights are taken out of the bottles so that he may blow them out.

Men's
Goods

E. R. Bollert & Co.

Ladies'
Goods

THE Faculty, Students of the O. A. C. and Macdonaid Institute will find this store ready to serve their wants to the best advantage. We are pre-eminently a Ladies' and Gentlemen's Outfitting and Furnishing Store. No matter what your needs this store is ready to supply them with good goods at moderate cost. We have always been favored with a large business from the personnel of the College. We shall pay special attention for its continuance and increase.

Men's Section

Fine Ordered Clothing at Moderate Prices.
Fit-the-form Ready-to-wear Clothing, very good and very cheap.
Best Styles of Hats and Caps at closest prices.
Up-to-date Shirts, Collars, Ties, Gloves, and Fancy Furnishings, not at fancy prices.
Underwear, Hosiery, Etc., grand values.

Ladies' Section

Dressmaking at very reasonable rates.
Ready-to-wear Coats, Skirts, Blouses, Etc., in great variety of new things.
MILLINERY—All the Novelties of a first-class Millinery Business constantly received.
The Underwear and Furnishing Stocks are crowded with good goods at low prices.
Belts, Collars, Gloves, Hosiery, Handkerchiefs, Etc., Etc.

25 and 27
Wyndham St.

E. R. Bollert & Co.

25 and 27
Wyndham St.

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

Christmas Presents



MERRY
XMAS

GET

A Handsome Little
Present for . . .

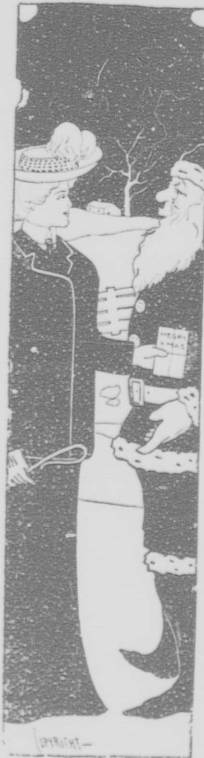
YOUR

Friend. Everyone expects
a box of

KANDY

Why not get the best in
the most attractive form

AT



The Kandy Kitchen

LOWER WYNDHAM STREET,

GUELPH, ONT.

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

MEN'S FURNISHINGS

Just to Remind You

That I carry one of the Largest and Most Select Stocks of **HATS, SHIRTS, TIES, SOX, COLLARS, UNDERWEAR** and **MEN'S FURNISHING GOODS IN THE CITY.**

Ordered Clothing

I have a select stock of **SUITINGS, OVERCOATINGS AND TROUSERINGS** to select from. Styles, Trimmings, Fit and Workmanship the very best, and prices as low as any in the trade. Our motto is: "The best possible value for the least money." All goods marked in *plain* figures and *one* price to all. Be sure you come to **73 WYNDHAM STREET** for your Furnishings and Clothing.

R. E. NELSON

Next Traders' Bank.

Men's Furnisher, Hatter and Fine Tailoring.

MERRY CHRISTMAS—EVERYBODY



Though we can't fill your stockings with the good things we sell, we can fill your hearts with joy all the year round by supplying you when needed with the best thoroughly seasoned

Lumber and Building Materials

The H. A. CLEMENS Co. LIMITED

Manufacturers of

WASHING MACHINES, STAIR BUILDING and INTERIOR FITTINGS A SPECIALTY

GUELPH, CANADA

Phone 50

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

TAKE HOME WITH YOU YOUR
Presents for Christmas

LARGE ASSORTMENT OF

Cut Glass Goods

Ebony Goods

Fancy Perfumes

G. B. Chocolates

Purses

Hair Brushes

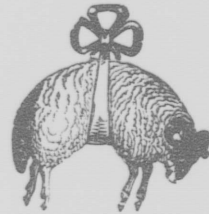
Toilet Cases, Etc.

Remember the place,

Petrie's Drug Store

Lower Wyndham Street.

**Advance in
Fine Furs..**



Is the latest report from the Big Fur Centres. This will make no difference this season with us. We have an IMMENSE STOCK bought and paid for; so it is up to you to get your money's worth this fall.

Our experience and guarantee should be worth something. We take the responsibility if everything should not prove satisfactory.

In FINE TAILORING we are in the First Division in Canada.

Keleher & Hendley

**Remember
the Place**

TO BUY

LOWNEY'S

Xmas

Chocolates

IN BEAUTIFUL

HOLIDAY

PACKAGES IS



Stewart's Drug Store

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

The Season's Greetings

To the Students of the Macdonald Institute and the O. A. College
and others of "The Review."

**G. B. RYAN & Co. EXTEND THE
SEASON'S HEARTY GREETINGS**

With the coming of the New Year and the making of new resolutions here is one good resolution to make. And it is one that you are likely to keep, for there will be no temptation to break it:—"This year I will go to Ryan's for everything I buy in the lines of goods they handle."

"A Square Deal for Every Man"
CLOTHING and FURNISHINGS
FOR MEN and BOYS.
Everything New. Everything Right.

Everything in Wearing Apparel
FOR WOMEN AND CHILDREN.
Millinery, Shoes, Dry Goods and
Carpets, Curtains, Housefurnishings.

G. B. RYAN & CO.
UPPER WYNDHAM STREET

The Canadian Bank
of Commerce

Established 1867. Head Office, Toronto
B. E. WALKER, General Manager

Capital (Paid Up) \$8,700,000
Rest, - - - 3,000,000

GUELPH BRANCH

A general banking business is transacted.
Bankers for the Dominion Live Stock Association.
Farmers' notes discounted.
Drafts issued payable at all points in Canada and the
principal cities in the United States, Great Britain,
France, Bermuda, etc.

SAVINGS BANK DEPARTMENT

Deposits of \$1.00 and upwards received and current
rate of interest allowed.
Interest added to the principal at the end of May
and November in each year.
Special attention given to Collection of Commercial
Papers and Farmers' sales notes.

J. M. DUFF, - Manager

R. B. Kennedy



PHOTOGRAPHER



The best place to get a good
Group Photograph or a Por-
trait of yourself.

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

The Little Tailor Store

COLLEGE MEN

Are usually particular about their appearance. They demand character in their clothes.

We make the kind of Suits and Overcoats that give a man that "well-dressed" appearance so much desired.

We make the clothes to fit the man; TAILOR individual style and shape into them.

ABOUT OUR PRICES

Being on a side street, our store rent is very small compared with main street rentals.

It is this combination—a big business done in a small store, with very light expenses—that makes it possible for us to turn out such high grade work at prices so much less than other tailors have to charge you.

Tweed and Worsted Suits \$15 to \$25
Blue and Black Serges \$18 to \$27
Overcoats \$16 to \$25
Trousers \$4 to \$7.50

R. J. STEWART

Opposite Knox Chu ch, Quebec Street.

Kee's Drug Store

Donald Institute Text Books.

Man's Psychology.....	\$1 00
and Dietetics.....	3 00
Co. Book—Farmer.....	2 00
Elementary Chemistry.....	1 00

Nature Study Department.

Sylvan Ontario.....	\$0 40
H. S. Botany.....	1 00
Science Note Book.....	35
Plants—Coulter.....	1 80

1st Year Books.

West's Grammar.....	\$0 50
Alexander's Anthology.....	50
Carpenter's Rhetoric.....	60
Soil—King.....	75
Elementary Chemistry.....	1 00
H. S. Botany.....	1 00
Poultry Craft.....	1 50
Canadian Dairying.....	1 00
Soils and Crops.....	1 00
Testing Milk.....	1 00
H. S. Book-keeping.....	60

A complete stock of 2nd, 3rd and 4th Year Text Books always on hand.

Fountain Pens, Note Books, Scribblers, etc. Try our \$1.00 Fountain Pens.

McKee's Book Store

Central Bookstore

Opposite where the Street Cars stop.

Text Books. Exercise Books.
Foolscap. Writing Pads. Up-to-date Note Papers and Envelopes, Papetries, Etc., Etc.
Bibles. Hymn Books. Books by Standard Authors. Poets.
Prayer Books.

In fact, everything that is kept in a well-ordered Bookstore.

G. ANDERSON & CO.

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

ONLY
ARTISTIC
CLOTHING

IN OUR READY-TO-
WEAR CLOTHING
AND FURNISHING
DEPARTMENT

The Dowler Co.

Burr &
Ainsworth

FURNITURE

DEALERS

Guelph, - Ont.

One
for
the
Boys

94 SUIT ENDS
worth \$24 to \$30
WHILE THEY
LAST
\$18.00 to \$22.00

Work:
High Class

J. A. SCOTT
Maker of Men's Clothes

Grant & Armstrong

Furniture Dealers
and Upholsterers

We Make a Specialty of

Repairing
Upholstered
Goods . .

COSY CORNERS AND SKIRT
BOXES MADE TO ORDER.

Try
Us

Quebec Street.

Phone 488.

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

BELL **HIGH CLASS**
Pianos
Piano-Players, Organs
 MANUFACTURED BY
Bell Piano & Organ Co. Limited
 CATALOGUE FREE. GUELPH, ONTARIO

MEN'S CLOTHING
PAR EXCELLENCE

There is no reason in the world why you should not wear the best clothing made—we sell it, and at a price no greater than some inferior kinds are sold at. There is style to our clothing—there's wear and there's value—what more can you ask? You cannot get more than we give for the money—anywhere.

Do you realize that we also sell the best lines of furnishings you have access to? This is news to scores of men in this vicinity—good news, and if they will, they can profit by it. Just come and see.

D. E. Macdonald & Bros.

5 and 7 Lower Wyndham. 56 McDonnell St.
 3 Entrances.

J. A. McCrea

Invites You

To inspect his beautiful display of China, Fancy Art Ware, and Cut Glass on the second floor. It is one of the sights of Guelph and as such should not be missed. We consider it a pleasure to show our goods and do not ask you to buy. We supply the O. A. C. and Macdonald Hall with groceries and can deliver anything you might require. Fresh Oysters, Oranges and Chocolates are our specialties.

Noted Tea Store

and China Palace

J. A. McCrea

'PHONE 48

Lower Wyndham St. - GUELPH

STALL No. 3, GUELPH MARKET

ALFRED HALES

Wholesale and Retail Dealer in

Fresh Meats, Pickled Beef and Tongues,

Poultry for the Students a Specialty,

Fresh Pork, Hams, Bacon, Lard,

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Shop—Telephone 191

Residence—Telephone 405

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BOOTH

150 Views of College Buildings and
Grounds and Guelph Scenes on
Post Cards

Real Photos, good enough to frame,

75 Cents Per Dozen

Duplicates of last year's classes always
on hand.

The Guelph Radial Railway Co.

TIME TABLE

Cars leave College Landing for City as
follows:

A. M.—6.25, 6.45, 7.05, 7.30, 7.50, 8.10,
8.35, 8.55, 9.20, 9.40, 10.00, 10.25, 10.45,
11.05, 11.30, 11.50.

P. M.—12.15, 12.35, 12.55, 1.15, 1.40,
2.00, 2.20, 2.45, 3.05, 3.30, 3.50, 4.15, 4.35,
5.00, 5.25, 5.50, 6.15, 6.40, 7.00, 7.20, 7.45,
8.05, 8.25, 8.45, 9.10, 9.30, 9.50, 10.15,
10.35, *10.55.

Returning, Cars leave St. George's Square 10 minutes later.
* Saturday Night Only.

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FURNISHINGS & CLOTHING

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28 Lower Wyndham St. Satisfaction Guaranteed

Guelph's Leading House

FOR STOVES OF EVERY DES-
CRPTION. SHEET METAL
WORKERS. KITCHEN AND
DAIRY SUPPLIES. EXPERT
HEATING CONTRACTORS.

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86 Upper Wyndham St., Guelph

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ELECTRIC BOILER COMPOUND CO., Ltd

PHONE 396, BOX 409, GUELPH, ONT.

Walker's Electric Boiler Compound

High-Grade Lubricating Oils, Greases, Pack-
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Crystal Cream Separator Oil
A Specialty.

FOR
DRUGS and TOILET ARTICLES
GO TO
BEATTIE'S DRUG STORE
LOWER WYNDHAM.

WALTER E. BUCKINGHAM, B.A., LL.B.
BARRISTER.

Solicitor, Notary, Conveyancer, Etc.

Douglas Street, Guelph.

Office Phone, 175.

House Phone, 404.

The Authorized College Pin



Adopted March 30th,
1903, by Joint Committee
of Students and Faculty
elected by O. A. C. A. A.
Design Registered at De-
partment of Agriculture,
Sept. 17th, 1903.

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Pringle's Jewelry Store

Sterling Gilt. Price 50c.

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FOR HARDWARE and
SPORTING GOODS
AT LOWEST PRICES

G. A. RICHARDSON

Upper Wyndham Street

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DENTISTS

Office and Surgery:
 Corner Wyndham and Macdonnell Sts.
 (over Dominion Bank).
 Residence—"Sunset," Paisley Street.
 Telephone 14

W. J. STEVENSON Phone 143 ANDREW MALCOLM

Stevenson & Malcolm Co.

Late Members of
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For Steam and Hot Water Heating,
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 Specialties in Sanitary Appliances.
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Wholesale and Retail

Butchers and Cattle Dealers

J. & A. TYSON,
 No. 1 Stall, Guelph Market,
 'Phone 78.

TYSON BROS.
 Shop cor. Green and Norfolk Sts.,
 'Phone 152.

JACKSON & SON

Grocers

FIRST-CLASS FANCY GROCERIES
 IN ALL LINES.

17 Lower Wyndham Street.

Telephone 112. Established 40 Years.

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**RED
 CROSS**
Pharmacy
J. B. Broadfoot
 St. George's
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GUELPH

THE Leading Drug Store

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 PERFUMES, TOILET SOAPS,
 TOOTH BRUSHES,
 SPONGES, COMBS, ETC.

They are sure to please the students of
 the O. A. C. and Macdonald Institute.

The Estate of J. L. Luckham,
R. M. G. McDIARMID, Druggist
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NEILL THE ... SHOE MAN

Sole Agent for

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 SO DO THE MACDONALD GIRLS.
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Cor. of Wyndham St. and Market Square.

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Manufacturer of all kinds of

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NEAR GEMMELL'S DYE WORKS.

FOOTBALL and HOCKEY GOODS

Made to Order in College Colors

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Senate Cigar Store

You find everything you want there.

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NEAR CHALMERS' CHURCH

T. H. GEMMELL & CO.

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Suits Cleaned, Dyed and Pressed.

Pressing Done on Shortest Notice

Also Agents for Parisian Laundry - Phone 69

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The Royal Opera House Barber Shop

Is the place to get the finest work in Guelph,
and when the best can be had at the same price
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DR. COGHLAN

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Telephone 223

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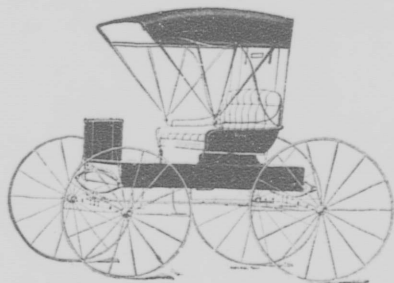
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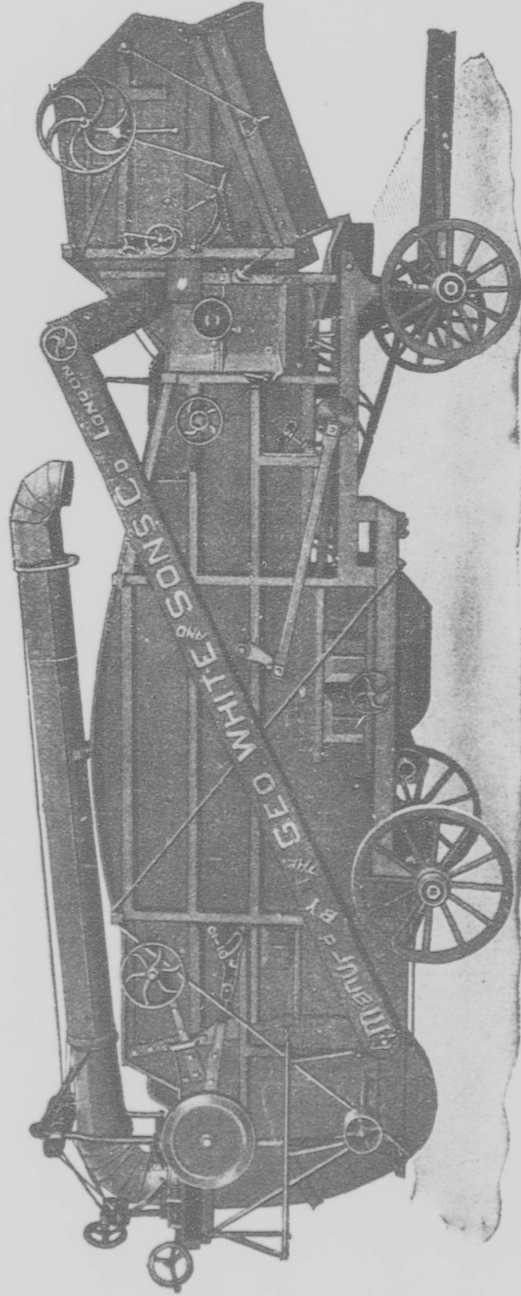
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THE WHITE CHALLENGE SEPARATOR WITH CUTTING BOX ATTACHMENT, WITH STACKER AND FEEDER.

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All the milk of the several
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