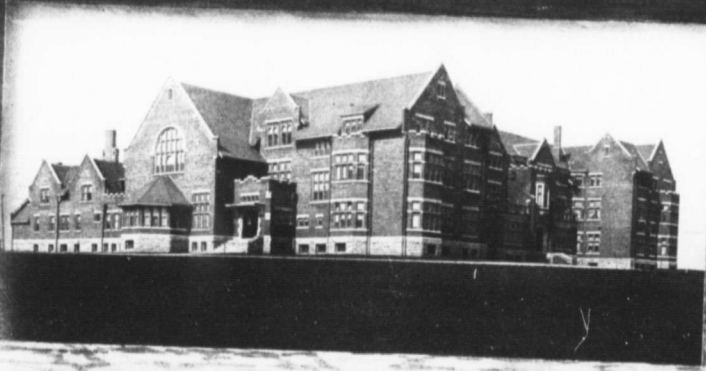


THE
O.A.G.
REVIEW

JUNE, 1910



For nothing I will tell you all about Cement



These pictures show you plainly how simple a matter it is to change a decrepit frame house into one of cement-stone.



YOU pay nothing for what I tell you.

And the reason I offer you my services for nothing is simply that the companies that employ me want the farming community awakened to the value that cement—of the right kind—has for every farmer. Even if they never sell you any cement, they want you and your neighbors to be informed on the uses of cement—and the ease and simplicity with which you can cheaply use it.

No High-Priced Labor Necessary

I can soon show you that it does not require an expensive mechanic to use cement-concrete instead of lumber for ANY purpose. I make the whole subject so plain and simple that you yourself could easily renovate your frame house, barn, hen house, wagon shed. I will tell you how to make a hundred farm-utilities from cement quickly and cheaply—more cheaply than you could with lumber. And bear in mind the fact that you are charged nothing for this "Education in Cement-Using." You will not be bothered to buy anything, either. There are no "strings" to this talk of mine—not one. Just write me and I ask questions.

Cement Endures—Lumber Decays

That alone is the biggest reason why you shouldn't overcoat your house and barn with cement, as I will tell you precisely how to do. Cement is almost indestructible. Buildings exist in Great Britain and elsewhere that were built of cement by the Romans two thousand years ago. For cement rightly used—as I will show you how to use it—makes structures fire-proof; wet-proof; decay-proof; warmer in winter; cooler in summer. And it is **ECONOMICAL**—much more so than lumber, for ninety-nine uses out of a hundred.

You may have my expert advice without charge. I can save you considerable money. I charge nothing.

For the asking, you are welcome to use my knowledge. You can inform yourself fully on the whole big question of the use of cement for practically every use you are probably putting lumber to now. I will instruct you fully, in plain language, in the use of cement for making anything from a fence-post to a dairy-barn. And I can show you how to save money by using cement for any building purpose instead of using wood. Simply tell me your name and address and mention what sort of a structure you think of building or repairing—whether a residence, a poultry house, or even a drinking-trough. You have nothing at all to pay for the advice and instruction I will promptly send you. Write to me before you buy another bill of lumber for any purpose. Be sure to.

Alfred Rogers

the Cement Man

Why not write me to-day? Accept my free services, make use of my knowledge to any extent; and you will not be under the least obligation or expense if you do. We want you to KNOW cement; and I will do all I can to help you KNOW it.

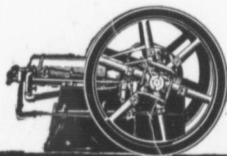


- Verandas
- Box Stalls
- Driveways
- Fence Posts
- Well Curbs
- Fed Yards
- Barn Floors
- Cellar Walls
- Root Cellars
- Horse Blocks
- Chimney Caps
- Chicken Houses
- Watering Troughs
- Curbs and Gutters
- Windmill Foundations
- Storage Water Tanks

Read This List of a Mere Few of the Uses Cement has on the Farm

Then write to me for particulars of how to build these things from cement—doing the work yourself, if you like, in spare time. Don't wait to write because you are not just ready to make any improvement to your buildings. Talk it over with me if you only need a few fence-posts or a watering-trough. Even on those small items I can save you considerable. Just write me.

ALFRED ROGERS, The Cement Man
STAIR BUILDING, TORONTO



GET AN I.H.C. GASOLINE ENGINE TO WORK FOR YOU

I H. C. engines and prosperity are going hand-in-hand on thousands of farms. I. H. C. gasoline engines are the farmers' willing workers that do not ask for wages or days off or refuse to work when the weather is bad.

Just give the wheel a turn—and a whole string of your other machines will get busy. You can run half a dozen of them at once, if you like—sawing, grinding, churning, separating cream, pumping water, etc. Your simple, powerful I. H. C. gasoline engine will furnish power for them all.

One great advantage of these engines is their ever-readiness. They enable you to do your hardest jobs faster, better and easier than ever you have been able to do them before.

There are hundreds of places where you would like to use a power—sometimes for just a little while, other times for a long, steady run. Many a time you can have the job done with your I. H. C. gasoline engine before you could even get ready with your old-style power. If it's a long, steady run, like a day's job of sawing wood, the engine will keep your saw going steadily hour after hour. The engine will take care of itself—all you have to do is to just 'saw wood.

The expense is only a few cents for gasoline for the whole day's work. There's no waste of time and fuel in starting up. And all expense stops the instant the work stops.

You need an I. H. C. engine to take the short cut on your work. Figure on the matter—see how soon it will pay for itself by getting full service for you out of your other machines. The engines are simple and easy to understand. You will have no trouble in learning to operate one of them.

Go to our local agent and look over the line. It includes an engine for every section and every problem; of all sizes and all costs, for all farm uses—vertical and horizontal (both stationary and portable); engines on skids; sawing, pumping and spraying outfits. It also includes I. H. C. gasoline tractors—first-prize-gold-medal winners—the best all-round farm tractor by test.

Call on our local agent in your town and talk the matter over with him. He will supply you with catalogues and all information. Or, if you prefer, write nearest branch house for catalogue and full particulars.

CANADIAN BRANCHES: Brandon, Calgary, Edmonton, Hamilton, London, Montreal, Ottawa, Regina, Saskatoon, St. John, Winnipeg.

INTERNATIONAL HARVESTER COMPANY OF AMERICA
(Incorporated)

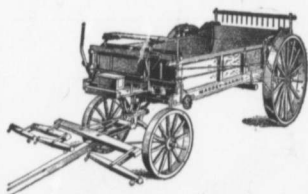
Chicago, U. S. A.



**THE
I-H-C LINE**

LOOK FOR THE I. H. C. TRADE MARK. IT IS A SEAL OF EXCELLENCE AND A GUARANTEE OF QUALITY.

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



**Increase Your
Crops and
Save Labor**

The Massey-Harris Spreader

makes a given amount of manure cover more ground and applies it so that all of it is available as plant food—Each acre will yield more than if given a heavier coating by hand. This means

**MORE ACRES COVERED AND
EACH ACRE MORE PRODUCTIVE**

Especially useful for top dressing field crops, meadows and pasture land, none of which can be satisfactorily accomplished by hand.

THE SAVING OF LABOR

One man or boy with this spreader does the work of four or five men—if the men could be got hold of—but probably you couldn't get help, and much valuable manure has been wasted, while the fields suffered for the want of it.

MASSEY-HARRIS CO. LTD.

Toronto Montreal Moncton Winnipeg
Regina Saskatoon Calgary

"VANCO"

Lead Arsenate

(Made in Canada)

Destroys All Leaf-Eating Insects

"VANCO" Lead Arsenate will kill 95% of Codling moths where Paris Green at its best will not kill over 75%.

For potato bugs it is far surer than Paris Green, and sticks to the vines much longer, especially in rainy weather.

"VANCO" Lead Arsenate contains 15% to 16% Arsenic Oxide and not over 40% moisture average. It is made by expert chemists and the quality is absolutely reliable. It never fails to kill the insects, and never burns the foliage.

Because we make it right here in Canada, in large and well-equipped laboratories, we are able to offer you "VANCO" Lead Arsenate at very favorable prices. Compare these with what others are asking.

| | |
|----------------------------------|--------------------------------|
| In 500 lb. barrels...10c per lb. | In 100 lb. kegs....11c per lb. |
| In 50 lb. barrels. 11½c per lb. | In 25 lb. kegs.....12c per lb. |
| In 12½ lb. pails....13c per lb. | |

In "VANCO" Brand you get High Quality at Lowest Price. We ask for business not on promises, but on records of Government Analyses and practical tests.

Club your orders and save on freight

Write for free Booklet on Sprays.

Chemical Laboratories Limited

13

148-158 VAN HORNE STREET

TORONTO.

OFFICIAL CALENDAR

OF THE DEPARTMENT OF EDUCATION

FOR THE YEAR 1910.

June:

1. Collectors in Unorganized Townships to report to Sheriff uncollected rates for previous year. (On or before 1st June). Assessor in Unorganized Townships to return assessment roll. (Not later than 1st June). Public and Separate School Boards to appoint representatives on the High School Entrance Boards of Examiners. (On or before 1st June). By-law to alter School boundaries or form Consolidated School Sections—last day of passing. (Not later than 1st June).
10. University Commencement. (Subject to appointment).
15. Senior Matriculation Examination in Arts, Toronto University, begins. (Subject to appointment).
17. Provincial Normal Schools close (Second term). (Subject to appointment).
21. Model School Entrance and Public School Graduation Examinations begin.
22. Inspectors' report on Legislative grant due. (Not later than 22nd June). High School Entrance Examination begins. (Subject to appointment).
27. University Matriculation Examinations begin. (Subject to appointment). Examinations for Entrance to Normal Schools and Faculties of Education begin. Examination for Commercial Specialists begins.
29. High, Public and Separate schools close. (End on 29th June).
30. Protestant Separate School Trustees to transmit to County Inspectors' names and attendance during the last preceding six months. (On or before 30th June).

July:

1. Dominion Day (Friday). Arbitrators to settle basis of taxation in Union School Sections if Assessors disagree. (On or before 1st July). Last day for establishing new High School by County Councils. (On or before 1st July).
5. Art Specialists Examination begins.
15. Trustees' Financial Statement and Inspectors' Report on Continuation Classes due. (On or before 15th July).



The Royal Military College of Canada.

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

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

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

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

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

The strict discipline maintained at the College is one of the most valuable features of the course, and, in addition, the constant practice of gymnastics, drills and outdoor exercise of all kinds, ensures health and excellent physical condition.

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

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

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

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

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

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

H.Q. 94—5 9—09

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

NOW READY!

A most important contribution to Canadian Agricultural Literature

The Canadian Apple Grower's Guide

By Linus Wolverton, M.A.

Author of "Fruits of Ontario"; Editor of the Canadian Horticulturist; Secretary of the Ontario Fruit Growers' Association, 1886-1903; Inspector Ontario Fruit Experiment Station and Secretary of the Board of Control, 1896-1906; Judge in Pomology and Superintendent of Horticulture for the Dominion of Canada at the World's Columbian Exposition, 1893.

PART I.—A Complete Guide to the Planting, Culture, Harvesting and Marketing of Apples.

PART II.—Descriptions of the Varieties of Apples which are Grown in the Various Provinces of the Dominion of Canada, made by the Author from Personal Study of both the Trees and the Fruit, with Full Size Photogravures of the Fruits Themselves, made under his Personal Supervision.

PART III.—Varieties of Apples Recommended for Planting in the Various Sections of the Different Provinces of the Dominion.

CLOTH, LARGE QUAR. O. BEAUTIFULLY ILLUSTRATED, \$2.00; BY MAIL, \$2.25.

The apple is the money-maker fruit of Canada, and with the advanced prices which it is certain to command during the next decade, apple growing is sure to become one of the very best branches of fruit-growing for profit.

In view of the great boom in apple culture which is sure to come, this work has been prepared. It covers the whole subject, from the planting of the tree to the harvesting and selling of the fruit, written in such a clear and concise manner that even the novice should be able to make a success of apple-growing.

Since the number of copies of the first edition is limited, and will soon be taken up, apple growers, or prospective growers, are advised to send in orders at once.

\$2.00 net, by mail \$2.25. ORDER NOW!

For Sale by All Booksellers.

WILLIAM BRIGGS, 29-37 RICHMOND ST. WEST, Toronto, Ont.

STEEL SILOS

WEATHER PROOF FROST PROOF FIRE PROOF

Composed of heavy, rivetted steel plate set on cement foundation, they are absolutely self-supporting

Simple to Erect. Easy to maintain.

Will keep ensilage sweet and clean without loss from frost or decay for the whole feeding season.

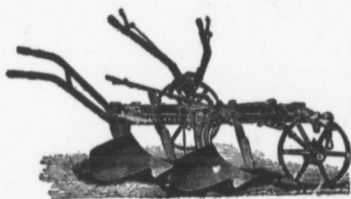
Have You Our Complete Silo Bulletin No. 600? Write For It.

THE WATEROUS ENGINE WORKS CO. Ltd.

BRANTFORD, CANADA.

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

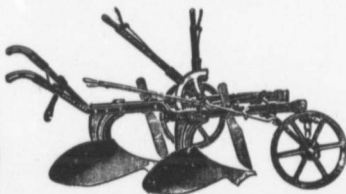
Plow Two Furrows, Not One — Work Three Horses, Not Four — Pay One Man, Not Two That's the Way to Make Your Farm Pay Big Profits



KID KANGAROO

WE have sold many thousands of these plows, and we have yet to hear of a single complaint from any buyer.

The Kid Kangaroo is fitted with our new patent straightener device, which is very necessary to keep plowing straight. It is fitted with special soft-centre crucible steel moldboards that will clean in any soil. Frames can be adjusted for wide or narrow furrows. We can furnish either wide or narrow bottoms, rolling colters, jointer or knife colters as desired. Three horses can easily draw this plow in the heaviest land.



MAPLE LEAF

THIS plow combines great strength, durability and remarkable light draft. It has been carefully and thoroughly tested, and will do perfect work. The frame is built to combine strength with the least weight. A special feature of this plow is the adjustable frame. By unloosening two bolts and two set screws, it can be adjusted to any width from 7 to 10 inches, within a few minutes. It has our new fine adjustment ratchets for gauging the depth of the furrows. Levers are conveniently placed and are easy to operate. The wheels are absolutely dustproof—straightener device can be fitted to plow when called for. This plow can be handled by two horses, yet is quite strong enough to stand the strain of three. Can be fitted with wide or narrow bottoms, rolling colter, knife colter or jointer. This is without doubt the most popular two furrow plow manufactured.



Where Cockshutt Plows are made

FARM RIGHT If interested, let us send you our plow catalogue, which describes and illustrates a large range of implements which make farming profitable.

You can get a Cockshutt Catalogue free by simply writing for it on a postcard 45C

COCKSHUTT PLOW COMPANY LIMITED **BRANTFORD**



Contents

VOL. XXII,

JUNE, 1910,

No. 9.

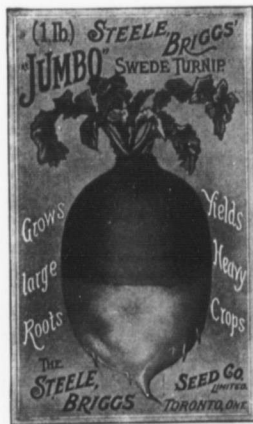
| | Page. |
|--|-------|
| The Graduate—By President Creelman | 465 |
| History of Class '10, O. A. College. | 468 |
| Biographical Sketches of Individual Members | 473 |
| Class Note | 489 |
| History of Class '10, Macdonald Hall | 490 |
| Biographical Sketches of Individual Members | 491 |
| Agriculture | 501 |
| Agromony | 504 |
| Horticulture | 509 |
| Poultry | 514 |
| Editorial | 519 |
| Organization the Farmers' Strength—By G. G. White, B.S.A. | 525 |
| Poem—"Not Understood"—By Thomas Bracken | 529 |
| Athletics | 530 |

THE O. A. G. REVIEW is published by the Students of the Ontario Agricultural College, Guelph, Canada, monthly during the College year.

ANNUAL SUBSCRIPTION: Students \$1.00. Ex-Students in Canada, 50 cents, others \$1 00. Single copies 15 cents. Advertising rates on application.

Steele, Briggs' ROOT CROPS FOR FARM STOCK SEEDS

shows up best in comparison with others every time



The Heaviest and best yielding varieties are:

Steele, Briggs' Jumbo Swede.
Steele, Briggs' Select Purple Top Swede.

Steele, Briggs' Good Luck Swede.
Steele, Briggs' Kangaroo Swede.
Steele, Briggs' Perfection Swede.
Steele, Briggs' Westbury Swede.
Steele, Briggs' Improved Grey-stone White Turnip.

FODDER CORN (Selected Stock)

Early Improved Leaming Corn.
Giant Prolific Sweet Ensilage Corn
Compton's Early Corn.

Be sure and ask for Steele, Briggs' Seeds and secure the highest yielders obtainable. Our Special "Brands" are sold by leading merchants everywhere. If your local dealer don't keep them, send to us direct.

Steele, Briggs' Seed Co.

LIMITED

TORONTO, Ont. HAMILTON, Ont. WINNIPEG, Man.

THE O. A. C. REVIEW

THE DIGNITY OF A CALLING IS ITS UTILITY.

VOL. XXII.

JUNE, 1910.

No. 9.

The Graduate

PRESIDENT G. C. CREELMAN, B.S.A., M.S., LL.D.

ANOTHER year, another month of examinations, another graduating class, then a scattering to the uttermost parts of the earth, and we who are left behind take up the burden again and prepare for 1910-'11. "The King is dead; long live the King!" We watch a class grow from fresh man to senior, regretfully say good-bye, wish them God speed, and turn to welcome the men who have pushed forward to take the vacant places.

And so, while each class may be looked upon as a unit in college calculations, yet individual students impress mind, until he who is apt to designate the class of '98 or "Jones'" class or the year "Smith"

Is it the brightest most eccentric man, let it be, or the mischief maker, or the mischief maker of your mind and these, or is it rather neglected no depart work, who if not in on the line, who if was at least in a the Lord's Day and sneer at sacred place in debates and argument on the sub

who cultivated a sense of humor and softened the sarcasms of others; like the epitaph on the rough board in a mining camp out west, "He seen his duty and he done it."

So to the graduates, as they go out into the world of real things to help in the doing of great things, it will help him who gives, and him who receives, if he permits his sense of duty to guide him, and in an even-tempered way, work onwards and upwards toward his own ideal.



PRESIDENT CREELMAN.

characteristics of certain years, not as '89 or '03, but as "Brown's" class or graduated.

man in the year, the the orator, the athlete maker who dwells in mine? Is it any of the affable man who ment of College the team was always not deeply spiritual place of worship on was never known to things, who took his made the most of the ject assigned him,

In Agriculture, at this moment, there is need of leaders of thought and leaders in good practice, as never before. Those who have profited by the College teachings, and the teaching of the Farmers' Institutes, are now making money and are happy in the making of it. Those who have not profited by these things are now asking themselves why, and asking us why, and they will ask you why, and you must answer straight and true.

Then, also, people who have never farmed are asking why. Why, when eggs are so dear, do more people not keep chickens? Why are we importing eggs into Canada from China and Russia? Why is everything we eat so very high in price. You reply that people from farming communities are flocking to the towns and cities, that the cities are growing at the expense of the country, and therefore, as the number of mouths increase and the number of hands decrease, there is a corresponding scarcity of food products and an increased price. As there is not likely to be any immediate relief, city people are inquiring about small farms and gardens, and poultry plants and bees. You will be called upon to help such a movement to the best of your ability.

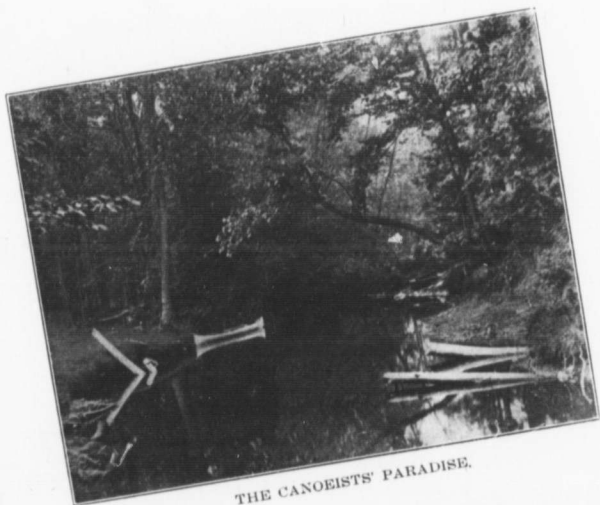
The graduate of to-day, then, faces new problems,—problems of national and economic importance, and if he has a keen sense of duty to himself and his native land, he will, as a citizen of this rapidly growing nation, try to help everyone he meets who is seriously interested in the soil,—its products and its possibilities.

Ontario is awakening. Farmers are making money. Brains on the farm are at a premium. Old orchards are being renovated, pruned, and sprayed. Water is being brought into the house and barn. Silos are going up every where. Seed selection is being practiced. Tiles are being laid by the millions. Sheep are coming back. And only men—trained men—are needed in every municipality to put into actual practice those principles that underlie the best practice in Agriculture. Do you see your duty? Will you do it?

THE SEA'S INFLUENCE.

The brine is in our blood from days of yore,
 And ever in our ears the tide's tune rings;
 The wave runs through our legends and our lore,
 And permeates a thousand diverse things;
 The memory of our race's island home
 Is charged with salt sea spray and ocean foam.

—William Edward Hunt.



THE CANOEISTS' PARADISE.



A COLLEGE PICNIC.

History of Class '10, O. A. College

BY A. M. SHAW AND C. M. LEARMONTH.

PROLOGUE.

*When the golden tints of September clothed the hills in a robe of flame,
We came to our Alma Mater, drawn hither by her world-wide fame.
We were men of many nations, men from lands beyond the seas,
We were green and scared and homesick, and we trembled at the knees,
But we made a vow unspoken that we'd face our fate like men,
And 'twas thus we started our career as the Class of Nineteen-Ten.*

*Then the curtain lifts on the second scene: no more are we meek and mild,
And we Maul the verdant freshie till his gentle soul is wild;
And when Field-Day's games are over we cheer again and again,
For the championships have all been won by the Class of Nineteen-Ten.*

*Next you see us as gallant Juniors,—ye gods! What a dazzling gang!
Fussing around with the females, making things go with a bang.
You can talk of your nifty functions but you'll never see one again
That will touch the Annual Conversat given by Nineteen-Ten.*

*And now comes the dignified Senior, and stern is his noble mug,
He scorneth the lighter things of life for he's got to get busy and plug.
But he says to himself as he grinds at his books in the depths of his student den,
"I don't give a darn if I do get plucked—I'm a member of Nineteen-Ten!"*

—Fraser.

Nineteen-Ten! Harken all ye readers to the true and thrilling history of the Class of Nineteen-Ten! We have made a history, engraved for eternity on the annals of our grand old Alma Mater, and as the years roll by it will ever be a source of pleasant reflection to our classmates, and, we hope, to all with whom we came in contact.

This illustrious class drew its members from every province in our fair Dominion, Uncle Sam's wide domains, England's great metropolis, the bonnie braes of Scotland, the rugged hills of Wales, the fruitful vineyards of old Alsace, the foremost nation of the Orient—Japan, the sun-kissed slopes of Mexico, the flooded fields of ancient Egypt and India's coral strand. We were surely a cosmopolitan class, but nevertheless ere many days had passed our diverse natures had blended into one for mutual benefit and protection. Thus we embarked upon our College course.

Our first serious business was the election of class officers and the following men were chosen: W. R. Reek, president; C. Ferguson, vice-president; H. W. Newhall, secretary; and C. M. Petrie, treasurer. Following the natural course of events, our initiation came in due time, but the hair-raising yarns that had been told unto us failed to produce the desired

effect among our numbers. To the expectant reader we quote the following excerpt from the Editorial Department of the October Review, 1906, "Without depreciating the valor of the men of '09, we would like to rub it in in good strong English, and with plenty of printer's ink, that they missed a glorious opportunity to distinguish themselves. This year the disparity of numbers was scarcely noticeable, and had the Sophomores the nerve and originality to hold their ante-mortem examination in broad daylight, this year's initiation would have been recorded as one bristling with uniqueness and interest."

Encouraged by what had gone before, our men competed on Field Day, and were able to win the modest sum of twenty-one points. Desiring further to give vent to our energetic spirits and show our originality, we departed from the time-worn Hallowe'en pranks and caused much consternation to the loser, perturbation to the Dean, and exaltation to ourselves, by the conflagration of seven barrels of tar.

Turning our attention to matters literary, we selected J. M. Lewis and F. H. Millen to represent us in our first union debate. In winning this debate, together with the spring debate, when we were represented by S. E. Todd and H. W. Newhall, we made a record as Freshmen which is without equal in the annals of the institution.

After Christmas we played grand hockey, winning the inter-year championship, and having four of our men playing on the College team.

The initial literary victories were followed up by another victory, S. E. Todd winning the Public Speaking contest.

But it all came to an end, as even first years at College will. We went again through the ordeal of examinations and scattered to our distant homes for the summer.

With autumn we were again on the field of action, ready for the untried joys of our Sophomore year. Proceeding to business, we elected the following officers: O. C. White, president; R. L. Moorhouse, vice-president; C. Ferguson, secretary-treasurer. As Sophomores our chief duty to our fellowmen was to domesticate the Freshmen, who numbered 120 to our 45. Not wishing to take advantage of this small (?) bunch, we decided to be again original, and inaugurated the first daylight initiation, which took the form of a flag rush. Here again we quote to the reader this excerpt from the October number of *The Review*, 1907, "A somewhat novel feature of the initiation this year is that it took place in *broad daylight*, and the fact that it did so, speaks volumes for the pluck and determination of the second year men. While the Freshmen are to be commended for the manner in which they upheld their colors, at the same time the Sophomores are to be congratulated upon their valiant struggle against almost overwhelming odds."

The one time for us to do our duty was on Field Day, and we knew it. Elaborate preparations were made, our men trained faithfully, and when the eventful day arrived we received our reward. We composed a new class yell for the occasion, and often since has it cheered us on to victory by its rousing refrain:

Who are we?
 We are the
 P-e-o and a p-l-e
 Rah! Rah! Nineteen,
 Rah! Rah! Ten,
 Rah! Rah! Rah! Rah!
 Nineteen-Ten.

We carried off the individual grand championship, the class championship with 40 points, the hose and reel contest, which gave the team members the Creelman medals, and won the tug-of-war, which put us in possession of the Association silver trophy which we still hold. To shelter our athletes between events, we erected a tent, which scheme proved to be such a success that it has been adopted by all other years. Later in the fall our men entered the 5-mile



cross-country run, and C. H. Aldwinckle won the Hallman-McKillican cup, with our other men in third, fourth, fifth and sixth positions. At the wrestling and boxing tournaments, we won the class championship by over half the total points and also were able to secure the championship in aquatics the same year. In the inter-year baseball, basket ball and hockey series, we were close runners-up.

Examinations came, but the results show that our athletics had not interfered with our studies. All our men received associate diplomas, except two foreigners who were handicapped by insufficient knowledge of English.

Befitting such strenuous activities we finished the year with a banquet, long to be remembered by the members of old Nineteen-Ten. An innovation was here introduced in the matter of programme, in which characteristic quotations from class members and professors were quoted. We also had the distinction of being the first class to propose a toast to "The Girls of Macdonald Hall," which customs have since been closely followed.

When we gathered as Juniors in the fall of '08, we found ourselves thirty strong. Many were missing from our ranks, it is true, but the new men who joined our enterprising class readily adopted themselves to our progressive ways. As a matter of course we elected a new class executive with A. M.

Shaw, president; R. L. Moorhouse, vice-president; J. D. Tothill, secretary and W. E. J. Edwards, treasurer.

Having established an enviable place for herself in the College records in her strenuous Sophomoric days, "Ten" now indulged in the cultivation of her individual talents. In sports she did not again aspire to class distinction, but won enough honors to maintain her athletic self respect, standing second in the inter-year series of hockey, basketball and baseball, and at the Indoor meet in the winter term, A. M. Shaw won the grand championship, thereby receiving the Pringle cup for the first time.

In literary work, when our men competed at union debates, they won, and for the second time the Public Speaking contest was captured. The winner was A. M. Shaw.

The Annual Conversazione afforded another occasion for the display of originality, which was shown in the artistic programme, tasteful decorations and scrumptious refreshments. One of the most striking features of the evening was the novel innovations introduced in the arrangement of the various rendezvous. In previous years a number of letters had been used to indicate the location of these meeting places. That year, however, the rendezvous were represented by six old-fashioned English inns.

Again we must quote to the reader from the April number of The Review, 1907:

"Junior At Home."

"The Assembly Hall in Macdonald Institute was the scene of an unique gathering, on the evening of March the fifth. The Junior Conversat committee invited the girls on the Macdonald Conversat committee, and the other members of the Junior year to spend a social evening in remembrance of the pleasant conversazione days."

This has won for us the distinction of being the first and only class that has had the pleasure of enjoying such a function.

Those dark days were next when all, from the lordliest Senior to the humblest Freshman must "cram" and

"Fire in each eye, and papers in each hand

They rave, recite and madden round the land."

It was a different Ten that gathered after the summer to travel the last lap of the course we ran for the "B. S. A." from that which three years before, unheralded and unknown, entered for the first time the portals of our Alma Mater. Among her numbers were now presidents, managers, captains and editors, and let it suffice to say, that in the annals of class and College history the names of these men are clearly and indelibly stamped.

Class officers were now elected, the following men being chosen: R. L. Moorhouse, president; S. Kennedy, vice-president; J. G. Lloyd-Jones, secretary-treasurer. This year found us divided into various options, eighteen in Agriculture, five in Horticulture, three in Biology, and one in Chemistry. In the fall term the following men of our class were sent to Chicago to represent the College in the Students' Judging Competition, held at the International Live-Stock Exposition: O. C. White, W. R. Reek, A. M. Shaw, W. E. J. Edwards and R. L. Moorhouse. Here, in competition with seven of

the foremost American Colleges, our team stood second, with a higher aggregate and individual score than any other previous Ontario team.

When we returned from our Christmas vacation we centred our effort on preparation for that last trying ordeal which stood between us and the coveted goal. Notwithstanding all this we found time to capture the indoor baseball championship, and were a close second in inter-year hockey; also for the third time winning the Public Speaking contest, thereby establishing a record unequalled heretofore by any class. O. C. White was the winner. In due time the Oratorical contest was held, and again Nineteen-Ten exhibited her superiority. In a close competition, Roy Fraser delivered the winning oration, thereby winning the "Creelman Class" Prize.

We aspired to a class pin, and specially selected one unique, though simple in design, and so long as our classmates retain this souvenir, never can they truthfully say they are totally bereft of gold.

In the Macdonald department of this graduation number you will find the records of our fair sisters, who have been with us for the past two years. In conjunction with them we have succeeded in making this graduation number the first of its kind ever published at the Ontario Agricultural College.

Responding to the invitation of the Senior classes of Macdonald Institute to join them in a May-day celebration, we were glad to accept, and now are able to say that we were participants in a celebration, carried out in a manner which reflects great credit on the originators of this jolly function. On this eventful day two class trees were planted, to stand as living monuments to the boys and girls of "Ten."

Truthfully are we able to say that time and space will not permit of a more detailed account of our history from Freshmen to Senior. Many are the tales we have left untold, of the social functions, the class meetings, the sleighrides, the snowshoe and skating parties, the hazings, the bed-dumpings, the purloinings of pastry, and the nocturnal festivities on the hill.

During our course we established, and still hold, numerous records; inaugurated many innovations, originated and carried out many new ideas, and with our singing of "Auld Lang Syne" at our final banquet, our course has been run. To the College we must make our bow. It is our turn to step aside and with our success or failure on examinations the story of Ten will have been told. In drawing to a conclusion this sketch of our class we voice the sentiments of its members in saying that so long as there lives one member with breath and memory left him, his cry will ever be the old one—"Nineteen-Ten Forever!"

EPILOGUE.

*The hour has come when we say good-bye, and 'tis easier said than done,
For it's mighty hard to leave College life with its bustle of work and fun.
We've grown to love Alma Mater with a reverence and love that will last,
And when we are fighting the battle of life our thoughts will turn back to the past,
To the days when we worked in the classroom, to the nights that we spent at the
Hall,*

*To the feeds, and the fights, and the functions, and to Nineteen-Ten most of all.
We'll remember the games on the campus and the spirit that made us twin,
And remembering the triumphs of student days we'll take off our coats and dig in.
—Fraser.*

Biographical Sketches

OF CLASS '10

Garnet Wolseley Collins

"Up, up, my friend, and quit your books."



Within a few days of August 28th, 1882, we find a record in the local paper of his native town of the existence of Garnet Wolseley Collins, who was, at that time, to be found in the village of New Ross, Lunenburg Co., N. S. He is reported to have read a few months afterwards his name in the paper, chronicling his arrival, but as he had not then received an O. A. College training he misinterpreted the abbreviation N. S. to mean "Nough Sleep," and he has rigidly adhered to this illusion till the present day. Shortly afterwards he found the name of the sister province, termed N. B., which he misconstrued to mean "Nö Breakfast," which phrase has become

strongly implanted on his mind, as has been seen in practice. Such is the result of the environment of his early life. He received his public school education in his native town. At the age of sixteen he moved with his parents to the Annapolis Valley where he spent two years in the High School. In 1903 he came to O. A. College, occupying his time in the Horticultural Department until September, 1906, when he commenced the course, specializing in Horticulture. His work has been marked by great perseverance and steady application to his studies. During his course he has filled the following offices: first year representative on A. A. executive, librarian of Y. M. C. A., member of Alpha Lit. executive and member of the Horticultural Club executive, besides being in his Sophomore year on the winning Hose Reel team. He has been engaged by the C. P. R. for horticultural work, with headquarters in Alberta.

William Bowman



"Still waters run deep."

Bill thought it was a great joke when he was born one day in November, 1888, at Little York (East Toronto). No authentic record is to hand as to whether he laughed on that day or not, but if he didn't he has been making up for lost time ever since.

His family subsequently moved to a farm near Georgetown, Ont., where he laughed his way through Limehouse public school, and through two years at Georgetown Collegiate. At the tender age of eighteen his merry blue eyes and cherubic countenance first appeared in the '10 class. He looked so innocent and so guileless that we all wondered why he had left his wings and halo at home. But alas for the fallacy of

first-sight impressions, we soon discovered that "For ways that are deep and tricks that are dark, our little Willie was peculiar."

Bill's radio-activity in disseminating sunshine and optimism is irresistible. For pranks and practical jokes he has "Peck's bad boy" beaten to a standstill. Yet withal he will be best remembered as a true friend, one who wept with us in our sorrows, and rejoiced with us in our happiness. Although he never aspired to climb the ladder of athletic or oratorical fame, all of the boys, and not a few of the girls, will ever keep a warm spot in their hearts for "Baldy Bill."

John Francis Harries



"Behold the man of the Alembic."

Cardiff, Wales, is the birthplace of the subject of this sketch. We are told that Jack learned to swim before he could walk, and that he had often caused his nurse much alarm by doing six lengths of the bath tub under water. He attended the primary schools of Cardiff, and later Blundell's public school at Tiverton, where he won distinction by standing first in Theology. However, instead of taking Holy Orders, he desired to study chemistry, and came to O. A. College to do it. While here, he has taken a live interest in athletics, especially in aquatics, representing the College at different swimming meets, his specialities being the still plunge, and the under-water

swim. As a Junior he managed, and as a Senior captained the team which, in 1910, won the Ontario Water Polo championship. Besides taking such an active interest in water sports Jack numbers among his accomplishments football, cricket and tennis. In the near future we expect to see him presiding over a happy home and a chemical laboratory.

John Frederick Carpenter*"He was a man of quiet mirth."*

"Carp's" advent into the class of '10 was hailed with delight. He followed a reputation. Born on a farm near Fruitland, in 1886, he early became intensely interested in agriculture, more especially in dairying and fruit-growing. The old United Empire Loyalist blood, from which he was descended, mingling with that of the canny Scot, soon made its impress on this young agriculturist. Seeing the possibilities of Niagara, he abandoned dairying very early in life and became a horticulturist.

After attending Hamilton High School, he entered the O. A. College in September, '04. At the end of two and a half years, circumstances compelled him to leave, but did not crush out that inborn craving for knowledge. He re-entered at New Years, 1909, with the present class.

"Carp" is an all-round, jolly good fellow; an enthusiast for tennis, an able man on the baseball diamond, and a formidable enemy on the rugby field. We owe much to him as president of the Union Lit. in the spring of 1910. The routine work was never better accomplished and in addition he ably piloted the drafting of a new constitution. Fred's loyalty to his class, to his Alma Mater and to Macdonald Hall stamps him as being a staunch and unfailing friend.

As a specialist we see for him a bright future as one of Canada's leaders in practical and scientific horticulture.

James Laughland*"Would one think 'twas possible for love
To make such ravage in a noble soul?"*

James is a product of the prairies, first gazing upon its wide expanse on July 6th, 1886.

Hartney, Manitoba, produced him, and sent him to O. A. College for a two-years' course with '09. Dropping out a year he came back and joined us as a Junior.

Jimmie is noted for his unfailing good humor, his inability to be disagreeable, and his practical common sense. He believes in enjoying life and never enjoys it quite so well as when in the company of the fair sex. An enthusiastic year man, he has always assisted the class in its many undertakings with his cheerful and energetic support. Jimmie's forte is Agriculture, but he practices skating, dancing, canoeing, and frilling on the side. He intends to return to the prairies and put into practice the training he received at O. A. College. His sunny disposition will undoubtedly win for him as many friends in the West as it has in the East.

Archibald Stanley Smith



He's an absent-minded beggar."

"Ginger," as he is popularly known among his fellow-students, first beheld the light of day in the town of Chesterville, Dundas County. This rare event occurred on Nov. 4th, 1888. From early childhood Archie has had a strong attachment for out-door life, and many are the tales he can tell of his prowess with the rifle and the paddle. After attending the public and high schools of his native town for some time, he decided to complete his education with a course in agriculture at O. A. College. Although taking little part in active athletics, he was always to be seen and heard on the side lines when a football game was in progress, and no baseball game was complete without "Ginger"

as scorer. His love for reading is one of his most marked characteristics, and he is never happier than when racing through the pages of some treasured volume. We wish him a happy and prosperous future.

Amasa Snyder



"A kinder friend has no man."

"Ein madchen, ein pfief, und ein schnapps" was to Amasa Snyder the highest state of bliss. Snyder, better known as "Dutch," first opened his eyes to the light of this sinful world in the County of Waterloo, near the village of Roseville, on Oct. 2nd, 1886. His parents, as indicated by his name, were Pennsylvania Dutch, his grandfather being one of those hardy and enterprising spirits, who, in the face of great obstacles, made his way to the new home in the wilds of Upper Canada, and helped to lay the foundation of the now prosperous County of Waterloo. Snyder received his education at Roseville Public School, and there he came noted for his pugnacious spirit and the ease with

which he assimilated knowledge. After leaving school, he remained at home on the farm until the year 1906, when, filled with the desire to conquer—found only in men of his type—he journeyed to the O. A. College in search of new worlds. Here his cheerful, generous and manly nature has won for him the respect and friendship of his classmates. "Dutch's" greatest fault was a fondness for girls, but he loved them all alike until the beginning of his third year, when some tie stronger than mere sentiment caused him to take periodic visits back to his old haunts in Waterloo County, doubtless, we venture to say, with sufficient reason. Nevertheless, in spite of this weakness, his influence upon his classmates has been such that they have learned to admire and respect him, and all join in wishing him the greatest success, and predict a bright future for him in whatever line of work he may see fit to undertake.

Roy Bristol Cooley



"Full jolly knight he seemed."

Roy Bristol Cooley was born at Belleville on December 11th, 1886. His parents were Scotch and Canadian. When old enough to lay aside his petticoats and don trousers, he was sent to the public school at Belleville, where he remained until he had passed the Entrance at fourteen years of age. He then attended Albert College for two years, but seeing greater worlds before him he packed his trunk and made tracks for Guelph. Entering with the '09 class, he remained two years, when not finding student life strenuous enough for his active body he returned home and spent a year wrestling with the problems of his father's farm. He entered the College again

for his third year with the class of 1910. He was elected vice-president of the Alpha Literary Society in the fall term of this year and in the winter term became president. In addition to this work he was an enthusiastic worker in the Y. M. C. A., and his influence upon his fellow students cannot but have had a desired effect. Cooley was a hard worker, and took great interest in problems both in and out of the classroom. Though an earnest student, he always found time on Friday evenings to escape from his work for a couple of hours and betake himself across the road to enjoy the society of one or more of the fair sex. While in his third year he made known his intention of taking up the Horticultural option, but subsequently changed his mind and became one of the most enthusiastic of Agriculturists. But no matter what branch of work he may see fit to undertake, his fellow students join in wishing him all success.

John Douglas Tothill



*"From a mixture of all kinds of things began
That heterogeneous thing, an Englishman."*

John was born. It happened in London. The eventful date was February 9th, 1888. He first wooed the Goddess of Knowledge at Blundell's Public School Tiverton, England, and coming to Canada in 1904, he continued his courtship at the O. A. C. College. During his stay here his name has always been prominently connected with the musical and biological organizations of the College. In his junior year he was secretary of the class, leader of the orchestra, and for some time served on the Review staff as editor of College Life. In his senior year he again led the orchestra and was elected president of the Philharmonic Society.

J. D. is a typical Englishman, being an enthusiastic lover of cricket, soccer and swimming. Also possessing the Englishman's fondness for out door life, he takes great pleasure in tramping through the field in search of bugs and blossoms. On leaving College he will continue biological work.

Alexander Malcolm Shaw

"There seemed in him a more than common life, in every limb."



Shaw came to college from Niagara Falls South, where ever since June 12th, 1885, he had been dividing his attention between farming, education and athletics. While at College he followed these inclinations, being especially an all-round athlete. He has played on the inter-year hockey and basketball teams, the college II. Rugby and soccer teams; was a member of the last champion hose reel team, the college gym. and track teams, and as indoor champion won the Pringle cup. Besides his prowess as an athlete his executive ability is attested by the fact that he has been continuously connected with the athletic executive from first year representative to President, where he has ever been a consistent and conscientious worker. He has always been connected with the Y. M. C. A. and Literary Societies, as a junior winning the public speaking contest and as President of the third year being largely responsible for the success of our Conversonazione. In his final year he was a member of the Stock Judging team.

A prince among "fussers" his attentions to our sister students have been paid regularly and systematically, whether as basketball coach or "cosy-corner specialist." His untiring perseverance, his personality and his true sportsman ship will lead him to any goal at which he may aim.

Shorey Johnson Neville

"Go, wondrous creature, mount where science guides."



On the night of September 30th, 1888, a terrific hurricane swept over the village of Cottonwood, Sask., and when the clouds had cleared away "Sunny Jim" was found sitting upon a stump surrounded by three million coyotes, and diligently searching for Coleopterous larvae. "Sunny's" make up comprised a streak of Swiss, a dab of Pennsylvania Dutch, the remainder being Yankee of English origin, and therefore we have no hesitation in classing him among the Compositae.

He received his first training at home, and after spending two years in the public school, he obtained Junior Leaving, Part I. Wishing to study Biological Science, he migrated to O. A. College, and has since shown his ability as a student by taking a creditable standing in his examinations. During his course at College he has been an enthusiastic member of the various biological societies and of the Camera Club, winning the photographic contest in the third year. He will return to his home in the west, and we wish him success in whatever work he may undertake.

Olver Clayton White



"Cool as an icicle, and determined as the rock it hangs upon."

On Sept. 14th, 1887, O. C. entered upon his career at Ashburn, Ontario County, and after some experience in the West, Pennsylvania, and Ottawa, he arrived at Guelph just nineteen years later, on Sept. 14th, 1906, and entered the class of '10 as a freshman. From this time on Clayton has displayed in many ways his ability to do things. He was elected President of the Maple Leaf Literary, Secretary of the Y. M. C. A., and was champion light weight wrestler in his first year. As President of the second year he was chairman of the Sophomore Banquet Committee. He made the soccer team, all year teams, and won his emblem for gym.

work the same year. On the Review staff he was Athletic Editor, and later Business Manager. As a senior he held the Presidency of the Union Lit., won the Public Speaking Contest, and made the Stock Judging team on which he was high man, thereby winning the Barton-Hamer gold medal.

As portrayed by his angelic countenance, O. C. was a model of innocence, and many times has this stood him in good stead in extricating himself from perilous paths into which his innate precocity had led him. Clayton will make good in whatever line of work he undertakes.

John Griffith Lloyd-Jones



"He was a shy man."

"Jonah" was a Welshman, but "Jonah" was not a thief, except when he stole away from the women. He was born at Llandinam in 1885, and received his early training in the board and public schools of that place. Coming to Canada to better acquaint himself with farming conditions and wishing to get the best training possible, he entered as a Freshman at O. A. College in 1906. During his entire course he has been a thorough and painstaking student and has always taken a high standing in his classes.

In his final year he specialized in Agriculture, and when the class gathered together to choose unto itself officers, for that of secretary-treasurer, they did cast lots, and the lot fell upon "Jonah," and he turned from them in his wrath and cried "Oh, crimes." And the eyes of the maidens fell upon him, and straight way they took counsel together, and commanded that he should appear before them that they might commune with him, that there might be music and dancing on the "May Day." He purposes returning to Wales to take up the management of a large estate. From our present knowledge of him we are assured of his future success.

Charles Mohr Learmonth

*"Conspicuous, for mirth and laughter,
The ladies first, his studies after."*

"Larry" blew in to Mohr's Corners, Carleton County, on Guy Fawkes' Day, 1889. This has probably had something to do with the explosive nature of his career ever since.

After having received his early education at the public school and continuation class, he came direct to O. A. College. He has played on the basket ball, base ball, and hockey year teams. In his Junior year he managed and as a Senior he captained the College basketball team, and has played for two years on the first hockey team. He has also held the College Life and Agricultural Editorships on The Review staff, and

has served on the executive of the Alpha and Delphic Lits.

"Larry's" unlimited capacity for fun backed up by plenty of common sense and executive ability, has won for him a host of friends throughout the College and Macdonald Hall.

"Larry" is an Agriculturist, a fusser of wide experience, a maker of wagers, a devourer of fudge and possesses a rich bare-of-tone voice. Need we say more?

Reginald Lyle Moorhouse

"Full of the exuberance of healthful life."

On arrival at Cairo, Ontario, May 4th, 1885, "Chinky's" first act was to grin audibly and "punt" the family cat through the window. After leaving public school he farmed for some years at home, till, having mastered the art of farming he came to College to learn its science. Here he entered into all branches of College Life, heart and soul.

A member of the '10 champion Tug-of-War and Hose Reel teams, champion heavyweight wrestler in '09, he was a tower of strength to the rugby team at centre half, where his pronounced punting propensities exhibited as a child stood him in good stead. His work as vice-president of the Philharmonic Society, chairman of the Bible Study committee, Bible class teacher and leader of the choir was characterized by untiring energy and unending self-sacrifice.

In his Senior year he was president of the class and a member of the Stock Judging team. "Chinky" intends to return home and will occupy his time in raising pure bred stock. His many friends are assured that under his able management Maple Wood farm will become one of the most prominent stock farms in Ontario.

Francis Clark Nunnick

"Bid me discourse; I will enchant thine ear."

Clark first made the acquaintance of his father's family in a farm-house near Scotland, Ont., on Sept. 14th, 1881. After leaving public school he turned his attention to farming in the day time and literary society work and social pursuits in the evening. He first came to College as a freshman with the class of '08, but deciding to wait for something better dropped out and joined us in our second year. He has occupied a prominent place ever since. As editor of the Review he has devoted much time and energy towards its improvement. He has participated in many debates, and Mock Parliaments, and for three years has pitched for the year baseball team. F. C. was a member of the choir, and throughout his college course has rendered able assistance with his musical talent at many functions. He has specialized in oratory, social functions, vocal solos and agriculture, and whether his life work will be in journalistic or educational spheres, we predict for him a successful future.

William Edward Judson Edwards

"You never saw him in a coat an age behind the fashion."

On a bright May morning, away back in the eighties, Wm. Ed. Judson Edwards became supreme on a farm near Claremont, Ontario. Being descended from English and Welsh stock, "Jud" inherited that spirit of "What we have we'll hold" in conjunction with the enthusiasm, humor, and love of romance which characterized the ancient Celt.

In November, '05, he entered College, and for the next two years distinguished himself for his conscientious application. A year was then spent on the farm. But "Absence makes the heart grow fonder" and the following fall saw Judson pack his grip and return to

join the boys of '10.

Serving as vice-president of the Delphic Lit. he proved to be a valuable asset. The conversat committee found in him an able financier. In the fall term of his Senior year the Delphic Lit. had "Jud." at the helm.

This quiet, unassuming Ontario boy showed his powers of discrimination and good judgment whenever he came in contact with our domesticated friends. Very early in the fall he was "spotted" by his classmates to win, easily, a place on the Stock Judging team.

The feeding and improvement of stock being his hobby, we expect to see the honor of Ontario County mount higher than ever when he takes charge of the old homestead. Canada will always have in him a citizen of first rank and his Alma Mater will have a loyal supporter.

Stuart Kennedy



"A spirit to the rocks akin."

This "Man from Glengarry" arrived at his parents' home, Apple Hill, Ontario, on December 27th, 1887, thereby missing his first Christmas dinner by two days. This habit of coming late seems to have stuck to him ever since, especially in the matter of breakfast and roll-call.

He obtained his Junior Leaving and Junior Matriculation at Alexander High School, and his thirst for knowledge being still unslaked he followed in his brother's footsteps, and came to O. A. College. "Ken" is one of the strong men of his year, both mentally and physically, and his muscular frame and quick wit have always been a source of strength both to his class and

to his Alma Mater. He served as vice-president of the Maple Leaf Lit., and as a representative on the A. A. executive. He was also a member of the '10 champion Tug of War team, and captained the '10 champion Hose and Reel team, and the inter-year championship indoor baseball team in 1910, made all year teams, played on the line of the first rugby team for three years; won the heavyweight wrestling championship, and was elected vice-president of his class in his final year. He intends following agricultural work in the West.

Roy Fraser



"A fellow of infinite jest, of most excellent fancy."

The stork had come and gone, and on August 8th, 1889, Roy cried bitterly because he had not slain that noble bird. But many a one with his trusty "blunder buss" has he since laid low.

At the tender age of eight he commenced his education in the public schools of Brooklyn, and later at South Orange, N. J. Returning to Canada, he took up continuation work at Fitzroy Harbor, where he studied a little, plagued the teacher a great deal, and out of school pursued the crafty denizens of the forest with never-ceasing delight. Wishing to further study Biological Science, he joined the class of 1910 as a Sophomore, and as a member of the second year banquet committee he was a source of "infinite jest and excellent fancy." Roy is a born musician, at social functions and Lit. meetings has he delighted his hearers with excellent selections from his varied repertoire, whether presiding at the piano, or playing in the orchestra or mandolin club. He played on the year teams in basket ball and baseball and was always an enthusiastic spectator at other games. Gifted with a fluency of expression more than common, he was high man in third year English, and winner of the Oratorical contest in his final year.

Frank Eaton Ellis



"Embellished with good morals and just thought."

On August 22nd, 1889, Truro, Nova Scotia, was honored by the arrival of the above named gentleman. He first attended the public school at Truro, and later received his matriculation from Truro Academy. We next find him in Nova Scotia Agricultural College, where he remained for two years.

Nothing is too good for Frank, and having heard that O. A. College was "the best there is," he entered the class of '10 as a Junior. Since coming here his high standing on examinations has proven him to be a clever and painstaking student. Although our acquaintance with him has been limited to two years, we know him to be an earnest worker, a good sport,

and a man who is in every way a credit to his class. As centre on the year's basket ball team, and as scrimmage on the second rugby line, he could always be relied upon to give a good account of himself.

Through the week he studies Agriculture, on Saturday plays tennis or drives a rubber-tired buggy. When he graduates, he intends taking up journalistic work.

Hugo Louis Knauss



"Hail, fellow! Well met."

"Kiddo" was born in Newark, N. J., August 15th, 1886, but at the age of two years he went to Detroit to root for the Tigers. He matriculated from the city schools before going to Michigan A. C., which institution he attended for one year.

Responding to the telepathic magnetism that drew together the illustrious class of '10, "Kiddo" laid in a supply of "Lucky Strike" and hiked for Guelph, where his jolly laugh and corduroy pants were soon well known.

Hugo is some ball player, he captained both the College football and indoor baseball teams in his final year, but notwithstanding his ability to play excellent

football, he proved an easy mark for Cupid, who, we are led to believe, scored a "touch down" on him. From latest report, however, we learn that it was only a "rouge." He was treasurer of the Athletic Association, and fourth year representative on the A. A. executive. He specialized in Horticulture, and intends devoting himself to that particular line in future. We see in Hugo a second Burbank.

Samuel Ellsworth Todd



"And e'en though vanquished, he could argue still."

Sam hails from Fenelon Falls, where he first appeared in the summer of 1878. The training he received from the stern realities of his early life have moulded him into a man of definite and earnest purpose. During his college course he has displayed his executive ability in connection with the Literary Society and the Review, being in a large measure responsible for the draft of the present constitution of both organizations.

Of an argumentative turn of mind, he has often appeared upon the debating platform, has taken an active part in all mock parliaments, in his first year won the Public Speaking Contest for '10, and as a senior was Horticultural Editor of the Review. He specialized in horticulture and co-operation, and so greatly was he impressed by the benefits to be derived from the latter that some years prior to his advent at O. A. College he formed a life partnership. The company's membership is now six. Sam's unlimited energy and forceful personality will undoubtedly pave the way to a most successful career in after life.

Eli Robinson



"Work! work! work!"

"While the cock is crowing aloof."

"Dad" is an Irishman. He was born some few years ago near Morrisburg, in the County of Dundas. After graduating from the Morrisburg Collegiate, he went to the Ottawa Normal to prepare himself for teaching, and for fourteen years afterwards he wielded the blue beech in his native county.

During this time he got married and bald and became imbued with the idea that he was meant for an agriculturist. Coming to College in 1905, he has for the most part interested himself in literary work. Has served on executives of Alpha and Delphic Literary Societies, President of Alpha in junior year, and was instrumental in organizing and assisted at all the mock parliaments.

Because of his sparkling wit and dry humor he was chosen to propose the toast to the faculty at the Sophomore Banquet and to reply to the toast to the students at the Experimental Union Banquet. He intends taking up agricultural high school or experimental work after graduation.

William Robert Reek



"Studios of useful knowledge."

"Bill" was born at Chatham, County Kent, on March 23rd, 1882. After getting his Junior Matriculation from the Leamington High School he came at once to join the "glorious class of '10," and at their first meeting was elected Class President. He commenced at once to do things, winning the Biological Scholarship and the Loudon Prize for barn architecture. Since then he has served on many committees, besides being President of the Y. M. C. A., Treasurer of Union Literary Society and Editor of the Experimental Department of the Review. He played on the basketball and baseball year teams, was a member of the Stock Judging team in the fourth year, and has

always been a staunch supporter of all college organizations, being ever willing to sacrifice his own interests for those of others. He specialized in Agriculture and has devoted a good deal of time to the Drainage Problem as it confronts the Ontario farmer. He has been appointed Drainage Expert on the staff of the Physics Department.

Robert Henry Clancy

*"Full of 'praties' and of 'whisky,' with a Shamrock in his vest,
And a big blackthorn shillelah, he'll harp Home-rule at his best."*

Pat is a mystery—deep and inscrutable. Although possessing an excellent memory, he declares that he has not the slightest recollection of the time or place of his birth. His speech and his affinity for "spuds," however, betrayeth him, and it is unanimously conceded that he originated in the land of the Shamrock. Pat is a cheerful pessimist and a fighter born. He is a strong advocate of Home-rule, and only an accident of birth, as to time and place, prevented him from being a Fenian. With his fondness for potatoes he developed early in life a desire for Agricultural knowledge. To gratify the latter passion he forsook old Erin and eventually appeared at O. A. College as a member of the '08 class, where he soon took first rank as one of the most practical men of the year. He went West, and later joined the '10 class with an additional store of agricultural lore and a moustache. This hirsuteous excrescence was not only a never-failing source of pride to Pat, but as it was the only phenomenon of its kind in the class, it was more or less a class(y) affair. Although fair eyes may scan these pages in vain for his noble lineaments, there is no doubt but that a post mortem would reveal the portrait of this enigmatical Irishman engraved upon many a tender cardiacal membrane.



SECOND YEAR GROUP.



1910 CHAMPION TUG OF WAR TEAM.

| | | | | |
|----------|---------|-----------------------|------------|-----------|
| Kennedy, | Slater, | John Douglas (coach), | Singleton, | Ferguson, |
| King, | Jones, | White (captain), | Moorhouse, | Lewis. |



1910 STOCK JUDGING TEAM.

W. R. Reek, W. E. J. Edwards, R. L. Moorehouse,
 Dr. J. H. Reed, Prof. G. E. Day, Prof. R. Wade, O. C. White, A. M. Shaw.

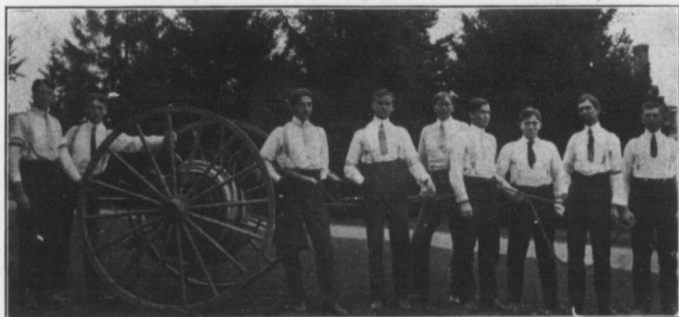


INDOOR BASEBALL CHAMPIONS, 1910.

Reek (field), Learmonth (3rd base), Fraser (2nd base), McRae (field),
 White (short stop), Knauss (1st base), Carpenter (short stop), Nunnick (pitcher)
 Kennedy, (capt.) (catcher).



CONVERSAZIONE COMMITTEE, 1909.



1910 CHAMPION HOSE REEL TEAM.

CLASS "NOISE."

Air—"I'm Glad I'm Married."

Sit up and watch us

For we are 1910!

We'll make all the noise we can,

Don't give a damn for any damn man,

When we get a-going

There's something doing then—

(*Spoken*) Seniors! Seniors! Rah! Rah! Rah!

Old 1910.

Other years may follow

But we will lead the way,

1910 has made a name,

We're mighty proud of the Senior's fame,

You'll go some to beat us

We sure have the men.

(*Spoken*) Seniors! Seniors! Rah! Rah! Rah!

Old 1910.

CLASS YELL.

Who are we?

We are the

P-E-O and a P-L-E

Rah! Rah! Nineteen

Rah! Rah! Ten

Rah! Rah! Rah! Rah!

Nineteen Ten.

History of Class '10, Macdonald Hall

MANY parts of the globe are represented in the class of 1910. The majority of the students came to prepare themselves for teachers of Domestic Science, their aim being to arouse a deeper interest in the noble art of home-making among the young girls of our own country; others to train for professional housekeepers, while some from the ranks of both classes intend following the essential and most interesting study of dietetics.

The elections of class representatives, choosing of class pins and prevailing good humor soon promoted a spirit of good fellowship. Early in the term an athletic association was formed for the first time in the history of the Hall. This work has developed rapidly, and has broadened into many branches. Ground hockey was introduced and proved to be a favorite pastime. Ice hockey was also indulged in to some extent, the games with the College boys being not the least exciting. Indoor baseball is another innovation in the field of sports. In our junior year the Macdonald girls took part in the O. A. College annual athletic concert, which proved so successful that it has been continued. May Day has been held which served as a class day for the graduating classes on both sides of the campus, one of the prominent features being the planting of a class tree.

The nucleus of student government was developed in our senior year, and from the standpoint of both faculty and students has proved a success. Delegates were sent to the convention at Rochester under the auspices of the Student Volunteer Movement and to the summer Y. W. C. A. conference at Muskoka, arousing a general interest in Y. W. work.

Undoubtedly the greatest honor befalling our class was to entertain in our junior year the National Council of Women, this honor being due to the untiring efforts of the late Mrs. Hoodless. This in itself was a liberal education, as it brought us into contact with the foremost women of all nationalities, giving us further insight into woman's sphere in life. The Canadian Manufacturers and Toronto Canadian Club members were also entertained.

Though our school generation is but two short years, we hope that while receiving instruction here we have also done something to promote the life of the College; something to which we can look back upon in future years and feel that the time spent here was not in vain.

Biographical Sketches of Class '10, Macdonald Hall

Florence B. Belton



"Small of stature but great of mind."

Florence Beryl Belton was born in the Forest City (London). Here she received her early education, winning the Boyle memorial medal on passing her Entrance examination. In 1908, having passed her Matriculation, she came to Macdonald Institute. Here, although learning to be mistress in the art of cooking, she also became an important worker in other branches of school work, thus keeping up her Collegiate record. As Macdonald Editor of The Review, she proved very capable, and the success of this department was due to her "noble" efforts. In spite of her many accomplishments she was a favorite.

Laura E. Black



"Here's an honest conscience."

Laura E. Black's early years were spent at Stanton and her school days at Shelburne. She graduated from "Model" at Orangeville. After teaching two years in the locality of her home, a further desire for knowledge, especially in Domestic Science lines, brought her to Macdonald in 1908.

Her "dunning" properties were well shown in her work as collector for the Y. W. C. A. We believe that already she is under the spell of the call of the West, and no doubt before long we shall be wishing her success in her work there.

Irene L. Eedy



"She hath a nimble wit."

Irene L. Eedy, although born in St. Thomas, has spent the greater part of her life in St. Marys, where she attended both the public and High Schools. In the fall of 1908 she came to Macdonald Institute to take the Normal course. Irene is the baby of the Normal class, although none could tell it from the business-like way in which she prepares for demonstrations. She was an enthusiastic member of the hockey team, and took no mean part in all forms of sport.

Jessie A. Allen



"A girl she seems of cheerful yesterdays and confident to-morrows."

Jessie A. Allen claims Mount Forest as the town of her nativity. After taking her junior leaving at High School, she went to Model School in her home town. She then went out into the world and imparted her knowledge to the rising generation. However, she decided to acquire a greater store of more practical knowledge, so she came to Macdonald in September, 1908. Her free, jolly manner has made her especially well known and well liked among the students of Macdonald. She has labored faithfully in both work and play, and we feel confident that she will "make good" in whatever line she chooses, whether theoretical or practical.

Marjorie M. Goldie



"Common sense and kindness, and every modest grace."

Marjorie M. Goldie was born in the city of Guelph, where she matriculated from the Collegiate Institute in 1907. Having been brought up in an atmosphere of cereals and flours, her natural tendency was to study the choice and preparation of foodstuffs, and we find her at her earliest possible opportunity wending her way to Macdonald. Here she has for two years earnestly delved into the mysteries of scientific home making.

Jean L. Flavelle



"A daughter of the gods, divinely tall and most divinely fair."

Jean Flavelle was born in Lindsay, in 1890. Here she attended the High School, matriculating in 1908, and in the fall of the same year she entered the Normal course at Macdonald Institute, in which she has been very successful, blossoming forth an expert in culinary art. During her two years in Guelph she was a member of the orchestra, the choir, the athletic committee, The Review staff, the captain of the ground hockey team, one of our best ice hockey players, and a tennis enthusiast. Her bright disposition has made her many friends who feel that her sincerity and thoroughness in everything she undertakes will win success for her in after life.

Lucie E. Bailey

*"No matter, no matter, so say her friends,
Whatever she starts she sure enough ends."*

Lucie Emma Bailey, a girl worth knowing, claims Selkirk, Ontario, as her birthplace. Lucie entered the Toronto Public School at the tender age of seven. In 1902 a desire for boarding school took her to Moulton Ladies' College. From there she matriculated in 1907 and came direct to Macdonald.

Lucie's chief ambition in life is to minister unto others; never too tired, or too busy, to lend a helping hand. Throughout her course she has taken an active interest in the Y. W. C. A. and various College Societies.

During her sojourn at Macdonald, Lucie has become renowned for her skill in the culinary art, and whether she goes from us to the careful study of "cooking for two," or finds a large class and draws a large salary, we wish her every success.

Winifred Hales

"My country 'tis of thee."

Though born under the Stars and Stripes, Winifred showed her natural good sense in returning to her mother's homeland.

Her early education was obtained in Hallock, Minnesota.

By her even disposition, though not in residence, she has made friends at Macdonald who wish her all success in her future undertakings, be they on this side of the line or the other.

Bessie H. Marsales

*"Her winning smile and her gleeful glance
Like a gleam of sunshine fell."*

Bessie Holbrook Marsales had the honor of being born in Guelph. Very soon after, however, her mother, fearing the proximity of the O. A. College, removed her small daughter to Wingham. Ever after she seemed in an unsettled state of mind, wandering between Wingham and Buffalo. Never until she found herself safely stowed in Screech Alley at the "Mac." did the roving spirit leave her; then indeed she felt herself to be again on native soil. Perhaps it was due to this contented spirit, or perhaps to something else, but certain it was that Bess was always cheerful. Even the terrors of an approaching "dem." never seemed to depress her. This never-failing cheerfulness endeared her to the hearts of her classmates.

Edna Bryans

"Type of the wise, who soar but never roam."



Edna Bryans made her debut into this world of troubles in Toronto, where she has since lived. It was at Jarvis Collegiate that she accumulated the necessary store of knowledge with which to obtain her matriculation. She remained at home for a short time but long enough to acquire a taste for Domestic Science and to develop this she entered Macdonald Institute. Edna has always been intensely interested in all kinds of sport, and is a most enthusiastic tennis and hockey player. She has filled very capably the position of corresponding secretary of the "Y," and was also a Bible-class leader.

Gertrude I. Dobson

*"In every charm, in every grace,
None can excel thy smiling face."*



Gertrude Isabelle Dobson, our class president, was born at Orillia, but her earlier education was received at her present home, the town of Fordwich. She then went to High School at Harriston, and later, in 1908, matriculated from the Wingham Collegiate. In the fall of the same year she entered the Normal class, and has proved to be a bright and capable student. All through her course she took an active part in Y. W. C. A. work, being president in her Junior year. Our best wishes go with her—best liked by those who know her best.

Lois Peers

*"She doeth little kindnesses which most leave undone
or yet despise."*



The subject or, shall it be said, the victim of this sketch was born on a farm just outside of Woodstock. Later she resided in Woodstock, where she received her earlier instruction, and after matriculating came to Macdonald to be educated in the art of Domestic Science. Her kind heart and ready sympathy quickly won for her a place in the hearts of the Mac. girls. Here her dramatic talent shone forth and provided many welcome additions to our good times. Lois has been helpful in many departments, but we would like to mention specially her work in the Y. W. C. A. We can assure her of our hearty interest in her future career.

Eva E. McMahan



*"Nothing lovelier can be found in woman,
Than to study household good."*

Eva E. McMahan first saw light of day in Port Elgin, but subsequently lived in London, "the best city in Ontario." Energy is the keynote of her success, for she is most energetic, whether it be in the round of social gaieties or in the more practical affairs of life. Eva is an enthusiastic wielder of the string-mop and duster, and room 116 was always noted for its resemblance to the proverbial "pins in a paper." She is fully capable of filling any position, however difficult, and her classmates all feel confident of her success in whatever walk of life she may pursue.

Grace M. Edwards



"A merry heart and true."

Grace M. Edwards was born at Lucan, Ontario, but received her early education in the London schools, from where she matriculated in June, 1906. The next year she attended the Western University in London, but at the end of the year, she decided that Domestic Science would appeal more strongly to her than classics or philosophy, so she entered the Normal class at Macdonald in Guelph, 1908. Throughout her course here she has been connected with all forms of athletics and the Tennis Club owes much of its success to her able management. No amount of work ever daunted her brightness or appetite for fun.

Marjorie Smyth



*"She has wit and song and sense,
Mirth and sport, and eloquence."*

It was in the pretty little town of Berlin that Marjorie Smyth was born. Here she received her early education, matriculating from the Berlin Collegiate in 1906. After spending a year and a half at St. Margaret's College where her incessant good humor made her a great favorite, she entered Macdonald Institute with the Normal class of '10. As she made daily trips to and from her home in the first term of her Junior year, it was in her Senior year that we knew and appreciated her best. Fond of fun, we never tired laughing at her curious capers, and her room was a general rendezvous for all. She took a great interest in athletics, being president of the athletic club in her Senior year. Marjorie's continual cheerfulness insures for her a happy future.

Georgina G. Stiven



*"She has little, slow eyes, eyes of deepest brown,
Sort of don't-you-know eyes, eyes that never frown."*

Georgina Gibson Stiven was born in the town of Goderich, but showed her good sense by coming to Guelph at the youthful age of three. Here she has received her education in the public school and Collegiate Institute, matriculating and receiving also her Junior Leaving certificates with honors in 1908. During her two years at Macdonald Institute her bright disposition has won her many friends, who expect to hear great things of her in the future, whether she uses her knowledge for the benefit of man or man kind.

Maysie I. Hutchison



*"Her heart was in her work,
And the heart giveth grace into every art."*

Maysie Isabelle Hutchison was born in Berlin, Ontario, where she spent the early part of her life. Later she moved to the little "Indian village" of Penetanguishene, where she still has her home. In 1907 she came to Macdonald Institute after obtaining her preparatory education at Berlin public and High schools. Although she led her class in her first year she did not return to complete her course until the year 1909. She has always been held in very high esteem by her classmates, to whom she endeared herself by her true womanly disposition.

Amoret Kendall



"How sweet and fair she seems to be."

Brockville, one of the prettiest spots along the St. Lawrence, claims the honor of being the home of our fair Amoret. Since coming to "Mac." she has absorbed all the knowledge obtainable and has also taken in all the fun on the side. By her quiet, unassuming manner she has won the hearts of a vast number of devoted friends, who will never forget her bright, smiling countenance, however far she may roam in accomplishing her great life work—that of teaching poor deluded humanity the modes of making tough meat tender.

Florence Pringle



"Lean enough to be thought a good student."

Florence Pringle was born in the city of Guelph, where she received her early education. Having matriculated in 1907, she went to Toronto to the Central Ontario School of Art and Design, where she studied for one year. Believing her talents lay in the more practical fields of learning, she entered the Macdonald Institute. Her good standing taken at the term examinations testify to the large amount of theory of scientific living she has digested, absorbed and assimilated.

M. I. Stuart



*"She's little, but she's wise,
She's a terror for her size."*

Mary Isabel Stuart was educated in the city of London. She survived the public school and Collegiate curricula, matriculating in 1908. In the fall of that year she became one of the busy bees of Macdonald Hall. Her interest and work have not been confined to her school work alone. She has been an interested Y. W. C. A. worker, and as president in her final year, has made it a complete success.

Louise D. Hogg



*"She reason'd without plodding long,
Nor ever gave her judgment wrong."*

Louise Drummond Hogg, "the fair maid from Perth," was born and educated in this town. After matriculating from the Perth Collegiate Institute she remained at home for several years preparing for her "higher education" at Macdonald. The latter Institute she entered in 1908, and the two years spent here have been very brilliant. Although standing head of her class throughout her course, it was not alone in her studies that she excelled, for she took a prominent part in all social engagements. She was president of the Literary Society, accompanist to the College mandolin club, and a member of the choir, and her hospitality made room 220 a very popular sitting room for her many friends. Later, in her second year, she brought great credit not only to herself but the Hall at large in her public speech at the Experimental Union banquet, and finally crowned her course by her able management of the Macdonald Department of the Conversazione.

HOUSEKEEPERS

Eva Bonnel

*"Yet should thy soul indulge the gen'rous heat!
Till captive science yields her lost retreat."*

Bobcaygeon, situated in the district of the Kawartha lakes amidst picturesque surroundings, is the home of Miss Eva Bonnel. The greater part of her school life was spent in the seclusion of a Toronto boarding school. Afterwards, she lived for two years in Germany, acquiring a knowledge of the language and of music. Sometime after, filled with a burning desire for scientific research, she came to Macdonald to join the ranks of the Housekeepers. She preferred the solitude of her own apartments, choosing as her companions such scientists as Hutchison, Snyder and others. On the subject of Proteids, she had no equal. Besides the associates above mentioned, she showed an admiration for the unabridged words of Webster. In the near future we see Miss Bonnell as a busy housekeeper, generously dealing out proteid and fresh air to starving humanity.

Sybilla Hadwin

*"Grace and useful in all she does,
Blessing and blest where'er she goes."*



Sybil Hadwin's early years were spent first near Manchester, Eng., then in France at school. Later her family came to Canada, settling in British Columbia, and from there she went to St. Luke's Hospital, San Francisco, in '04. To equip herself still further for life, she entered the Macdonald Housekeeper class in '08, has been interested in the Literary, choir and Y. W. C. A., and with her artistic ideas has contributed largely to the success of many a function. We are confident her unselfish ideals will be realized in a useful career in which we wish her good success.

Mrs. Agnes Symmons



"True worth is being, not seeming."

Mrs. Agnes Symmons spent the early years of her life near Owen Sound; her married life near Ottawa and Quebec. Later coming home to Guelph, she decided to take advantage of the Housekeeper course offered at Macdonald. To whatever place her work may take her, we wish her all success.

Annie A. Pettingell



"She has two eyes, so soft and brown. Take care!"

Annie Pettingell better known as Petty, spent the early years of her life in Quisponces, New Brunswick. Having attended Simmons' College, Boston, for some time, she obtained a credit in Bacteriology, hence was the envy of all her classmates. She was a Homemaker for one year, but "cooking for two" was not good enough for her, so she learned to cook for many in the Housekeeper course. If the graduating dinner of 1909, for which she was stewardess, is any test of her executive ability, we predict great things for her in her future career.

Mary E. Murdock



"To know her were a liberal education."

Mary E. Murdock first saw the light of day near Palmerston. Her education began there and proceeded along varied useful lines; among other things, she acquired a knowledge of cheese-making, and become quite a connoisseur in thoroughbreds. Her progressive spirit led her to Macdonald Institute for a short course in 1906. This sip of a wider knowledge whetted her appetite for more, and in September, 1908, she came back to her old haunts with a mind alert to absorb all the knowledge to be picked up on this historic campus.

A still wider horizon stretches before her as a graduate Housekeeper, and her friends and admirers at Macdonald will watch her budding career with interest. "Murdock" will be heard from wherever her sphere may be.

Margaret E. Smellie

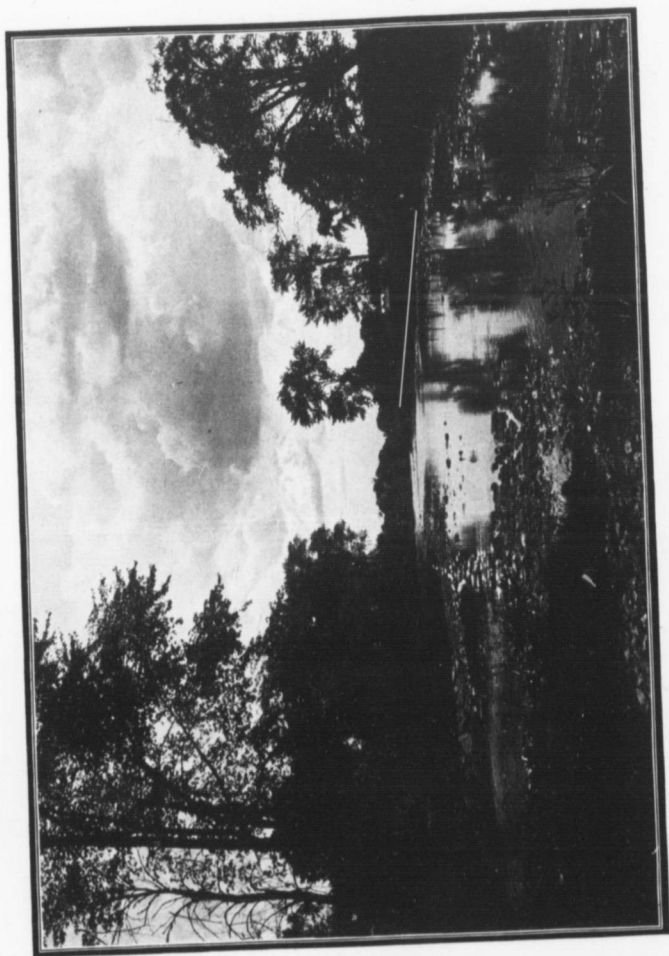


*"Honor to those whose words or deeds
Thus help us in our daily needs."*

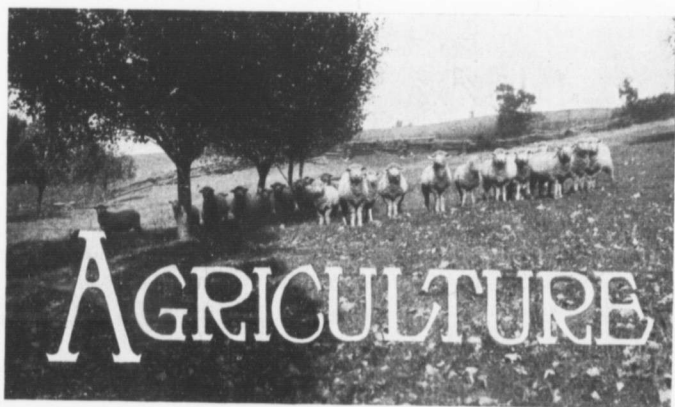
In the growing city of Port Arthur, on the shores of Thunder Bay, was born the subject of this sketch, Margaret E. Smellie.

She was educated in Port Arthur, Fort William and St. Margarets. Always interested in the welfare of others, she conceived the idea of fitting herself for a life of greater usefulness, and decided, in 1908, to take the Housekeeper course at Macdonald.

In her second year, as president of the House committee, she endeared herself to us all by her ability to rule as well as to love.



THE SPEED IN SUMMER.



Counting the Cost

G. E. DAY, B.S.A., PROFESSOR OF ANIMAL HUSBANDRY.

WE cannot get something from nothing. Every bushel of grain, every ton of hay, straw, or other product makes a definite draft upon the fertility of the soil, leaving the soil poorer in certain constituents than it was before. Aside from its fertility, land is valueless to the farmer. The farmer invests his money in land solely on account of the fertility which the land possesses, hence, we may say that the fertility of the land represents the farmer's capital. It follows, therefore, that the farmer who sells grain, hay, or other product of the soil, sells along with that product a part of his capital, and, unless he makes provision for returning to the soil the equivalent of the fertility removed, he impairs his capital every time he makes a sale. We all know the ultimate result of soil robbing—

impoverished farms and impoverished farmers, but it is strange how few people take this point into consideration when counting the profit or loss from growing and marketing a certain crop.

There is a homely saying that one cannot eat his cake and have it, but it is possible for the farmer to market his produce and still keep a large proportion of its most important part at home; important, at least, so far as he is concerned. By marketing his produce in the form of live stock, or some animal product, the farmer is able to obtain, as a rule, more than prevailing market prices for his crops, and retain upon the farm that which will enable him to produce crops at a lower cost.

Profit is not indicated by the selling price of an article, but is represented by the difference between the cost and the selling price. Because A sells

his oats at 50c per bushel, it does not follow that he has a larger profit than B, who sells his oats at 45c per bushel. To decide which man had the larger profit, we would need to know how much a bushel of oats cost each of these men. In this connection we are often unfair in computing results of feeding operations. It is a common practice to charge up against our live stock, top market prices for all the food they consume, and never take into consideration what they are capable of doing in the way of decreasing the cost of producing subsequent crops. It is often objected that one should be careful in crediting live stock with the manure they produce, because a large proportion of the manure is often lost in the handling. It is true that there is often a great waste in handling manure, but this is not due to any fault of the animals and should not be charged against them, but should be charged against the slipshod methods of the farmer who permits such a waste to occur.

Animals show to best advantage when used as a means of marketing home-grown products. When foods have to be purchased, the purchaser has to pay the grower's profit, and, in many cases, a middleman's profit as well, so that it is impossible to show very much profit in many cases where purchased foods are used. With home grown foods produced upon fertile soil, it is impossible for a man to sell his produce in the form of animal products and make a good profit, even though he may not get any more than market prices for his crops. The reason for this is easily seen. Under a system of feeding crops to live stock and taking proper care of the manure, crops are produced at a much lower cost than upon a farm where the crops are sold

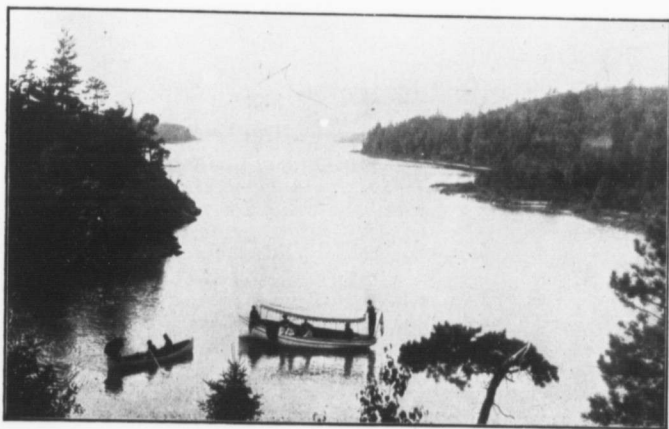
in their natural state. It is right here where the stock farmer has a great advantage; he produces his crops at a low cost, and can make a profit even though he should sell his crops at a lower price than the grain farmer. If he gets as much per ton or per bushel as the grain farmer, he has a much larger profit, but when, as is usually the case, he gets more per ton or per bushel than the grain farmer, he has still further reason for congratulation.

A concrete case may make the matter clearer. Suppose, for example, a farmer buys a steer for \$40.00. He feeds the steer home-grown foods which, valued at market prices, amount to \$20.00, and the steer is sold for \$61.00. Most people would say that the farmer made only \$1.00 through feeding this steer, but there are other possibilities. Supposing it could be demonstrated that the food this steer consumed actually cost the farmer only \$10.00 to produce, then the farmer's profit would be \$11.00 instead of \$1.00. Besides this, we must remember that the steer has left a considerable portion of the food he consumed in the farmer's barnyard where it is available for reducing the cost of producing the next year's crop.

In the case of purchased foods, it is necessary to charge against the animals what the foods cost, and if we knew the cost of home-grown products, it would be more nearly fair to charge the animals with the actual cost of these products, rather than with the market value of the products. By charging home-grown foods at their actual cost against the animals consuming them, we would necessarily be giving the animals credit for the improvement they have made in the fertility of the soil, because the true measure of this fertility is the extent to which it re

duces the cost of production. Therefore, instead of charging all foods consumed by animals at market prices, and counting as profit only what they return in excess of market prices, we should aim to find out how much we have received per ton or per bushel for the foods the animals have consumed, and then we can gain a more intelligent

idea as to whether our live stock is paying its way or not. To study the cost of production is sound business practice, but we cannot intelligently study the cost of producing our live stock without going further back and studying the cost of producing the crops upon which the animals are fed.



CHARACTERISTIC CANADIAN SCENERY.



Some Studies in Heredity at Ste. Annes

G. H. CUTLER, B.S.A.

IF one could isolate from the broad field of hereditary investigation any one line of research and proceed to prove and establish facts without encountering difficulties from environmental and ancestral influences or experiencing interruptions from unsettled correlated problems, the course would be a comparatively easy one. But where factors such as environment and ancestry enter in, to influence growth and development, the difficulties become materially increased. An additional obstacle is the fact that our knowledge is so meagre and, moreover, so full of gaps that perhaps the gaps constitute the most important part of the subject. If the entire field could be mapped out and those portions which have been thoroughly investigated shown, the surveyed areas representing settled facts would no doubt

appear infinitesimally small. Nevertheless, the investigations in heredity have, to some extent, characterized the last decade and the knowledge and data accrued cannot be regarded as inconsiderable. The unearthing of Mendel's records and the great law which he propounded, gave a wonderful impetus to the studies in heredity. Investigators thought that in the light of this new discovery they saw an easy solution to all difficulties and that by adhering to the proper interpretations of Mendel's law, results could be anticipated with certainty. Such has to a very great extent been the result, but a proper interpretation applicable to "work-a-day" breeding problems is becoming manifestly complex, and at every point the necessity for further study has been repeatedly demonstrated.

In order, if possible, to throw light on fundamental problems in heredity a number of experiments were planned and are at present under way at Ste. Annes. By conducting simultaneously, experiments bearing on closely related problems, it was thought greater progress could be made than if a single line of work were undertaken.

Of the lines of work in progress I shall deal with but one, namely: "A comparative study of the systems generally followed in the improvement of small grains."

A general survey of the field cannot but impress one with the multiplicity of systems advocated. Without question each has commendable features and much good has resulted from the application of the principles involved, but it seems impossible to obtain definite information on the relative value of the different systems in vogue. Such knowledge seems of the greatest practical import. If there is one method more excellent than another, it is desirable that we know it. This superiority, however, can be demonstrated only by a comparative study of the systems themselves. When once the principle has been discovered a long step will have been taken in the direction of simplifying the work of improvement by selection.

The different methods under test are as follows:—

- 1.—No selection.
- 2.—Selection by fanning mill.
- 3.—Selection of heads.
- 4.—Selection of plants.
- 5.—Isolation of promising individual plants.

In securing foundation stock, material was obtained from farmers throughout the Province of Quebec, the aim being to procure stock which was as far removed from any breeding or im-

provement as could be obtained. It consisted of wheat, barley and two varieties of oats.

While perceptible improvement can not reasonably be expected from the "No selection" method in the short period of ten or twelve years, there will probably be some improvement through natural selection. Even the life of the average breeder would be too brief to admit of material improvement being affected by such a method. We must, therefore, turn our attention to the devising of ways and means of assisting nature in maintaining and improving her natural forms. The purpose which the "No selection" method was intended to serve was that of a check on each of the other systems, and also to represent the somewhat limited practice in vogue in some of our rural districts.

The "Fanning mill" method is one which is receiving careful attention on account of its practical, economic bearing. It is a modification of the Fernan or Bulk system of selection in that the initial selection is a composite one, embracing the required bulk of choice seeds from the entire crop without regard to the character of the heads or plants which produced the grains. In this system only the largest, plumpest and heaviest kernels are retained and used for seed.

The third system which has become the basis of improvement accepted by the Canadian Seed Growers' Association consists in selecting the best heads from the most vigorous plants. These heads provide the seed for the succeeding crop and like the preceding method go to make up a composite sample. Improvement is affected by the repeated selection of heads showing slight favorable variations in the desired direction. In accordance with

German methods, widely aberrant types are shunned and only the best representatives of the variety are chosen in order to retain and intensify all the good characters possessed by the original stock. The advocates of this system claim that environmental conditions do not influence the inherent qualities of a plant, and any changes wrought by outward conditions are temporary, not permanent. They hold that selection is the only means by which hereditary qualities can be fixed, increased and finally changed in certain directions. Many instances might be cited where permanent improvement has been affected by this method. The famous Schlanstedt Rye of Germany, noted for its wonderful purity and uniformity, is perhaps the best concrete example of a systematic selection of heads.

The fourth system, namely, "Selection of plants," consists in selecting those plants which give evidence of marked superiority, as determined by a study of their visible characters. Each year the cultures are carefully searched for plants of excellence. These plants must conform to a certain set standard before they merit recognition. They are subsequently threshed and the grain selected, only the largest, plump, best quality grains are retained. The possibilities of affecting improvement by this method seem favorable, in fact, they seem equally as good as by the head selection method, since fewer characters are included in the aggregate. The essential differences between the German method and the one under discussion is the fact that the physiological and morphological characters of the plants become the determining factors in the initial selection, while in the German system the character of the head only is consider-

ed. If the contention is correct, that after an elaborate process of eliminating individuals of minor worth, the product is a pure strain, then such a condition can be reached much sooner by the plant selection method than by the German system, since fewer characters obtain in the initial selection.

The last system consists in isolating desirable individuals which have the power of transmitting to their progeny the characters which they as plants possess. Thus the individual plant is made the unit of selection and those plants which excel in projected efficiency become the mothers of distinct strains.

This method is based upon the theory that varieties are made up of many individual types or elementary species which possess hereditary qualities. These types bear marks of distinction which enable the specialist to separate one from the other. Thus each plant has an individuality based on morphological and substantive characters. Those which transmit these are retained; all others are discarded. A distinct criterion is therefore recognized in the unit character which serves a valuable purpose in isolating desirable individuals. These characters cannot be measured, weighed, or accurately determined, yet a knowledge of correlations aid materially in arriving at a conclusion.

The method adopted is to grow the plants in foundation beds under conditions as uniform as possible. From these beds those plants are selected which possess good length and strength of straw, heads evenly borne and ripened, and which give indication of constitutional vigor. The plants which merit recognition are carried forward separately for several generations to test their productivity and hereditary quali-

ties. If they succeed in maintaining their original high standard they become worthy of the name "strain." If not they are rejected.

At present the work has not reached a stage where results would warrant publication, being now under way only three years. The different systems are being tested side by side under conditions as uniform as it is possible to provide. The yield from each is computed from year to year. As soon as sufficient seed has been multiplied from any one mother plant isolated by the last method, it will be brought into competition with its original.

A comparative study of the systems outlined above should shed some light on the much-discussed question of selection. The problem is fundamental. If De Vries' contention is correct that the isolation of favorable mutants does away with the necessity of all future selections, many are spending too much time in selecting heads and seeds. On the other hand if De Vries is in error, a comparative study of generally accepted systems should reveal not only the weakness of his theory but the relative value of each system under test.

NATURE, THE BENIGN.

Nature, the terrible, cruel, deaf, malign!
 So men have named her in their vague alarm,
 Who know her outward only. Never harm
 Came to the soul that read her secret sign,
 Lived her pure laws, and dreamed her dream benign,
 That broodeth eternal ever kind and warm;
 With rare imagination's secret charm,
 Where all her lores and kindred loves entwine.

Not hers the working of blind woes and ills,
 Unanswered hunger and the futile breath
 Of wasted suffering and unneeded death;—
 Behind the formless mask, the seeming strife,
 Bound by a law as old as her own hills,
 She is a spirit; and her joy is life.

—Wilfrid Campbell.



REFRESHING SCENES.



A CORNER OF THE CAMPUS.



Horticulture

The Horticulture Option

S. E. TODD, '10.

THE most careless reader of the newspapers and magazines of Canada and the United States cannot fail to be impressed by the serious tone of the discussion regarding the food supplies of the people of the North American continent. Free land is no longer available in the United States and a similar state will soon exist in Canada. The end of the large exports of food from the United States at least is in sight. According to the best economists the year nineteen hundred and fourteen will see the consumption of cereals in the United States equal the production, if the present ratio of consumption and production continues. This means that the export of food stuffs from the United States must cease and the people must perforce look to other things besides meats and grains to aid them in solving the problem of food supply. If the production of cereals and meats becomes inadequate to supply the need of the population, then the consumption of fruits, vegetables and nuts must vastly increase and quickly result in the entire

stoppage of exports from the United States.

These facts, combined with the rapidly increasing population of Canada, makes the present situation one of great interest to the horticulturists of Canada. When one considers that the population of the Dominion has almost doubled in the time that it takes to bring a Northern Spy apple tree to profitable bearing age, the importance of the ratio of increase in population to the increase in fruit production becomes apparent.

To the horticulturist of Ontario the probable developments in fruit and vegetable culture are of special interest. The main factors controlling the range of production for any crop in Canada are hardiness of the plant, length of season and total sunshine necessary for maturing the crop, and the moisture content of the air. The fact that horticultural crops, as a whole, require either an early growing season or a long one to insure their profitable production, of necessity makes those portions of the Dominion enjoying

these advantages of increasing import ance. A study of the table prepared by the Physics Department of the Ontario Agricultural College, showing the length of season and total insolation, i. e., total units of sunshine received during the growing season, combined with the known limits of climatic endurance of many of our fruit plants, brings out the importance of Ontario in relation to Canadian horticulture. The table is prepared according to the divisions made by the Biological Department of Washington. This department has divided North America into a number of crop zones, according to the insolation and length of season. These divisions, so far as Canada is concerned, are: Upper Austral, northern; Transition—south, median and northern; Canadian—south, median and northern, and the Arctic zone. The following table gives a comparison of the climate of the various fruit districts of Canada, but only a study of a Biological map will reveal the area to which the table applies.

ONTARIO.

S.—Sum of heat units received during growing season. T.—Temperature of six hottest weeks. L.—Length of growing season.

| Station | S. | T. | L. | Zone. |
|-------------------|--------|------|-----|--------|
| Peele Island..... | 13,379 | 74.1 | 213 | U.A.N. |
| Windsor..... | 12,891 | 72.0 | 209 | " |
| Cottam..... | 12,853 | 71.0 | 212 | " |
| Chatham..... | 12,614 | 70.0 | 209 | " |
| Stony Creek..... | 12,583 | 71.0 | 208 | " |
| Hamilton..... | 12,380 | 71.6 | 202 | " |
| Welland..... | 12,207 | 69.4 | 202 | Tr. S. |
| Sarnia..... | 12,207 | 69.3 | 204 | " |
| London..... | 12,055 | 69.3 | 200 | " |
| Paris..... | 12,012 | 69.2 | 200 | " |
| Port Dover..... | 12,000 | 69.3 | 200 | " |
| Brantford..... | 11,891 | 69.4 | 198 | " |
| Birnam..... | 11,837 | 68.0 | 199 | Tr. M. |
| Port Hope..... | 11,800 | 68.5 | 198 | " |
| Port Stanley..... | 11,732 | 69.0 | 198 | " |
| Agincourt..... | 11,738 | 68.9 | 197 | " |
| Lucknow..... | 11,646 | 67.3 | 195 | " |
| Deseronto..... | 11,608 | 69.1 | 192 | " |
| Woodstock..... | 11,495 | 67.8 | 194 | " |
| Kingston..... | 11,424 | 68.0 | 192 | " |
| Collingwood..... | 11,455 | 66.9 | 195 | " |
| Meaford..... | 11,319 | 66.5 | 195 | " |

| Station | S. | T. | L. | Zone. |
|------------------|--------|------|-----|--------|
| Guelph..... | 11,236 | 67.0 | 190 | " |
| Toronto..... | 11,200 | 67.5 | 190 | " |
| Peterboro..... | 11,132 | 69.5 | 185 | " |
| Point Clark..... | 11,030 | 65.9 | 190 | " |
| Stratford..... | 10,991 | 66.9 | 186 | " |
| Ottawa..... | 11,040 | 68.6 | 184 | " |
| Bala..... | 10,946 | 65.4 | 188 | Tr. N. |
| Listowel..... | 10,940 | 66.1 | 188 | " |
| Saugeen..... | 10,815 | 65.3 | 187 | " |
| Owen Sound..... | 10,793 | 65.0 | 186 | " |

NOVA SCOTIA.

| | | | | |
|--------------------|--------|------|-----|--------|
| Sable Island..... | 11,040 | 62.9 | 201 | Tr. M. |
| Halifax..... | 10,572 | 64.6 | 185 | Tr. N. |
| Yarmouth..... | 10,424 | 60.8 | 192 | " |
| Wolfville..... | 10,763 | 65.4 | 189 | " |
| Pictou..... | 10,621 | 67.5 | 184 | " |
| Port Hastings..... | 10,558 | 65.0 | 185 | " |
| Truro..... | 10,104 | 63.8 | 178 | " |
| Fredericton..... | 10,021 | 64.8 | 174 | " |
| Chatham..... | 9,917 | 65.4 | 172 | " |
| Grand Manan..... | 10,381 | 61.6 | 189 | " |
| St. John..... | 9,972 | 62.7 | 178 | " |

BRITISH COLUMBIA.

| | | | | |
|-----------------------|--------|------|-----|--------|
| Athalmer..... | 11,090 | 69.2 | 197 | Tr. S. |
| Vernon..... | 11,134 | 65.3 | 195 | " |
| Winter Harbor..... | 11,237 | 59.2 | 215 | " |
| Salmon Arm..... | 11,345 | 66.4 | 200 | " |
| Nelson..... | 11,477 | 65.7 | 201 | " |
| Cape Scott..... | 11,505 | 55.3 | 228 | " |
| Okanagan Mission..... | 11,660 | 66.2 | 204 | " |
| Hedley..... | 11,701 | 67.6 | 204 | " |
| Summerland..... | 12,180 | 68.7 | 210 | U.A.N. |
| Agassiz..... | 12,405 | 62.0 | 227 | " |
| Kamloops..... | 12,410 | 68.3 | 209 | " |
| Steveston..... | 12,554 | 59.7 | 238 | " |
| Ladner..... | 12,596 | 61.0 | 236 | " |
| New Westminster..... | 12,734 | 63.0 | 229 | " |
| Vancouver..... | 12,737 | 63.1 | 233 | " |
| Thetis Island..... | 12,816 | 62.9 | 237 | " |
| Nanaimo..... | 12,894 | 63.4 | 236 | " |
| Chilliwack..... | 13,046 | 64.7 | 232 | " |
| North Nicomen..... | 13,052 | 64.0 | 233 | " |
| Alberni..... | 13,102 | 65.4 | 235 | " |
| Cowichan..... | 13,463 | 63.5 | 249 | " |
| Clayoquot..... | 13,552 | 58.6 | 260 | " |
| Spence's Bridge..... | 13,754 | 73.2 | 224 | " |
| Victoria..... | 14,150 | 60.0 | 269 | " |

It will be seen from the table that the tender fruit district of Ontario, excepting a few specially favored spots, such as along the south shore of Lake Huron in Lambton County, is confined to the Upper Austral Northern Zone, which has the warmest growing season in Canada. Not only are these sections the great tender fruit districts, but the early vegetable trade and the production of summer apples must become of increasing importance in this zone and

the Transition south, because earliness of season is bound to be the determining factor of production in these crops. A further study of the table shows the experienced horticulturist that the area of production for the standard winter apples, excepting again a few favored spots, lies well within that part of the Transition Zone known as south and median. Thus, it will be seen that production of fruit lies within fairly well defined boundaries as indicated by length of growing season and total insolation.

When a like test is applied to the remaining provinces of the Dominion it will be seen how little of the remainder of Canada lies within the fruit producing zones. A considerable extent of British Columbia along the coast has a very long season, but the excessive moisture in the air reduces the average temperature, and increases the liability to fungus diseases to such an extent that the fruit sections lie not in the district of long season, but rather in the *crier* inland mountain valleys. The same is true to a lesser degree on the Atlantic coast, although it is possible that unlike British Columbia, there is a considerable fruit area in the Eastern Provinces still undeveloped. It will be noticed that in Nova Scotia the fruit district lies in the Transition north zone. The effect of the marine climate is so marked that in specially sheltered valleys such as the Annapolis the standard winter apples can be grown to perfection in this zone. The same fact will be noted later in regard to Owen Sound, in Ontario. This may also be true of certain isolated sections in British Columbia, in the Transition north and median, but at present the fruit district is confined to the Transition south and to a limited extent in the Upper Austral Northern

Zones. The remainder of Canada lies outside of those districts which have been considered in Ontario, British Columbia and Nova Scotia as important fruit and vegetable districts.

As the great bulk of Canadian territory—which can never become important in the production of fruit and vegetables—becomes more and more thickly populated, the inhabitants must depend largely on certain sections of the Provinces of British Columbia, Nova Scotia and Ontario for their horticultural supplies. Moreover the rapidly approaching cessation of exports from the United States must also make Europe increasingly dependent on Canadian fruit products. At no place in Ontario is the moisture content of the air excessive while the great length of the shore line wonderfully increases the area of possible fruit production in the Province. This is instanced by the fact that although Owen Sound is in the Transition north zone and thus outside of the recognized fruit producing zones, yet the ameliorating influence of the water of Lake Huron on the winter temperature makes the section quite favorable to the production of the standard winter apples. Added to the length of shore-line is the favorable geographical position both as to latitude and marketing facilities, the total advantages of which place Ontario far in the lead of Canadian provinces in horticultural possibilities.

A consideration of the above facts must bring to the attention of the thinking man the increasing importance of the study of horticulture in the Province and of the Horticulture option at the Ontario Agricultural College. Up to the present the agriculture option has rightly been made the strong feature of the College curriculum. The preponderance of the interests of farm

field crops and animal husbandry in the Province demanded this. But this condition is rapidly changing, and if the College is to remain leader of agricultural thought and education in the Province, it is imperative that the Horticultural option be made fully equal in importance to that of agriculture.

To the student in horticulture standing at the end of the course and looking back over the four terms of study, one fact seems to stand out, namely: the paucity of exact scientific horticultural data in all departments of the College as compared with the wealth of knowledge in matters relative to farm crops and animals. The writer will not presume to go into the cause of this condition more than to state his belief that it is due not to any defection on the part of the staff but rather to the lack of such data and the necessity which has heretofore made farm crops and animals subjects of special study rather than horticulture. Nevertheless, to the student thirsting for exact scientific knowledge of the chemistry of fruits in order to enable him to help place his beloved art on a systematized basis, it is rather disconcerting to be referred to "Feeding Farm Animals" as the best available work on proteids in plants.

After listening to the very interesting discussion regarding the conduct of the roots of cereals, legumes, etc., toward the mineral salts in the soil, it is discouraging when, having made an inquiry relative to peaches, the student is told to apply seven hundred and fifty to fifteen hundred pounds of a fertilizer made of nitrogen two per cent., etc., etc. It is not absolute information that the student wants but rather a discussion of the conduct of the roots of peach trees toward the soil salts, such as was given in dealing with cereals. It is also unsatisfactory to find oneself in

possession of a fair knowledge of the technique of underdrainage and yet be ignorant of the relation of the water content of the soil in winter to root freezing of trees, or of its relation to the cessation of growth in the fall. The student turns longing eyes toward the department of agronomy with its hundreds of experimental plots, and to the Animal Husbandry Department with its many representative types and breeds, and sighs deeply for an opportunity to study his chosen profession under equally favorable circumstances.

While the horticulture option labors under these disadvantages it, nevertheless, offers, in the opinion of the writer, the field of greatest opportunity in the College to-day. As a commercial proposition horticulture stands pre-eminent among the allied branches of agriculture and it affords a field for scientific research such as no other branch offers at present. The increasing importance of the industry in Ontario must force the complete recognition of the value of the art and the establishment of the science.

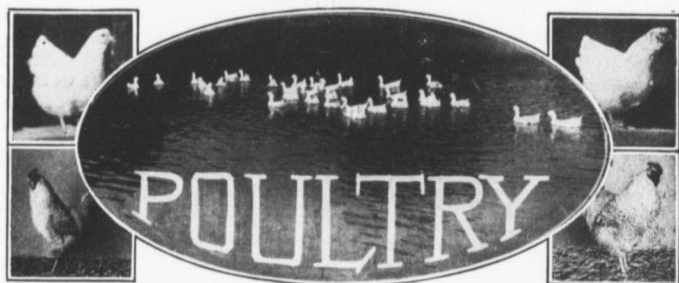
When the student of the Senior year receives an examination application form from the university, he finds there is room on the sheet for about seven or eight subjects. Into this space he has to crowd twenty or twenty-five subjects on which he is a candidate for examination. In the present undivided state of the agricultural option it is probably impossible to curtail the number of subjects treated, although every student must of necessity feel that the course is broader than it is deep. This condition happily does not exist to the same degree in the horticultural option. Because of the specialized condition of the art it is possible to arrange a course in horticulture that offers to the student a narrower range of subjects and

therefore a deeper study of those subjects than is possible in the agricultural option. This should have the distinct advantage of making it possible for the graduate in horticulture to go from the College with a training in his subject more nearly approaching that possessed by the graduate of Toronto University. Horticulture is a specialized branch,

and it should offer to the student desirous of becoming master of his art the opportunity to study *a few subjects thoroughly in his Senior year.* Such a training will be more nearly in accord with that of the University and must have its effect in deepening the minds of the students coming under its influence.



ON THE SPEED.



Egyptian and Chinese Incubation

H. A. McALEER, '11.

THE practice of artificial incubation is of very ancient origin, and if we are to believe the reports of the success of the antique hatcheries, we must conclude that artificial incubation, like the tempering of copper and Damascus steel, is a lost art. In tracing the history of incubation we find the methods employed were varied and ingenious and while the developments have not always been successful they were, at least, instructive and often amusing, De Reaumer quoting Pliny to the effect that a very patient lady by the name of Livia hatched eggs in her bosom, having kept them there for three weeks.

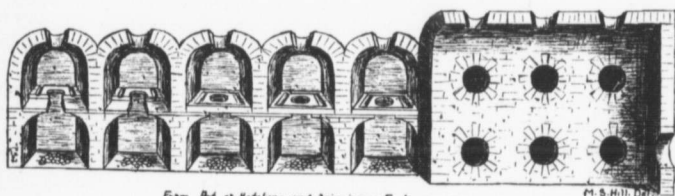
Whether the Egyptians or the Chinese were the first to practice the art is difficult to say; at any rate the earliest accounts were of the Egyptians, and we shall assume that they were first. Aristotle and Pliny mention that the Egyptians buried eggs in the ground in decayed material and that they hatched in the regular time. The natives of Egypt credit the invention of artificial incubation to the Priests of

the Temple of Isis. According to Cyphers the first definite description of Egyptian ovens was given by Sir John Maundeville in a book of travel written about 1356. To M. De Reaumer, a French scientist of the Royal Academy of Paris, we owe the best descriptions of these early hatcheries. In his book, "The Art of Hatching and Bringing up Fowls," printed in 1750, we have a very complete and interesting account of Egyptian methods. He states that these ovens, he calls them "Maamals," are scattered throughout Egypt, but the secret knowledge of their successful operation is held by the natives of a small village by name of Bermea, in the Delta, about 60 miles from Cairo. This secret is closely guarded and is handed down from father to son. When the hatching season is on, which is of four months duration, January to the end of April, the men go out to the ovens scattered throughout the country, returning to the village when the hatching season is over.

The various hatcheries, while differing in size, are similar in detail of con

struction. Each building is from 6 to 8 feet in height and 24 feet or more long, depending on the number of ovens it contains, and is built with very thick walls of clay or brick. Running lengthwise through the centre of the building

After the ovens become thoroughly heated the eggs are placed in the lower room and the fires are started again in the gutters of the room above. The aperture connecting the lower room with the corridor and the one in the



From *Art of Hatching and Bringing up Fowls.*

is a corridor 9 to 10 feet in height, having like the rest of the building a slightly arched roof. The ovens on each side of the corridor are from 4 to 5 feet long, 12 to 15 feet wide and 6 to 8 feet high, and are divided midway by a horizontal partition, in the centre of which is a circular opening 2 feet in diameter. In the centre of the arched roof of the upper division of each oven is another hole 18 inches in diameter communicating with the outer air. Each division of each oven communicates with the central hall by an opening 2 feet in diameter. Similar holes, one for each pair of ovens, are in the arched roof of the corridor. The lower division of each room is called the egg room and has a capacity of 5,000 eggs which are heaped on mats of straw placed on the floor. In the upper division called the fire room, is a gutter 6 inches wide by 2 inches deep extending around the room at a short distance from the wall. In this is built a smouldering fire the fuel being dried cow and camel dung and straw. Authorities differ as to the number of times the fires are lit per day, some claim it is done each morning and night, others four times a day.

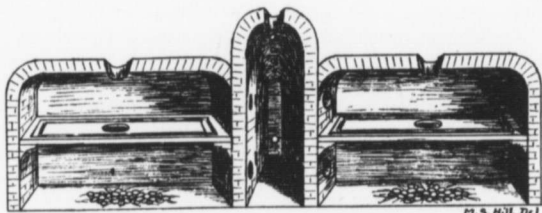
roof of the upper room are stuffed with tow. This allows the smoke to escape through the opening that connects the upper room with the hall where it passes out through the holes in the ceiling. However, considerable of the smoke must pass through the opening that connects the upper and lower rooms and thoroughly bathe the eggs below. On the tenth day the lighting of the fires cease, the walls having become sufficiently warmed to furnish the required heat during the remaining period of the hatch. The eggs are now divided, some being placed in the upper oven to give them more room. Here De Reaumer authorities disagree again, some stating that all the apertures are tightly closed while others assert that the opening in the roof of the upper oven is partially open to allow for ventilation. This difference is due no doubt to the different authors having examined different ovens.

In "The Feather," of October, 1908, there are accounts of Egyptian ovens credited to Lane in 1831, and Wilkin son in 1855. These descriptions practically agree with the foregoing. In "Standard," of October 3rd, 1908, there

is a translation of an article by M. De Bonne, from a Belgian paper, in which the hatchery depicted differs considerably from anything heretofore published. M. De Bonne calls them "Maamal Elkatakit," they differ from the hatcheries described above, in that the building is built half under ground, of a mixture of clay and straw, the walls being baked after the building is completed. The ovens are two stories in height, and have halls all around them instead of in front as in those cited above. The upper and lower rooms of the ovens do not communicate, and the openings into halls are fitted with tight doors and the ceiling of the upper room is entire. The most notable difference is in the mode of heating. About three weeks before the first batch of eggs is placed in the rooms, an attendant builds a fire of dried manure and straw in the ovens and closes the door. The fire burns and smoulders during that period. The men then remove the ashes and cover the floor of the oven with two inches of cut straw. The fire is never again

partment ovens. On the floor of lower oven number one is placed 6,000 eggs, three days following the same number is placed in oven number two, four days later number three is filled, then in three days number four is filled, number five follows in four days, and three days later number six is completed. This method of procedure is to prevent a sudden decrease in temperature at the commencement of the hatching, also a fatal increase before the eggs are ready to hatch. On the twelfth day the eggs are transferred to the upper compartment where they hatch in 21 days. During the entire period of incubation the doors of the ovens are kept tightly closed so the eggs get no ventilation, excepting when the doors are opened to examine the eggs. In this respect it differs materially from the other ovens described.

Chinese incubators have several points in common with Egyptian in that they are both built on the mammoth plan and both utilize the heat of the room during the latter stages of incubation. The Chinese hatcheries are



From "Art of Hatching and Bringing up Poultry."

built in the ovens during that hatching season, the desired temperature being maintained by burning the fuel in earthen vessels at required periods and proper intervals to meet the requirements. In the hatchery there are two tiers, each containing three two-com

very numerous, and while they vary in size and minor details they are very similar in general arrangement.

C. D. Beale, in the 17th annual report of United States Bureau of Animal Industry, gives a very complete account of a modern Chinese hatchery.

The walls are made of sun dried brick about 6 inches thick, and are plastered with mud on the inside. One side wall adjoins living rooms and is made of reeds plastered with mud an inch thick. The roof is made of native tiles, made very loosely with some mats on the underside. The floor is of beaten earth.

Completely filling one side and the other also, except for a door space and a sufficient room for a man to test eggs, are round barrel-like brick and mud walls, with earthen jars set in them. The jar has either a flange or a bulge in it which supports it on the wall. It is very deep and comes within 6 or 8 inches of the ground; the conical bottom is filled with ashes to the depth of 8 or 9 inches to keep the temperature more uniform and to avoid sudden changes of temperature when the doors are open, or when there is a strong wind. On top of the ashes is thrown a bit of old mat to keep the baskets of eggs clean and to prevent raising a dust when they are taken out. The eggs are held in a basket that leaves a space of about an inch between it and the inner wall of the jar. Round ing full they hold from 1,200 to 1,350 eggs. The outer cover is three feet high and three feet in diameter. The whole is covered with a thick mat or cover two inches thick, so concave on the underside as to leave a space about six inches between the eggs and the under surface of the cover.

The barrel-like oven has a space one foot in diameter for pulling in the fuel, the lower edge coming down to the ground.

About six feet from the floor is a platform the full size of the room, except for a space just room enough for a man between the wall and the platform. The bottom is made of reeds one-half inch in diameter, with spaces

nearly as large between them. On these is an old quilt or mat, on which the eggs are placed. Around the whole is a raised edge. One-half foot above this is a similar platform. Horizontal poles are held by ropes at the right height on which to stand to reach these platforms. The space between the platform and the walls being so narrow, the man can support himself by leaning against them, and so have both hands free to handle the eggs.

The only light in the place comes from a paper covered window one foot square. Very little comes from the door even when open, as that opens in to one of the living rooms to avoid sudden changes of temperature on windy days.

The method of handling the eggs is very laborious, as it takes one man's time all day and night to manipulate them. After the eggs are put into the baskets a slow smouldering fire, made with very fine charcoal is started. On the second day the eggs are taken out a handful at a time into another basket. After this they are changed from two to four times a day. If the temperature is about right twice is sufficient, but if they get too hot the covers are lifted and the mat covers taken out of the openings to let air in around the bottom of the jar, and they are changed to another basket and left out for a short time. If very hot they are spread on flat trays. In taking the temperature no thermometer is used, the eggs being simply touched to the eye ball, a few being taken from each basket at irregular intervals. At the end of four days the eggs are tested by being held to the light. The infertiles are sold as food. The eggs are kept in the jars until the eleventh day when they are transferred to the platforms above. Here they remain until they

hatch. The only heat they receive is from the room. When the weather is cool they are covered with another quilt like the one beneath them. These ovens, it is claimed, hatch from 60 to 70 per cent. of all eggs set and about 90 per cent. of the fertile eggs.

According to Mr. Beale, these hatcheries are very inexpensive, a complete 26,000 egg capacity house would not cost more than a hundred dollars. This figure seems ridiculous when we compare it with machines used in Christian countries, where an incubator of less than 400 egg capacity will cost \$40.00.

The great success of Chinese incubation may be said to be due to two causes, namely, the environment and the man. The temperature in the localities where the hatcheries operate is

very equable during the hatching season. In the man we have patience and perseverance bred in bone and blood for centuries, coupled with an ability and a willingness to work 20 hours a day or more when necessary to accomplish a task that makes the Chinaman an ideal operator for such a type of incubator.

In comparing the method of handling eggs in the Chinese and Egyptian methods the difference is very striking. The Egyptians practice very scant cooling of the eggs while the Chinese method is excessive. We find them constantly cooling and airing the eggs. Indeed, they go so far as to leave them exposed in the room after the eleventh day. Here is food for argument for the advocates of little and much cooling.

INSPIRATION.

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

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

Lily Alice Lefevre.

THE O. A. C. REVIEW

REVIEW STAFF.

S. H. GANDIER, - - - Editor

C. M. LEARMONTH, Agriculture.

W. DAWSON, Locals.

W. R. REEK, Experimental.

P. E. LIGHT, College Life.

S. E. TODD, Horticulture.

MISS BELTON, Macdonald.

F. M. CLEMENT, Athletics.

MISS FLAVELLE, Ass't Macdonald.

M. C. HERNER, Poultry

MISS ROSS, Locals.

H. A. DORRANCE, Alumni.

S. ROGERS, Staff Photographer.

O. C. WHITE, Business Manager.

W. W. Emerson, Assistant Business Manager.

Editorial

On Wednesday evening, May 11th, at the regular convocation of Mc Master University, Toronto, there were two honorary degrees of LL.D. conferred on

Degree Conferred

Mr. George Christie Creelman, President of Ontario Agricultural College, and on Ex-President Loudon, of Toronto University.

Mr. Creelman was presented by Professor McCrimmon of McMaster, who drew attention to the number of important positions which he had held since graduating from the Ontario Agricultural College, in 1888, with the first class in agriculture. In 1904 Mr. Creelman was appointed to the position of President of this famous institution. All the duties of this position he had fulfilled with great credit to himself and to his country.

In acknowledging the honor conferred upon him, Mr. Creelman spoke

of the real progress of agriculture during the last few years, and showed that the aim of the college was to increase the fertility of the soil, so that though other things might come and go, agriculture would go on forever. In closing, he said, "I accept, then, this degree as a token of fellowship, as another bond between the city and the country, and as a recognition of the place agriculture has made for itself in the sphere of practical science and the position which agricultural education has assumed in the realm of higher education."

There are two sad events in the College life of the average student. The first is his initiation, the second his graduation. Every thorough

ex-student loves his Alma Mater, the institution that afforded him pleasant associations, broadened his mind,

strengthened his ambition, and in many cases gave to him the means of effectively gaining a livelihood. Small wonder then that he cannot leave College without experiencing a tug at his heart strings, a pang of regret.

To those students with whom the Seniors have been associated, some for three years, other for less, the occasion is one of regret and loss. In the passing of Class '10 from the halls of our College, many of us lose, perhaps forever, friendships made strong by years of pleasant association. When we return to resume studies in September we shall surely feel, in many ways, the absence of Class '10. In literary, athletic, Y. M. C. A. and all other work connected with our College, Class '10 has been a strong factor in its successful accomplishment. Though in numbers it has not been so strong as some other classes, the individual members have very clearly demonstrated that strength of numbers is not necessary for a strong and successful class. The broad-mindedness, enthusiasm, independence and chivalry of Class '10 have earned for it the respect of the whole College, so that its departure is a matter of general regret.

Probably one of the greatest drawbacks which The Review has experienced since its earliest publication, is the fact that each year a new staff takes charge of Review matters, but since our magazine is a College organ this will remain a difficulty indefinitely. With this number the labors of the staff of 1909-'10 are ended, and with the October issue the new staff shoulders the responsibilities of office.

Since last October, the various members of the present staff have sacrificed

a good deal of time and thought to the interests of The Review, and we sincerely believe that for the most part their efforts have been rewarded with success. We have had a successful year, from both a business and a literary standpoint; not that we wish in any way to make boastful mention of Review matters, but in justice to the sub-editors and the business managers, we feel compelled to acknowledge in perfect sincerity the splendid manner in which the various departments have conducted their work. Three of the retiring staff, Messrs. White, Learmonth and Light, deserve special mention, as these men have served for two years in various capacities upon the staff of The Review. Indeed, it is fortunate for The Review that each year one or two members of the old staff are usually re-elected to the new staff, each, of course, filling a new office. This forms a nucleus as it were for the conduction of business without confusion and delay when the new staff comes into office. Upon the staff for 1910-'11, the names of M. C. Herner, F. M. Clement, and W. W. Emerson are familiar to The Review. The ability of these men could not be more concretely testified than by their reelection to the staff of The Review. The other members of the new staff have not yet had opportunity to demonstrate their ability to fill the office to which each has been appointed. They are tried and trusted men, however, in various other College organizations, and the fact that the student body has endorsed the appointment of each to the staff of The Review is sufficient guarantee that they will all "make good." Prospects are bright for as successful and harmonious a year as the one completed by the publication of this issue.

This reference to the Athletic Department of this issue is made with the express intention of bringing before the notice of foot-ball men, the article by our foot-ball manager, Mr. Fairbairn. Read this article carefully, understand his arguments and bring back in September as part of your own nature the spirit exhibited by our manager. It's the athlete with true enthusiasm for his College that brings most honor to her.

The Athletic Department

A few short months hence and the familiar halls of our old home on the hill will again resound with the hum and bustle of assembling students. From

The Coming College Year

where will they all come? From the far north to the far south, and from east to west of this great North American continent, from across the Atlantic and from across the Pacific will students wend their way to our far-famed College.

Some for the first time as a unit in the much-abused though necessary Freshman class will wander cautiously and wonderingly through the corridors and halls. Others just one year removed from the Freshman ranks will no doubt, as of old, endeavor to guide their younger brethren in the paths of righteousness and well-doing; while here and there shall we find Junior and Senior in all friendliness and dignity as now becomes his station in life.

Yet though from all parts of the earth, from all countries and climes, and actuated and controlled by motives and opinions as different as the individuals, yet with all will the one great important question sooner or later assert itself, i.e.: What shall I do in the

future? What is my own personal outlook to make the most of the opportunities now made possible by my student days at the O. A. College? If we are to be successful we must answer these questions. We must in a measure be acquainted with the data and conditions that necessarily must guide our conclusion. What are they?

In order to thoroughly appreciate the situation, let us roll back the years and take a peep at the agricultural conditions in the past. In 1830 agricultural pursuits were on the eve of passing out of the self-sufficing stage. For hundreds of years the man, his wife and family had had one incentive in working, one end in view, i. e., to provide themselves with food and clothing. The impelling forces of evolution, however, caused marked and rapid changes. Agriculture now passed into the commercial stage. The chief end and aim became the market, not the family. The epoch-making inventions in machinery made further progress possible. It transformed the whole world. Contemporary with this, rail way transportation opened up huge tracts of prairie country, and through these channels poured floods of farm produce that was to disturb the commercial equilibrium of the world. Systematic and sustained efforts were made in every direction. The whole industry began to thrill and throb with new life. The period of stagnation which for 2,000 years had held agriculture in its grasp was over. About 1886 may be said to commence a new era in the world's history. The development of machinery, ways and means of transportation, of market facilities, of drainage and irrigation schemes, intensive systems of cultivation, the expansion of the functions of the Dominion and Provincial Departments of Agricul

ture all mark the inception of a new era in the agricultural industry and place it finally and permanently on a level with the professions, requiring as great a degree of accuracy of thought, of judgment and intensity of reasoning as is required in any department of social activity.

At the same time what changes were taking place in the educational system? We all are acquainted with the High School movement in Ontario. The same is taking place in the States. We find fifty high schools in Ohio teaching agriculture, forty-eight in Nebraska, while all the other States are spending vast sums similarly. Quite recently President Butterfield, of Massachusetts Agricultural College, remarked that he could not find men to fill all the positions offered. The educational system is giving way to the new state of things. The spirit of the age is entering the schools, and is a spirit of hope and confidence in the future. We may all our lives be farmers. If so, let us see to it that we acquire a thorough knowledge of one or two departments of agriculture. Let us not be content until we have fathomed the most difficult problems and have learnt how to produce the best article for the best market. Possibly we may turn to some branch of teaching, high school work for instance. Let us then remember that we are still farmers; that we are part of a huge class of men that are important to the world. Let us endeavor to dignify our calling for nothing of itself can dignify itself. Then if we have made the most of our opportunities while at our alma mater, be we farmers or teachers, we shall be able to look forward with confidence and assurance to a bright and prosperous future, a future in an age marked by progress. Let us make

doubly sure, then, that when in the future we look back to our college days we may say, 'I am part of this throng, I had my opportunity, and I made the most of it.'

This is a new movement which appears to have made itself popular

A Brass Band

with a large number of the students. To President Ryrie, of the Philharmonic Society is due the credit of introducing the idea of organizing a College band during the coming fall term. McMaster University, however, is probably the originator of the idea, for when the McMaster students visited our College last November, they were accompanied by their own band, which gave to the entire day an air of festivity. Incidentally, McMaster won the Senior rugby match that afternoon by a large score, enthused as their players were by strains from the brazen throats of the "University Band."

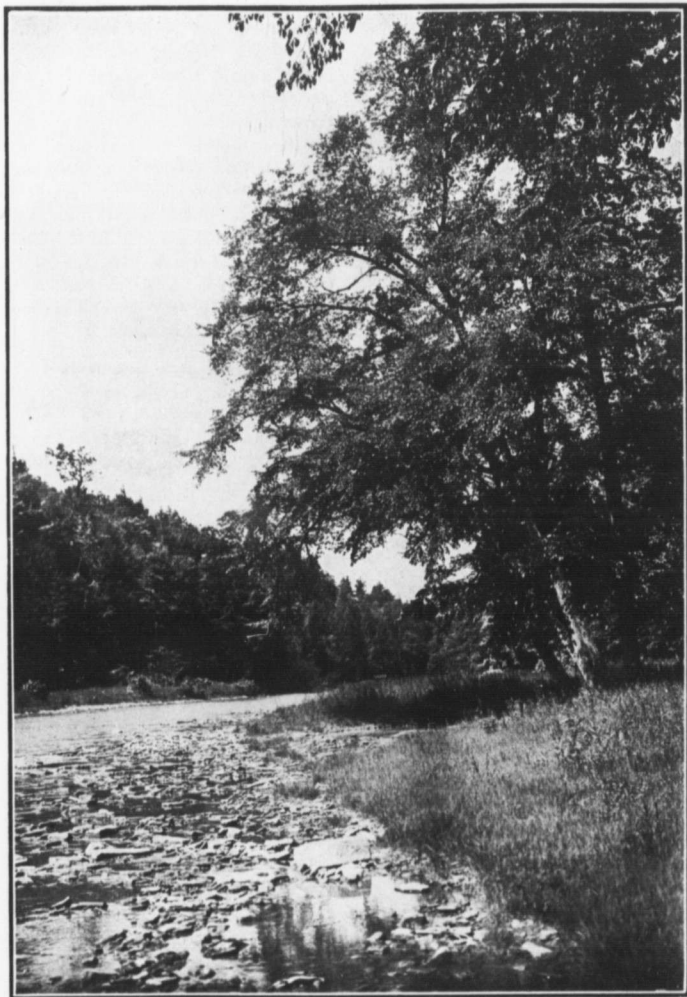
Has our College the necessary material for an organization of this kind? There are at least twenty-five or thirty men who have had some experience with various brass or reed instruments and have been members of an orchestra or brass band. With these to draw from, no great difficulty should be experienced in getting together a number sufficient for a band of ordinary size. Perhaps the greatest obstacle is the procuring of the necessary instruments. To buy a complete set of new instruments requires a considerable sum of money which at present is not forthcoming. The only plan which has as yet been advocated is that each person wishing to become a member of the band, shall provide his own instrument. Should this method be followed entirely trouble will probably be ex

perienced in fitting up a band in which all parts are evenly balanced; for example, should there be four tenor horns and one alto we could scarcely say that these parts were proportionate. To obtain proper results it will probably be necessary to provide several instruments which will not be contributed by the students themselves. Not for the purchasing of instruments only is the fund necessary, but the expense of instruction, music and various other items must be met. Instruction is extremely important. The success or failure of every band is directly due to its instructor. It should not be diffi-

cult to obtain the services of a good instructor for one or two evenings a week until the organization is well under way. Considering the matter broadly, there appears to be no reason why a "College Band" should not prove a success.

Steps towards raising a band fund have already been taken. We wish here to acknowledge the receipt of twenty-five dollars towards the band scheme from Mr. Nixon, of the "Canadian Farm," Toronto. Mr. H. S. Ryrie, O. A. College, will be pleased to acknowledge all contributions immediately upon receipt of same.





A FAVORITE RETREAT.

Organization the Farmers' Strength

A Brief Review of the Farmers' Movement in the West

G. G. WHITE, B.S.A., WINNIPEG.

THE day is past when physical force and individual prowess are the dominating factors that rule society. We are living in an age when the fate of the individual depends, not so much on his own strength, as upon the strength of the body to which he belongs. No matter how great the sum of the strengths of the individuals composing a group or body of men may be, unless they are united, organized and disciplined, they are powerless to protect their interests against the strong combinations of labor and capital that exist to day. Among no class of men do we find greater individual strength, physical, mental and moral, than among the agricultural classes, and yet no class of men has been so powerless in protecting its business or in securing legislation favorable to its interests. A secretary of a manufacturers' association of 2,500 members may make the proud boast that his organization is "able to bring millions of people to the verge of starvation or cripple the industries of Canada," but a more or less unorganized body of some 800,000 farmers is not able to secure for its members the just returns for their labor or to prevent their parliamentary representative passing legislation directly detrimental to its own interests.

While other classes of men were organizing themselves into united bodies the great agricultural class remained an aggregate of separate and isolated individuals. Whenever organ-

ization was proposed even the farmer himself said, "you can't organize farmers; they won't hold together." It is true, too, that there have been some grounds for this statement. The isolated and semi-independent state of the farmer has developed a strong spirit of individuality which has not made it easy for him to merge his interests in a common whole. While the city laborer in the complex factory system, where division of labor is carried to its limit, has been trained from childhood to co-operate with his neighbors, the farmer has stood alone doing all his own work and depending on no one. Until railroad, telephone and telegraphic communications had been developed to a certain extent, rural organization was a practical impossibility. This difficulty, however, is fast disappearing. But what has perhaps done more than any other thing to arouse the farmer to a sense of his helpless situation is the advance toward specialization. It was specialization and division of labor in the factories that to a large extent made labor unions and such organizations necessary; and so in a like manner it has been the production of one principal commodity by each man or by each district or province that has shown the farmer where, if he is to succeed, he must co-operate with his neighbors. The large production of one commodity necessitated the farmer going beyond the local market into a field of commerce and industry to which he was an absolute stranger and in which

he was ill prepared to protect his own interests. It was not long before the agriculturist saw that his individual strength was powerless and to protect his interests he must unite himself with his brother farmers. It was this need for collective bargaining that gave birth to our various rural organizations, such as the Fruit Growers', Grain Growers' and other associations.

In no country has this specialized farming become so wide spread as in our Canadian West, and perhaps no country has done more to demonstrate what the farmers can do through organization. Grain has for many years been the principal, and, in many cases, the only product of the Western farm. From the first the farmer has had to depend upon outside markets and has had to encounter many difficulties and much injustice in trying to secure a fair return for his grain. It has only been since he has united with his neighbors that he has been able to secure anything like fair treatment.

The troubles of the Western Grain Growers' date back before the building of the railway. When that road was built the company, to relieve themselves of the responsibility of providing storage facilities for grain as they did for other commodities, entered into an understanding with a few standard elevator companies, whereby, if these elevator companies would agree to provide the storage, they, the railway company, would not grant any farmer the privilege of shipping a car of grain except it went through an elevator. At that time there was little or no legislation to regulate the grain trade, and the farmer naturally chafed under the usage he received. The elevator companies through their arrangement with the railroad had a complete monopoly

of the grain trade, and were in a position to dictate their own terms. Conditions became so bad that a Royal Commission was appointed to investigate the situation. This led to the passing of the Manitoba Grain Act in 1900. This act gave the farmer some redress by allowing him the privilege of shipping his grain over the loading platform instead of putting it through the elevator, but it was so loosely worded that the railways and their elevator friends were easily able to evade the spirit of the law while adhering to its letter. While the farmer had the privilege of shipping his own grain directly, so many obstacles were placed in his way that it was practically an impossibility. There was always a car shortage. The railroad allowed the elevator companies to monopolize all the cars whether they required them or not. The farmer could not get his car placed where he wanted it or when he wanted it. He was put to every conceivable trouble in order to convince him of the "folly of his ways."

Three or four elevator companies had a complete monopoly of the business. They had the backing of the transportation companies. They owned all the storage facilities and controlled the Winnipeg Grain and Produce Exchange. Among themselves there was no competition; one wire of prices served for all the buyers at any point. After allowing for freight they always claimed a margin of 10c to 15c a bushel on all grain purchased on the street; they claimed a lack of storage for the higher grades in order to force the farmer to accept the lower; they took excessive dockage, gave poor weights and manipulated the grades within the elevator. To complete their monopoly and eliminate even the pos

sibility of competition, they pooled their receipts.

The farmers lacked organization, and here were the circumstances which brought this fact into the light. In 1903 a meeting of the farmers was called in Indian Head and the first branch of the Saskatchewan Grain Growers' Association was formed. It was only a few weeks until similar action was taken in Manitoba and the first local branch of the Manitoba Grain Growers' Association was organized at the town of Virden. The following year, 1904, a branch of the American Society of Equity was established in Alberta. A little later the Alberta Farmers' Association was organized, and, in 1909 these two bodies merged into one under the name of the United Farmers of Alberta. In 1908 representatives from the three provincial associations met and formed a federal organization known as the Interprovincial Council. This winter we are pleased to have carried the movement one step further, and have clasped hands with the Dominion Grange of the East in the formation of the National Council of Agriculture, an organization which is bound to play a mighty part in the Government and upbuilding of this Dominion. The Western organizations have grown at a marvellous rate. To-day the three provincial associations comprise over 500 local branches, and in all between 20,000 and 25,000 members. New branches are being formed every day, and the membership is growing very rapidly.

It was not long after the organization was formed before improvements took place. In 1903 delegates from Manitoba, Saskatchewan and Alberta waited on the Dominion Government and got amendments to the Grain Act,

which placed the farmer with one car of grain on practically the same footing, as regards freedom of shipping, as the elevator company with 100 cars. The farmer could then evade the elevator difficulty by shipping his grain directly over the loading platform and consigning it to his commission man in Winnipeg who sold it on the Grain Exchange. But here, again, he encountered the same old adversary, because the elevator companies controlled the exchange and made rules to suit themselves. The one great demand the associations have made is that the Government take over these elevators and operate them under an independent commission for the service of the grain grower. The elevator is a necessary part of the machinery of the grain trade, and in the hands of a monopoly or those who use it against the welfare of the trade, it forms, and all ways will form, one of the most powerful checks to fair dealing and honest, open competition. By the strength of their organization, they have carried their case before every government of the three provinces, and in the Manitoba Legislature it is at present being considered in the form of a bill.

During the conference held in Ottawa in the spring of 1908 to consider the report of the second Royal Grain Commission, the farmers were ably represented by members of their own executive. There were present at that conference the ministers of Trade and Commerce, Agriculture and of the Interior, the representatives of the Grain Growers' Association, the C. P. R., the C. N. R., G. N. R., Winnipeg Grain Exchange, Terminal Elevators, North west Grain Dealers' Association, Bankers' Association, Millers' Association and others. The discussion centered around the Grain Act. The Railways,

Bankers' Association, Elevator Companies and allied interests tried hard to have the act amended so as to be less useful to the farmers. They not only failed in their purpose, but the farmers got practically every amendment they asked for.

The crowning achievement of the Association has been the formation of their own company. They saw that if they were to know the grain trade and be in a position to suggest improvement they must engage actively in the business. In 1906 they formed a joint stock company known as the Grain Growers' Grain Company from capital subscribed by members of the associations. The company was composed entirely of farmers and so organized as to be directly under their control and management. The company met with powerful opposition at first, but the farmers were loyal and stayed with it. The result has been that they have practically doubled their business every succeeding year since they started, and their trade is still increasing. They are today, although in competition with some 30 other firms, handling about one-quarter of the grain passing through Winnipeg. They have made the business pay well every year since they started. They have enabled the association to carry out many undertakings, which, through lack of funds, they could otherwise never have accomplished. They have been able to establish their own press and publish their own journal, "The Grain Growers' Guide." By this organ the facts can be got before the farmers in the true light. Today the company has about 8,000 farmer shareholders, and their number is steadily increasing.

The Western farmers are today an object lesson to the world on the

power of organization and co-operation. The Grain Growers' Association, by improving market conditions and by establishing the Grain Growers' Grain Company, has saved millions of dollars during the past five years. One of the secrets of the success of this association is that it has been an independent organization, free from all Government support, and consequent control. Independent and self supporting, it has been free to attack any government or party and demand its right. While agricultural societies and other such institutions have their place and have done much good, the farmers to day must have their organization apart from all these societies, apart from all governments and parties, and free to attack openly and strongly every act of legislation, every movement, whether of individual, corporation or government, that is not in their interests. The Grain Growers' of the West have still some mighty problems before them. They must have a sample market for their grain, they must have a change in the system of terminal storage. They must have free competition and not monopoly. While much has been accomplished, much still remains. But in the few years they have been organized, they have demonstrated what can be done. They have gathered together those isolated individuals on the lonely prairies and united them into one great organization, which has brought powerful corporations to terms and made governments tremble. This is only a prophesy of what can be done. When every farmer in our Dominion shall be linked together in one great organization, then will the fear of trusts and combines be over, tariff walls will crumble and our laws will be for the people, not for the privileged few.

NOT UNDERSTOOD

Not understood. We move along asunder,
 Our paths grow wider as the seasons creep
 Along the years; we marvel and we wonder
 Why life is life and then we fall asleep,
 Not understood.

Not understood. We gather false impressions,
 And hug them closer as the years go by,
 Till virtues often seem to us transgressions;
 And thus men rise and fall, and live and die,
 Not understood.

Not understood. Poor souls with stunted vision,
 Oft measure giants by their narrow gauge;
 The poisoned shafts of falsehood and derision
 Are oft impelled 'gainst those who mould the a
 Not understood.

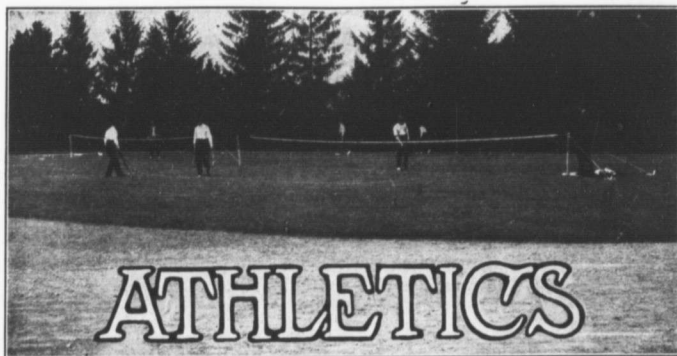
Not understood. The secret springs of action,
 Which lie beneath the surface and the show,
 Are disregarded; with self satisfaction
 We judge our neighbors, and they often go,
 Not understood.

Not understood. How trifles often change us!
 The thoughtless sentence or the fancied slight
 Destroy long years of friendship and estrange us,
 And on our souls there falls a freezing blight;
 Not understood.

Not understood. How many breasts are aching
 For lack of sympathy! Ah! day by day,
 How many cheerless, lonely hearts are breaking;
 How many noble spirits pass away
 Not understood.

Oh, God! that men would see a little clearer;
 Or judge less harshly where they cannot see;
 Oh, God! that men would draw a little nearer
 To one another, they'd be nearer thee,
 And understood.

—Thomas Bracken, Dunedin, N.



Rugby Football

J. B. FAIRBAIRN.

RUGBY football was played at the College in the early eighties. The game from time to time has been severely criticized and denounced by some people, but with singular insistence it continues to assert its vitality, and it never was more popular than at the present time. Whatever objections there may be to it, or rather, to the abuse of it, the history of the sport would indicate that it is here to stay.

Not only does the rigid training establish self-control in those who play, but the game holds up a standard of discipline to those who observe it. This is a strong factor in its popularity, and the fact that it offers almost the ideal measure of effort followed by immediate relaxation renders it far less a tax on the vital organs, than the majority of our contests. Again, because it involves personal physical contact, it always will be a strenuous sport, appealing to the vigorous, healthy, man. Some of the highest scholarship men in all

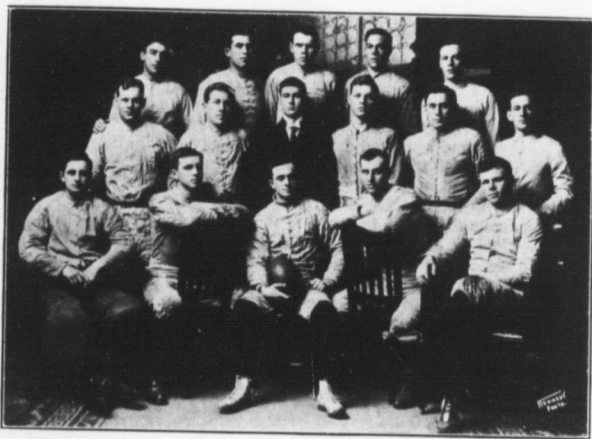
colleges, to which the O. A. College is no exception, have been attracted to the football field, mainly on account of the brains necessary in bringing out the scientific possibilities of the game. While in intercollegiate football the development of players is of great interest, still more appealing to those who enjoy the sport for its strategical possibilities is the study and development of plays.

In the past it would seem as if we at the college had laid too much stress upon three of the fundamental principles of the game, viz., block your man—break through—and tackle low. True enough these are essentials which must be mastered by every winning team, but for us during the coming fall our pass word shall be "more open play." The on-side kick, as it was used by the University of Toronto team last year, contained the elements of the greatest ground-gaining possibilities. This new play was a revelation to us because our instructors from



O. A. COLLEGE SENIOR RUGBY TEAM, 1909.

Back row.—B. J. Bourke (l. half), L. D. Jackson (l. outside), R. Moorehouse (c. half), C. L. S. Palmer (l. middle), D. E. MacRae (scrimmage).
 Middle row.—C. A. Webster (r. outside), G. O. Madden (full), F. Carpenter (spare), W. Emerson (scrimmage), S. Clark (l. outside), V. King (spare), W. Dawson (scrimmage).
 Lower row.—W. Toole (scrimmage), S. Kennedy (r. middle), J. B. Fairbairn (manager), H. L. Knauss, captain (quarter), H. A. McAleer (l. inside).



O. A. COLLEGE SECOND RUGBY TEAM, 1909.

Back row.—W. H. Porter (spare), R. S. Graybiel (r. inside), W. H. Moore (c. half), J. Present (scrimmage), H. L. Barrett (l. half).
 Second row.—S. Rodgers (full), I. B. Henderson (l. inside), A. Hutchinson (manager), R. H. Murray (l. middle), G. C. Millar (r. inside), A. M. Campbell (r. half).
 Lower row.—P. E. Light (l. outside), F. E. Ellis (scrimmage), S. H. Gandier, captain (quarter), R. G. Thomson (r. outside), A. McMillan (scrimmage).

time to time had discouraged any at tempt to kick or pass the ball to the open field. In our games at home and away from home we were considerably stronger on the line than were our opponents, and in spite of our power and force at plunging formations we were beaten by fast open play. Now-a-days mass plays are at a discount and fast open work is the best policy. Speed must no longer be sacrificed in favor of weight, except in the case of scrimmage men or guards, and any man who possesses ability to drop-kick accurately or punt long distances should receive special coaching.

The outlook for football during the coming season is very bright, but we must not lose sight of the value of a thorough training in the fine points of the game, together with incessant prac

tice. Many players were in uniform last season, but we anticipate that the number will be doubled in 1910. Football possesses many inviting and enticing qualities, which are not found in any other line of sport. It embodies valuable physical upbuilding and offers many opportunities for individual distinction. It also supplies an opportunity for an unlimited number of students to participate in the recreation and pleasure which the game affords.

If you have not been an active football man in the past you cannot afford to miss the opportunity which will be yours this fall. If because of some misfortune you are physically unfit, then lend your support on the side line, and by your presence help to enthuse and inspire those who are endeavoring to win distinction for our college.

EVENING.

From upland slopes I see the cows file by,
 Lowing, great chested, down the homeward trail,
 By dusking fields and meadows shining pale,
 With moon-tipped dandelions. Flickering high,
 A peevish night hawk in the western sky
 Beats up into the lucent solitudes,
 Or drops with griding wing. The stilly woods
 Grow dark and deep and gloom mysteriously,
 Cool night wings creep, and whisper in mine ear,
 The homely cricket gossips at my feet;
 From far-off pools and wastes of reeds I hear,
 Clear and soft-piped, the chanting frogs break sweet
 In full Pandean chorus. One by one
 Shine out the stars, and the great night comes on.

—Archibald Lampman.

Schools' and Teachers' Department

Devoted to those interests of the Ontario Agricultural College which pertain particularly to the training of teachers for giving instruction in the schools of the Province along vocational lines—in Home Economics, Industrial Arts, Elementary Agriculture and Horticulture.

THE ONTARIO AGRICULTURAL COLLEGE AND ITS RELATION TO THE SCHOOLS OF ONTARIO.

The Ontario Agricultural College seeks to co-operate with the Public, Separate and High Schools of the Province, as far as possible, in educating our youth. Of necessity, its particular interests lie in the vocational phase of their education, and largely through the training of teachers does the College hope to make these interests effective.

Besides preparing specially trained Agricultural Representatives to take charge of the Agricultural Departments of High Schools in different counties, it trains teachers for giving instruction in Elementary Industrial Arts, Domestic Science and Elementary Agriculture.

Trustee Boards seeking to have any of these newer lines of instruction introduced into their schools are asked to join forces with the College and to encourage and assist their teachers to equip themselves for the work.

Besides training teachers, the College, through the Schools' Division of the Experimental Union, furnishes schools with seeds, forest tree seedlings, climbing vines, etc., for their school garden work. Some of the supplies are free; others are furnished at cost price. For the present season more than two hundred Ontario schools are co-operating in the work, and seeds have been supplied to more than eight thousand school children. This is an extension work of the Nature Study Department, and enquiries for further information may be addressed to it.

Summer School for Teachers, 1910

The seventh session of the **Summer School for Teachers** will be held at the College in July—opening on Monday, July 4th, and closing on Friday, July 29th.

COURSES OF STUDY

Instruction will be given in five courses, and students may select any one of these; no student will be permitted to take more than one course:

1. **Nature Study**; 2. **Elementary Agriculture and Horticulture**; 3. **Art and Constructive Work**; 4. **Woodworking and Mechanical Drawing**; 5. **Household Science**. There is no tuition fee for Ontario teachers.

A circular outlining the syllabus of work and furnishing information about cost of board, applications, railway arrangements, etc., has been issued by the Department of Education, Toronto. This may be secured by application there or by addressing the Agricultural College, Guelph.

I.—ELEMENTARY AGRICULTURE AND HORTICULTURE.

Normal Teachers' College Class Spring Term, 1910.—The class of 1910 is comprised of forty-one teachers, graduated from the Normal Schools at Easter, and one special student. Ten entered from the London Normal, seven

from Hamilton, four from Stratford, five from Toronto, six from Peterborough and nine from Ottawa.

The instruction given them at the College aims to specially prepare them for teaching in rural schools. Besides the training in school gardening and its closely-allied subjects, they are taught those elements of Physics, Chemistry, Bacteriology, etc., that have a particular bearing on the practice of farming. While their course is brief and of an elementary character, it is believed that the insight which they gain of things agricultural during their



NORMAL TEACHERS PREPARING THEIR GARDENS, APRIL 28th, 1910.

ten weeks' course will enhance their teaching power and value in our country schools. And not only are they better equipped as instructors of youth; their presence in a farming community will stand for progress and enlightenment; they will, in a measure, stand as representatives of the Agricultural College and the better education of farmers, farmers' wives and farmers' children. Inspectors or trustees desiring to secure their services as special instructors in school gardening, etc., may address them at the College, up to the end of June. School boards employing these teachers and carrying on a satisfactory course of instruction through the school garden are given a special grant of \$30.00 a year, besides an initial grant of \$50.00, to meet the expenses of buying more land, fencing, draining, etc.

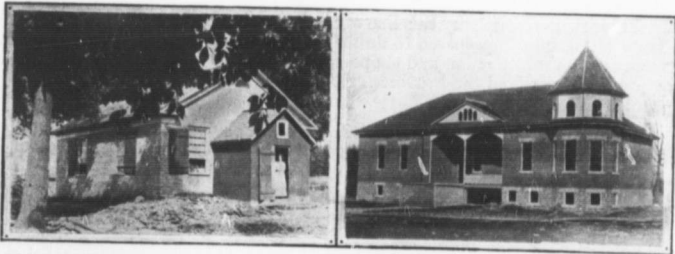
All these teachers have had experience in teaching already in country schools. Before attending the Normal Schools, they were trained in County Model Schools. The class of 1911 will likely be the last of these experienced teachers available for this training.

The work is a rather unique experiment in teacher-training. The Ontario Agricultural College has for this opportunity to adapt its work to the needs of the children in the country schools, turned itself for the time being into a Teachers' Training College. To some extent it remains to be seen whether rural trustee boards throughout the Province are ready to make use of these specially prepared teachers. So far as can be learned from the teachers who were sent out last year, signs are not lacking that in many parts of Ontario, the people are awakening to the possibilities of improving the education of the pupils in our rural schools.

Progress of School Gardening in Lincoln County.—Inspector Ireland has the following to say of the work in his inspectorate: "In 1909 the work was carried on very successfully in St. David's and at the Vineland and Rittenhouse schools. More gardens will be in operation this year: (1) The Trustees of S. S. No. 3, Louth Township, have recently

bought a splendid half acre at a cost of \$200.00. Miss Eberhardt is preparing to manage the work by taking a course at your College. I believe she will succeed. (2) The Trustees of No. 1, Clinton Township, are buying a new school site, containing two acres, at a cost of about \$725.00. One-half acre is for a garden. Miss Nettie Stewart (class of '09) is the teacher, and a strong believer in the garden. The ratepayers are very much in favor of it. (3) In S. S. No. 5, Clinton Township, one-half acre of land is being prepared for a garden. Miss Lounsbury will take advantage of the Summer School at Guelph to qualify her to carry on the work successfully. (4) The fine new school house being built in No. 3, Niagara Township, will have a garden attached. The site contains two acres. (5) A new \$5,000.00 school is being built in U. S. S. No. 2, Grantham, and No. 8, Louth. Land has been bought for garden purposes. (6) In S. S. No. 1, North Grimsby, a new school site has been bought at a cost of nearly \$4,000.00. Part of this is intended for a garden.

What is needed here is the trained and enthusiastic teacher. The people will provide the land. I believe that I may say that the garden will soon be looked upon as a vital part of our educational machinery. It seems so here."



OLD AND NEW SCHOOLS—S. S. NO. 6, THURLOW TP., HASTINGS CO., CANNIFTON POST OFFICE

A New School in Hastings County:—The picture above shows the old and new schools in S. S. No. 6, Thurlow Township, Hastings Co. The old school was erected in 1852 and the new one in 1909. Two school sections are accommodated in the new building, the adjoining section having united with No. 6.

The modern school has been built after plan 24, described in the Department of Education's **Plans for Rural School Buildings**. It has two class rooms, cloak rooms, a teacher's room, basement and furnace. Its dimensions are 45x85, and in every way it is commodious and up-to-date; the large basement provides an excellent playroom. The building cost \$6,000.00. The contractors were the Geo. Walton Co., Belleville. The school is one of the best in Eastern Ontario, and the community is deservedly proud of it.

There are two and a half acres in the grounds and \$600.00 has been spent in putting them into shape. The land was drained and levelled, stones were removed, a neat wire fence was built, grass was sown and vines planted. Gardening is being undertaken by the children.

The staff consists of Miss E. L. Rush and Miss H. Lawson. It is in the inspectorate of Mr. H. J. Clarke, Belleville.

II—ELEMENTARY INDUSTRIAL ARTS.

Like the class in Elementary Agriculture, the teachers taking the course in Elementary Industrial Arts were graduated from the Normal Schools at Easter. There are thirty-five in the class, seven being from London, thirteen from Stratford, one from Hamilton, one from Toronto, five from Peterborough, two from Ottawa and six from North Bay. The work of instruction of this class is undertaken by the Manual Training Department. It aims to prepare the teachers to undertake special services in introducing Elementary Manual Training into the schools of the smaller towns and the villages of Ontario, to give to the children who may go from our public schools into industrial life, some training in drawing and manual interests that will better fit them "to earn a living and to live a life." Teachers taking this course will be prepared to direct the work throughout all the grades of a school.

School Boards desiring to secure the services of one of these teachers may address them at the College up to the end of June. The same financial encouragement is given for their employment as is given rural schools to encourage the introduction of the teaching of agriculture, viz.: an annual grant of \$30.00 for the up-keep of the work and an initial grant of \$50.00 to purchase the first equipment.

There is no reason why this line of work should not make rapid progress; a body of teachers is prepared to do the work, the Department of Education encourages its introduction and supports it financially. Moreover, the growing industrial needs of the Province calls for some attention from schools and school boards.

News Notes.—Mr. T. G. Later, '10, has been appointed to the position of Manual Training Instructor in the Sault Ste. Marie Technical High School, duties to commence in September. The initial salary is \$1,000.00.



LESSON IN SKETCHING ON COLLEGE CAMPUS.

Toole—I tell you what's wrong, I have too much blood. If the doctor had stuck a knife in me and let some out I should be alright.

Whale—Well, here's a cork screw.



Yesterday.

Where the trembling willows are bending low,
And the shadowy current is gliding slow,
I silently slip with my paddle a-drip,
And dream of our drifting so long ago.
Then, when the moon on your hair was shining
Its silver bars with gold combining,
The light of your eyes and the stars in the skies
Made a happiness all my own.
Now your eyes can never behold me.
Now your arms can never enfold me.

Dead is the hope of all rapture and bliss;

Silent the lips that I never shall kiss.

—A. C. Baker.

N. B.—The above is not a joke. It is supposed to be sad. I was asked to write it as a healing balm for the big, broken, bleeding heart of John Thunder Present. Kindly read it with the index finger pointing upward.—A. B.



A. B. Shaw (studying obstetrics)—
Say Knapp, what are the symptoms of intemperance?



Baldwin—Isn't it nice to have a violin and a bow?

Mac girl—Yes, indeed, but oh! the latter.



CANADIAN PACIFIC RAILWAY

GREAT LAKES SERVICE

FIVE CLYDE-BUILT STEAMSHIPS

Canadian Pacific Standard

Sailings—

| | | |
|-----------|-------|-----------------|
| MONDAY | - - - | S.S. ATHABASKA |
| TUESDAY | - - - | S.S. KEEWATIN |
| WEDNESDAY | - - - | S.S. ALBERTA |
| THURSDAY | - - - | S.S. MANITOBA |
| SATURDAY | - - - | S.S. ASSINIBOIA |

Connection at Fort William for Canadian West, Pacific Coast, Japan, China and Australia.

First class tickets include meals and berth on steamships.

For full information, berth reservations, etc., make application to nearest agent, or to

R. L. THOMPSON,
District Passenger Agent, Toronto, Ont.

Postulates and Propositions.

1. A pie may be produced any number of times.
2. A landlady may be reduced to her lowest terms by a series of propositions.
3. A bee-line may be made from one boarding house to another.
4. The clothing of a boarding house bed, although extended indefinitely in both directions, will never meet.
5. Any two meals at a boarding house are less than one square meal.

Thomson—Say, Frank, what is a sting psychrometer for?

Marcellus—To take wet temperatures on short notice.

Whale (to fair one)—Do you live in Ontario?

Fair One—Oh, no; my home is in Heaven. I am only stopping here.

O Jupiter! How weary are my spirits.
—Underhill.

Horse Owners! Use

GOMBAULT'S



Caustic Balsam

A Safe Speedy and Painless Cure

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

**THIS IS
THE SHEET METAL AGE.**

Lightning, wind, rain or snow have no effect on a "Galt" Steel Shingled Roof.

Lightning just glides off our steel roof, follows down the conductors and disappears into the ground.

The continuous, overlapping, interlocking top joint and the Gale-proof, closed-end, side-lock afford no opening for the wind—and entirely prevent water or snow from being blown through the joints—one of the weaknesses of other shingles.

THE GALT ART METAL CO., LIMITED, GALT, ONT.
Sales and Distributing Agents: Dunn Bros., Winnipeg and Regina.

"Galt" Shingles make twice as secure a roof, because they are the only locked shingle nailed on two sides.

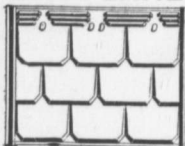
Handsome and easiest and quickest laid shingle on the market.

Catalog "B-3" tells about them.

"Galt" Shingles

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

EASTLAKE



Steel Shingles

Another Score For "Eastlake" Shingles

The superiority of "Eastlake" Steel Shingles is emphasized again and again. It is easy to make claims in advertising, but it's not so easy to manufacture a product that proves them true. **Actual wearing tests prove "Eastlake" quality.** Read the following letter—the best evidence of real roofing satisfaction.

Rosebank Farm,
Manilla, Ont., Dec. 25th, 1909.

R. Taylor, Esq., Seabright, Ont.

Dear Sir,—In reply to your enquiry of the 21st inst., I beg to state that I roofed my dwelling house **twenty-two years ago** last fall with "**Eastlake**" Shingles made by the **Metallic Roofing Co.**, of Toronto. They have given excellent satisfaction. They have never leaked, nor have the cleats turned down.

Three years ago the Township of Brock built a new town hall and the council appointed a committee of some of the largest ratepayers and the men of most experience to investigate the claims of the different makers of metal shingles. After giving it very full and careful consideration, they unanimously recommended the "Eastlake" Shingle, which was used with very satisfactory results.

Yours truly,
(Signed) Hy. Glendinning.

Mr. Glendinning is President of the Eastern Ontario Dairymen's Association, and is well known throughout Ontario as a lecturer to Farmers' Institutes under the auspices of the Ontario Government.

Mr. Taylor, of Seabright, has since ordered "Eastlake" Shingles.

Write for our interesting booklet, "Eastlake Metallic Shingles." It contains roofing facts you should know.

Manufacturers of Metallic Building Materials.



2168

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

INTERNATIONAL STOCK FOOD

THREE FEEDS FOR ONE CENT

Will save you money over the ordinary way of feeding.
Will keep your stock in better condition.
Is equally good for horses, colts, cows, calves, hogs, pigs, sheep, lambs, etc.
Is absolutely harmless even if taken into the human system.
Is sold on a cash guarantee by over 125,000 dealers.

COLORED SPEED PICTURE OF
DAN PATCH, 1:55. CRESCUS, 2:02¼.

MAILED ABSOLUTELY FREE.

We have just published a large colored lithograph showing Dan Patch and Cresceus in a fast finish down the stretch. It was made from life, and shows both of these magnificent animals in their natural colors. If gotten out in a small edition it would sell for \$2.00. We will be glad to mail it to you free, postage prepaid by us, if you will write us at once, answering the following question:

1st—Name this paper. 2nd—How many head of live stock do you own?

Picture will not be mailed unless you answer these questions.

International Stock Food Co., Toronto, Canada

Art Materials

Our large and complete stock of Art Supplies are selected specially for school and college use. The quality is the best, and the prices are within the reach of every class of student.

Color Boxes, A1 - 25c. each
Crayons—Crayograph, 10c. pkg.

Complete Catalogue mailed
on request

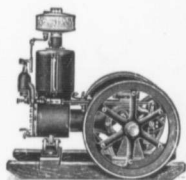


The Geo. M. Hendry Co.

LIMITED

215-219 Victoria St.,

Toronto, Ont.



WHY IS IT
THAT OUR
Sticney
Gasoline
Engine

IS SO POPULAR?

- 1st. It is so extremely simple. Know all about it in a few minutes.
- 2nd. Easy to start and operate. A boy can handle it.
- 3rd. No pipes always in the way. So compact and strong.

Other reasons, but enough said.
**POWER IS GUARANTEED
ALL ENGINES.**

Last of all, our prices meet any competition with other reliable manufacturers.

**ONT. WIND ENGINE & PUMP CO.
Limited,**
Winnipeg, Toronto, Calgary

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

Mutual Life of Canada

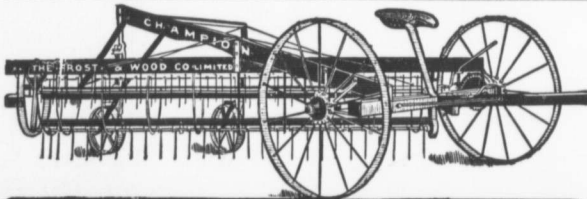
HEAD OFFICE, WATERLOO, ONT.

Is a thoroughly SOUND AND PROGRESSIVE COMPANY, confining its business to the Dominion of Canada and Newfoundland, noted for the most healthy Climates IN THE WORLD.

ITS EXPENSE RATE TO INCOME IS THE **Lowest of all Canadian Companies**

Every Dollar accumulated by this Company, from whatever source, is the sole property of its policy-holders, and is under the direct control of the Board elected by the policy-holders to manage the Company and direct the affairs in the sole interests and for the sole benefit of policy-holders, who alone

OWN Everything CONTROL Everything GET Everything
GEO. CHAPMAN, General Agent, GUELPH.



BETTER HAY PRICES

"Well-cured, half-sold," is a true hay-proverb. Sweet, clean, well-dried, even-colored hay brings a high price in every market. You can shake newly cut hay and rake it all in one operation, and save the price of a sulky-rake and a tedder—if you own a

Champion Side Delivery Rake Used in connection with the Champion Hay Loader

below illustrated, you have a combination that will do your haying up "to the King's taste." We can't go into detail here about these high-grade haying machines, but we have done so in our free catalog. In it you'll find answered the question you're most liable to ask. Capacity of Loader is easily 2 tons in ten minutes; no break-downs, either; no getting off wagon to detach loader. With the Side Delivery Rake you can shake and rake a 20-acre field easily in four hours and leave it in good shape for the loader. It works so smoothly—no threshing or hard-hitting—that it will rake clean a bean-field and not waste any. Better send for that catalog * and our "Farmer's Ready Reckoner." **BOTH FREE.** We have an agent in your vicinity who will gladly answer your questions. Call on him and ask about these two machines.

**Frost &
Wood
Co., Ltd.**

Smith's Falls, Can.



The Armstrong Line

Bike Buggies

Road Wagons

Top Buggies

Stanhopes

Surreys

Mikados

Democrats

Carts

Catalogue with full description of all styles with illustrations will be mailed on application.

J. B. ARMSTRONG MFG. CO.

MANUFACTURERS

Limited

GUELPH, - - CANADA

The Manufacturers Life

has some extremely advantageous plans of insurance to offer young men—plans which, by the way, are not offered by any other Company in Canada. They are worth looking into.

Apply to W. E. BROLEY, Elora

HEAD OFFICE: TORONTO, CANADA

THRESHERMEN'S
FARMERS' AND
DAIRYMEN'S

Rubber Goods

Thresher Belts, Steam Packing, Hose,
Rubber Tubing and Molded Rubber Goods
of every description for agricultural and
dairy machinery.



The Dunlop Trade Mark,
the two hands is the seal
of quality in rubber.

DUNLOP Tire and Rubber
Goods Co. Limited

Agents and Dealers throughout Canada.



The Advertiser Job
London, Ont.

Where the O. A. C. Review is printed.

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

96

Seldom See

a big knee like this, but your horse
may have a bunch or bruise on his
Ankle, Hock, Side, Knee or Throat.



ABSORBINE

will clean them off without laying the
horse up. No blister, no hair gone.
\$2.00 per bottle, deliv'd. Book \$ D free.
ABSORBINE, J.M., for mankind, \$1.
Removes Painful Swellings, Enlarged Glands,
Gout, Wens, Bruises, Varicose Veins, Varicos-
ities, Old Sores. - Allays Pain. Book free.
W. F. YOUNG, P.O.F., 177 Temple St., Springfield, Mass.
LYMANS Ltd., Montreal, Canadian Agents.

Melfort, Sask., Jan. 30th, 1908.

Dear Sir,—I have used your AB-
SORBINE for quite a while, and must
say it is a splendid remedy for what it
says on the bottle.

Yours truly,

M. BURROUGHS.

A HIGH GRADE
ESTABLISHMENT FOR THE

PRINTING

Of CATALOGS, BOOKS and
COMMERCIAL JOB WORK



Society and College

Work a Specialty

R. G. McLEAN

26-34 LOMBARD STREET,

TORONTO, - - - ONT.

Telephone, Main 637-638.

Springhill Ayrshires

Are strengthened annually by importations direct from Scotland of the very best milking strains. Calves and animals, all ages, and both sexes always for sale.

ROBT. HUNTER & SONS

SPRING BROOK STOCK FARM.

High Class Holsteins of Exceptional Breeding and Quality. Tamworth Swine of best Imp. British blood, Barred Plymouth Rock Cockerels from extra laying strain. Quality and production stands foremost at Spring Brook. A call solicited. Farm ten miles west of O. A. C. Main line G. T. R. Telephone connection
A. C. HALLMAN,
Breslau, Ont.

Evolution of a College Girl.

Mary, at school.
May, at high school.
Mayme, at collegiate.
Mae, at College.
Ma, at home.

ONTARIO VETERINARY COLLEGE



Temperance Street - Toronto, Canada

ESTABLISHED 1862

Controlled by the Provincial Government of Ontario. Affiliated with the University of Toronto. The course of study extends through three college years. Calendar with information will be mailed free on application. ∴

E. A. A. GRANGE, V. S., M. S.
PRINCIPAL

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

CASH PRIZES FOR O. A. C. Students

| | |
|-------------|----------------------------|
| 1st—\$10.00 | For the Students who get |
| 2nd— 7.00 | the most subscriptions for |
| 3rd— 5.00 | Canadian Farm |
| 4th— 3.00 | during vacation—April 15 |
| | to September 15. |

The only condition being that each student trying for these prizes must be a subscriber at student rates.

These prizes are exclusive of regular commissions.

For further particulars address,

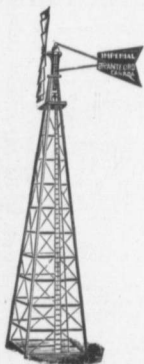
D. C. NIXEN,
Circulation Manager.

CANADIAN FARM

TORONTO, ONT.



Windmills!



Towers girded every five feet apart and double braced.

- Grain Grinders.
- Pumps.
- Tanks.
- Gas and Gasoline Engines.
- Concrete Mixers.

Write for Catalogues.

Goold, Shapley & Muir Co.
LIMITED
BRANTFORD, CANADA

FARM LOANS

MONEY to LOAN on first-class Farm
Properties in large or small amounts.

GREGORY & GOODERHAM
CANADA LIFE BUILDING, TORONTO



THE UNDERWOOD typewriter is more extensively used in Canada than all other makes of typewriters combined.

IT is the typewriter you will eventually use.

UNITED TYPEWRITER CO. LTD.
TORONTO
and all other Canadian cities.

Oshawa Metal Ceilings Fit for the finest building. Cost little enough. Reduce fire-risks. Two thousand designs for stores, halls, warerooms, churches, residences, etc. Write for handsomely illustrated book showing exclusive Pedlar designs.
PEDLAR People of Oshawa
Montreal, Toronto, Halifax, St. John, Winnipeg, Vancouver

CLEANER MILK—BIGGER PROFITS

Every dairyman—every farmer—anybody who owns one milch cow or more should use the **STERILAC SANITARY MILK PAIL**. It prevents contagion and disease, makes clean milk an absolute certainty, it saves time, and puts an extra profit on your milk supply. The Sterilac Pail has a capacity of 14 quarts, stands nearly 14 inches high, and has no joints or seams on the inside, thus making it germ-proof and easy to clean. It has extra wide detachable funnel, equipped on the inside with a deep metal dirt shelf. Place a piece of ordinary cheese cloth over the bottom of the funnel as a strainer. All dirt falling into the funnel opening is caught on the shelf or screen—not on the milk strainer, which is protected from falling dirt by the top part of the pail. As the milk falls on the slant, it passes over the shelf direct to the strainer into the pail. Milk and dirt do not come in contact—no chance of anything falling on the strainer but milk. This is the only effective and economical sanitary pail on the market. Highly endorsed by medical authorities. Price, \$2.50; in lots of six or more, \$2.25—money back if not as represented. Write for big Catalogue of dairy supplies—free.



W. A. DRUMMOND & CO., 179 KING STREET E., TORONTO

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

If you want a pen point that flows freely, and lasts two to four times longer than any other. Try

RIVER SERIES

Practically non-corrosive—Ask your Stationer, or write to

The **BENSON-JOHNSTON CO., Ltd**
CANADIAN AGENTS,
HAMILTON, - - - - ONTARIO

BRAMPTON JERSEYS

CANADA'S LARGEST
JERSEY HERD.

B. H. BULL & SON, Importers and Breeders of
Proprietors. Choice Strains of
JERSEY CATTLE

Don Herd of Jerseys

Headed by Fountains Boyle 332 C. J., C. C.,
Son of Golden Ferns Lad 65,300 A. J., C. C.

Choice stock for sale; best breeding correct dairy type and prize winners at reasonable prices

DAVID DUNCAN,
DON, ONTARIO

Duncan Station,
C. N. O. R.

Ayrshires and Yorkshires

We have two choice August and September, 1908 bulls on hand, also some just dropped. Females any desired age. Young pigs of of both sexes; good ones ready to ship. We will be pleased to correspond or meet with intending purchasers and others, and let them examine our herd.

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

IMPORTED Clydesdale Stallions

and Fillies, Hackneys, Shetland Ponies

Your choice at moderate prices.

For particulars apply to

G. A. BRODIE, Bethesda, Ont.

Stations: Stouffville, G. T. R.
Claremont, C. P. R.
Gormley, C. N. R.

Independent Telephone Service.

SMITH & RICHARDSON,
COLUMBUS, ONT.

Importers of

CLYDESDALE HORSES

This year's importation is by far the best bunch we've ever landed, among them the Toronto and Ottawa winners.

R. R. Stations—G. T. R., Oshawa and
Brooklin. C. P. R., Myrtle.

Long Distance Phone at Residence.

Pine Grove Stock Farm

ROCKLAND, ONTARIO, CANADA

BREEDERS OF

**SCOTCH SHORTHORNS
and SHROPSHIRE**

W. C. EDWARDS & CO.
LIMITED, Proprietors

JAMES SMITH, Superintendent

**ALEX. HUME
& CO.**

MENIE, ONTARIO

Phone in Residence

KRESO

An Ideal Disinfectant, Germicide, Deodorant, Antiseptic and Parasiticide

For Hospitals, Veterinary and Domestic Use

Write for Descriptive Booklet

Parke, Davis & Co.

Manufacturing Chemists and Biologists,

WALKERVILLE, ONTARIO

Eastern Depot, 378 St. Paul Street, MONTREAL, QUE.

The Gasoline Spramotor

Exhibited at the Ontario Agricultural College during the week of February 3-5, is the latest arrival in the Spramotor Family. It embodies all the knowledge we have in this business, now fifteen years in building. The automatic features of this machine were first developed in our Horse-Power Spramotor. The Motor was developed from ten years' use, and when this combination was put in use it worked like a charm. Experts agree in pronouncing it perfect.

Those contemplating power machines should investigate this latest development.

200 lbs. pressure can be easily developed. 50 lbs. air pressure can be easily developed.

A tachable to any gasoline engine of 2 horse-power.

Absolutely guaranteed. Automatic in operation. Easy to operate. Simple. All parts accessible. The finest material, workmanship, and highest possible grade throughout.

Write now and find out; it's free.

Gold Medal Pan-American - - - } "There's a Reason"
Gold Medal National Horticultural Congress }

AGENTS WANTED

SPRAMOTOR WORKS, 1272 King St., London, Ont.

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

This Holstein has recently completed the highest record yet for a Canadian Cow



De Kol Plus, No. 753, owned by Mr. S. J. Foster, Prince Edward Co., Ont.

In the Record of Performance test just completed this cow has a record for the year of 22,296 lbs. milk. Her total feed account, pasture included, was \$90.50 for the year.

READ WHAT MR. FOSTER THINKS OF BANNER FEED.

Prince Edward Co.,

The Quaker Oats Company, Peterborough, Ont.

Bloomfield, May 8th, 1910.

Gentlemen,—I am writing you with regard to your Banner Feed. I might say I have been feeding BANNER FEED for over a year and find it very satisfactory from every feeder's standpoint. I have a cow, De Kol Plus, which holds the Canadian record for milk, giving during the year 22,296 lbs. of milk, which tested 945 lbs of Butter and 756 lbs. of fat. I fed this cow principally on Banner Feed. I tried other mixed grains, but found that they did not do as well as on Banner Feed.

I have two cows in the milk test this year and they are showing equally as good results from the same feed. I find your Banner Feed a very evenly balanced feed. The cows are not only very fond of it, but it keeps them in good condition as well as giving the flow of milk.

In conclusion I can only say that I cannot recommend too highly the feed put up by The Quaker Oats Company to all feeders as being a good pure feed.

Yours truly,

(Sgd.)

S. J. FOSTER.

ASK YOUR DEALER TO GET YOU BANNER FEED IF HE DOES NOT ALREADY HAVE IT. IT WILL GIVE YOU AS GOOD RESULTS AS MR. FOSTER SECURED.

We Manufacture { Schumacher Stock Feed. Victor Feed } Every one good
 { Molac Dairy Feed. Banner Feed } Feed

All we solicit is a trial order and a fair test.

PETERBORO The Quaker Oats Company ONTARIO

NEW IDEA FURNACES

No Running Up and Down Stairs

The New Idea Furnace may be entirely controlled and regulated without going down stairs. The New Idea Regulator does this.

Handsome, solid steel chains are connected to the draft and check dampers in the furnace room, and brought up stairs over smooth working pulleys to a regulating board, placed in the hall or dining room, or other place convenient for the owner of the furnace. The installing of this system does not in any way disfigure the room, and the board itself is beautifully nickelled and is a real ornament. It is simply operated and saves an endless number of trips up and down stairs.

If your house is too warm you simply change the chain to a position marked "Check," if more heat is desired you change the chain to "More Draft," and you always get a quick answer when you operate the Regulator on the New Idea, it responds quickly at all times. Saves you trouble and gives you the temperature desired.

NEW IDEA GRATE
NO SIFTING
OF ASHES



BOTH SHAKES AND DUMPS

ASK FOR FREE CATALOGUES.
SEND SIZE OF HOUSE
IF YOU WISH ESTIMATE OF
COST OF FURNACE
INSTALLED READY FOR USE
THE GURNEY TILDEN Co.
HAMILTON LIMITED MONTREAL
WINNIPEG DEPT. D VANCOUVER

Every Farmer knows that the DeLaval Cream Separators are in a class by themselves as the best separators

☞ But many have the mistaken idea, which would - be - competitors help to magnify, that they are "expensive" and that something "cheaper" will do in their stead.

The Facts are that the DeLaval Cream Separators are not only the best but at the same time by far the cheapest

—in proportion to the actual capacity and the actual life of the machine.

☞ These are simple facts easily capable of proof to any buyer who will take the trouble to get at them and who need only apply to the nearest D E L A V A L agent or send for a catalogue to do so.

THE DE LAVAL SEPARATOR CO.

173-177 William Street
MONTREAL

14 and 16 Princess Street
WINNIPEG