VOLUME XXII.

NUMBER

30× 30×



October

1909

The Thing That Interests Dairymen Today

is not which Company has made the most failures in its attempts to make successful ("ream Separators, or which Company has abandoned or discarded the most inventions because (by its own admissions) of the inferiority of those inventions.

The questions which interest dairymen are:

Which is the best Cream Separator in 1909?

And which will continue to be the best Separator in 1910?

The United States Separator holds the World's Record for close skimming.

Its record has not been equaled by any Cream Separator, although numerous attempts have been made to equal it.

The United States has a solid one piece frame. No bolls, screws or rivets to work loose.

Gearing enclosed in dust-proof case. Gearing runs in oil bath.

Closest skimmer in the world. Simple and easy to clean.

Light running. Longest life.

The United States has the best point of all—perfect separation—and also has more other good points than any other Separator.

Selling Agents in every dairy section in the country, will grant a free trial.

Send for Catalogue No. 143.

VERMONT FARM MACHINE COMPANY

BELLOWS FALLS, VERMONT



The Bond Hardware Company, Limited

STUDENTS' HEADQUARTERS

SPORTING GOODS

ALSO

Everything in Hardware "Our Prices Always Right"

GUELPH

ONTARIO

Bank of Montreal

ESTABLISHED 1817

Incorporated by Act of Parliament.

CAPITAL (all paid up), REST, - - UNDIVIDED PROFITS,

\$14,400,000.00 12,000,000.00 358,530.20

HEAD OFFICE

MONTREAL

BOARD OF DIRECTORS:

Rt. Hon. Lord Strathcona and Mount Royal, G.C.M.G., Honorary President. Hon. Sir George A. Drummond, K.C.M.G., President

E. S. Clouston, Esq., Vice-President.

Sir Thos. Shaughnessy, K.C.V.O., E. B. Greenshields, Esq., Sir William C. Macdonald, R. B. Angus, Esq., James Ross, Esq., C. R. Hosmer, Esq., Hon. Robt. Mackay. E. S. CLOUSTON, General Manager.

The Bank of Montreal has Branches and Agencies all over the Dominion and in Foreign Countries. Its customers are guaranteed prompt and courteous attention.

H. LOCKWOOD, Manager at Guelph.

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

An Independent Audit Protects Depositors

A distinctive feature of the Traders Bank, is the system of perpetual audit, conducted—not by the officers of the Bank, but by an Auditor appointed by the Board of Directors.

This auditor is independent of the management of the Bank. He has access to all the office records and investigates every transaction.

The thinking man will realize how this careful scrutiny of the Bank's business protects the depositors.

TOTAL ASSETS.

\$38,800,000

THE TRADERS BANK OF CANADA

INCORPORATED 1885

BRANCH AT GUELPH, ONT.

Teaching Days for 1909

High Schools and Collegiate Institutes and Public and Separate Schools in cities, towns and incorporated villages have the following number of teaching days in 1909:—

Dates of Oper	ing and Closing.
Open	Close8th April. Close29th June. Close22nd December.
January 20 February 20 March 23 April 16 May 20 June 21	July
120	Public Schools

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

What a Gallon of Gasoline Will Do for You

GALLON of gasoline will run one of the efficient 2-horsepower 1 H.C. Gasoline Engines for fully 5 hours.

That is, you will have full 2-horsepower to turn your

machines all that time.

It will save you and your family all the hard work of turning the cream separator.

It will pump water and grind feed for all your stock.

It will saw your wood, shell your corn, turn your grindstone. It will do all these things and many more for you the same day.

And for 5 hours' steady work it will cost you the price of one gallon of gasoline.

Is not that getting your hard work done at a pretty cheap rate? You will have plenty of other jobs for your

I. H. C. Gasoline Engine

There is something for it to do all the time. If it is not working it is not costing you anything. When the engine stops, all expense stops. But it is ready to start up again at the same work or any other work at any moment.

There are larger I. H. C. engines that consume more fuel and do more work-you have your choice of a number of styles and many sizes

Vertical 2, 3 and 25-horsepower. Horizontal (stationary and portable) 4, 6, 8, 10, 12, 15 and 20horsepower.

horsepower.

Gasoline-tractors 12, 15 and 20-horsepower.

Famous air-cooled 1 and 2-horsepower.

Famous skidded engines 2, 3, 4, 6 and 8-horsepower.

Also a complete line of famous mounting engines from 4 to 20-horsepower, and Sawing, Spraying and Pumping Outfits and Jacks. If you will look into the matter rightly, and learn to appreciate how much work an I. H. C. engine will do for you and how economically it will do it, you will inevitably come to the conclusion that you must have one of some kind

The International local agent will be glad to supply you with catalogues and all particulars, or write our nearest branch house

for further information.

CANADIAN BRANCH HOUSES-Brandon, Calgary, Edmonton, Hamilton, London, Montreal, Ottawa, Regina, Saskatoon, St. John, Winnipeg.

INTERNATIONAL HARVESTER COMPANY OF AMERICA, CHICAGO, U. S. A.



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. withstanding 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 atendance 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, Survey-ing, 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 91/2 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.

You Ought to Know About Steel Ribbed Fire-Pots

Any invention that will save you from 1/8 to 1/3 in fuel, is a pretty important subject to the man who is going to put in a new furnace this summer.

The "Hecla" Firepot has three times the radiating surface of any other because it has 97 steel ribs fused into the castiron (count the flanges or pins in your present furnace). crease in radiating means a corresponding increase in the amount of heat given off by the fuel. By actual tests extending over three years,

'Mecla" Furnace

saves from 1/8 to 1/3 of the fuel

Every one of the "Hecla" Furnace steel ribs radiates heat. They also throw off the heat so rapidly that the firepot never becomes redhot, cannot burn out, and should be practically everlasting.

We can't tell you all the points of 'Hecla' Furnaces, here. Our new catalegue contains them, explains them and illustrates them. Suppose we send you a copy—free?

CLARE BROS. & CO. LIMITED, PRESTON, ONTARIO.

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

Your Rugby Supplies?

¶ Rugby is a strenuous game, and every player realizes the importance of proper protection from possible injury. In designing our rugby clothing and other accessories we have always endeavored to produce the best possible protection with the least encumbrance to the movements of the players. This is a noticeable feature in all our rugby goods.

Footballs: The Wilson Official Rugby Ball is guaranteed perfect in size, shape and quality. Price \$4.00. at \$2.50 and \$3.00.

Rugby Boots: We have made our boots to conform with the demands of the players. Our special boots at \$3.50 is made with black calf skin upper, with the popular "Yale" cleats, and to afford good ankle protection.

Accessaries: Our stock of arm, knee and shoulder pads includes every popular style and shape. Our Special Rugby Catalog describes all in detail—Send for it.

The O. A. C. Seal Pennants and Cushions

Every college student should have them. The correct thing for room decoration or sending as a souvenir. The most handsome style yet produced. Made of heavy felt in O. A. C. Colors, with Official Crest printed in colors.

Pennant size, 15x34				-			Price	\$1.25
Cushion, filled with	fine	qua	ality	form,	size	24x24		2 50
Cushion, unfilled,	-	-	-	-	size	24×24		2 00

SEND FOR SPECIAL RUGBY CATALOG

Harold A. Wilson Co. Ltd. 297-299 Yonge Street - Toronto

Dominion Bank

Capital Paid Up \$3,980,000

\$5,280,000

A GENERAL BANKING BUSINESS TRANSACTED.

Drafts bought and sold on all parts of the world.

SAVINGS BANK DEPARTMENT.

Special attention paid to savings accounts. Interest allowed on deposits of \$1.00 and upwards.

Every convenience will be afforded students for the transacting of their banking business.

A. R. SAMPSON, Manager.

The Royal Bank of Canada.

INCORPORATED 1869

Capital \$4,800.000

Reserve \$5,500,000

Savings Bank Department

Deposits of \$1 and upwards are received and interest allowed at current rates.

OUT-OF-TOWN ACCOUNTS SOLICITED

GUELPH BRANCH

TOWELL'S BLOCK



Vol. XXII.

OCTOBER, 1909.

No. 1.

The Farmer in Politics-By W. W. Emerson	1
Dry Land Farming in the Orange River Colony - By E. J. MacMillan	5
The Benefits of a National Association of Dairy Instructors-By H. E. Vannorman	9
Agriculture	II
¥F111	15
Experimental	
Editorial	
Athletics	29
College Life	31
Alumni	37
Macdonald	42
Schools' Department	
Locals	
	50

THE O. A. C. REVIEW is published by the Students of the Ontario Agricultural Gollege, Guelph, Ganada, monthly during the Gollege year.

ANNUAL SUBSCRIPTION: Students \$1.00. Ex-Students 50 cents. Single copies 15 cents. Advertising rates on application.

Steele, Briggs'

Seeds

Are Noted Everywhere for their

PURITY AND RELIABILITY

Send us your name for our splendid

ILLUSTRATED CATALOGUE for 1910

It's full of good things for the farm and garden. Also many valuable introductions which are sure to interest Farmers, Gardeners and Amateurs.

Steele, Briggs Seed Co.

Limited

TORONTO HAMILTON WINNIPEG

THE O. A. C. REVIEW

THE DIGNITY OF A CALLING IS ITS UTILITY.

VOL. XXII.

OCTOBER, 1909.

No. 1

The Farmer in Politics

BY W. W. EMERSON, '11.

POLITICS is the science and art of government." In a true Democracy the ideal government is founded upon the convictions, opinions, and ideals of the people which find expression and representation in public men and institutions. Every citizen is bound by the very fact of his citizenship to take an active and intelligent part in the politics of his country, and if the parliament does not reflect public opinion it is because the people, and especially the informed and representative people have not done their duty as citizens.

Do we possess an ideal government? Do our public men express and repre sent our convictions, our opinions, and our ideals? Can we, knowing as we must of graft, bribery, and corruption that surround us answer this in the affirmative? No! a thousand times no! Goldwin Smith has aptly likened our parliament to "a field on which raven ous ambition fights for power and pelf," and to those who watch the signs of the times his words are only too true. Assuredly we-as patriotic Canadians -must ask ourselves this question. How can these things be? In reply but one answer can be given, and that

is that we, as citizens, have not done our duty.

For this deplorable state of affairs the Canadian farmer must hold himself largely responsible. Not that he is so much responsible for the sins of com mission but rather that he has omitted to exercise his good influence in public life. But more important still is it for the farmer to realize that mainly through him must come that redress which is absolutely necessary if we are to prosper as a nation. In order for us to con ceive of the farmer's proper place in politics it will be necessary for us to have some idea of farming as we find it to-day.

In the pioneer days of our country's history every man who settled on the land was more or less his own farmer, lumberman and manufacturer. But with the increasing population there came of necessity the division of labor, and to-day we find even the various branches of agriculture being exclu sively practised in favorably-situated localities. But farming as a whole has always held the premier position of importance and the farmer of to-day is conducting "a national business on a scale of magnificance that defies the

imagination to comprehend." When do actors play to empty benches, when do newspapers lose their subscribers, when do doctors fail to collect their bills, when do railways pass their dividends, when do banks fall into the hands of receivers, when do universities suffer for lack of funds? Is it not when the crops fail? Surely the wel fare of the farmer is that of the nation at large.

And yet, notwithstanding his ac knowledged importance the farmer is in active political life conspicuous by his comparative absence. At election times the would-be members are ever ready to utter his praise as a national factor and "the backbone of the coun try," the "cornerstone of the empire," "the breadwinner of the world," are expressions too familiar to 'our ears. I say "too familiar" advisedly, because it is with these crumbs from the poli tical loaf that these silver-tongued sophisters would fain satisfy the farmer in place of giving him that which is his by right. Public opinion has too long enunciated his position as the farmer and politics rather than the farmer in politics.

The time has now come when it is the duty as well as the privilege of every farmer to be actively interested in politics. There are problems facing us, as Canadians, to-day in the settle ment of which it will be in the best interests of the country if farmers make their voices heard, and by acting together cause their influence to be felt through good men in both parties.

If any one word could express the reason why the farmer does not occupy his rightful position in political life, it would be Education or more prop erly the lack of it, understanding Edu cation in its broadest sense, as "that

development which best fits a man to perform rightly all duties of citizen ship." This deficiency exhibits itself in many ways.

Probably one of the most common evidences of this is seen in the custom of voting "as father did." This can only be due to an inability to form a satisfactory opinion on the question at issue. Before the farmer can make any progress he must learn to think for himself. Again the narrowmindedness that prevails in some localities is al most inexplicable. Cases are on record to-day of men who have entered county politics and have risen step by step until they had occupied practically all positions of trust in their counties and were in every respect qualified to repre sent their constituencies in either the Provincial or Dominion Houses. And vet, on account of some petty jealousy they were compelled to step aside and give place to some smooth-talking plat form politician whose sole qualification was his ability in "lawyer oratory."

Lack of interest in public affairs is one of the chief reasons why the farmer is not more actively engaged in politics. This is directly due to the narrowness of his reading and this in turn to his lack of Education. If the farmer only understood the great importance of the questions that confront us to-day, and would take time to search out the principles which under lie them he would require no helping hand to aid him in marking his ballot. So great is the importance of some of these questions that an outline of two or three may not be out of place here.

The Tariff probably receives more discussion than any other political question of the day. In theory it is supposed to regulate international trade, to protect farming and other

home industries, and to encourage home markets. No matter how the farmer looks at this question to-day it will pay him to consider, and consider seriously, whether or not he receives an adequate return from the tariff as we have it. Does it seem advisable to promote international transportation facilities at great expense and then limit transportation? Does the farmer realize that the prices of Canadian food stuffs are regulated by their value on the European markets? Let the farmer question why he pays exorbitant prices for clothing and machinery, whether or not trusts and combines destroy open competition on the home market, and as to High Tariff excluding his own goods from foreign markets. Every man, woman and child in our Dominion to-day pays One Dollar an nually (in protection) to the wollen industry, and yet woolen manufac turers are to-day clamoring for higher tariff. Will it pay? Let the farmer answer.

The question of bounties to manu facturers and subsidies to railroads is also a live one for the present-day, wide-awake farmer. It is a well known fact that much of the farmer's money is being given to concerns from which he receives practically no benefit. It is equally true that the day for railway subsidies is past. Whatever justifica tion there may have been for this prac tice when, for purposes of colonization. railways were subsidized is now gone. Indeed there is no less certainty of a new railway receiving returns than there is of that farmer who sows his seed in the virgin soil. The farmer who realizing this, and not making a strenuous and concerted effort to have his interests properly represented, is recreant to his duties as a citizen.

To return again to the farmer's seeming powerlessness in political life. we would say that his apparent inabili ty to co-operate is his greatest impedi ment. Practically all other industries of our country have excellent organi zations, and it is mainly due to this that they owe the recognition they re ceive at the hands of the government. Farmers' political co-operative move ments have generally failed because individuals or groups of individuals have been allowed to procure, for them selves, government favors in the name of farmers. As a body, farmers need never hope to gain much from any such organizations until they become suffi ciently educated to subserve the local to the general cause.

Having thus considered why the farmer does not occupy his rightful political position we are now in a position to consider how it may be accomplished. Obviously it must be through Education and Co-operation, since the principles which underlie these are the principles on which the whole question of "the farmer in politics" rests.

Education is the basic factor in the life of the individual and of the state. It should train the farmer to read widely and think broadly and so bring an educated, unbiased, and perceptive mind to bear upon the questions of the day. It should enable him to keep in touch with passing events and to take advantage of the information such a study reveals. It should help him to cope successfully with his own daily problems and to realize the true great ness of his calling for "the dignity of a calling is its utility." In all Education should make the farmer a leader in progressive agricultural thought in his own district.

Of all the means of education at the

farmer's disposal, reading is possibly the most important. Books should present for his consideration standards which are not false to life as he knows it; ideals, which are not "too bright or good for human nature's daily food," but through which he can get a clean, healthy view of life. On its more practical side reading should help the farmer in his daily tasks: to save time, to do things better, and, by giving him an understanding of the principles which underlie certain operations, remove much of the irksomeness at tached to their performance.

But there is an education open to the farmer that is not gathered from books. This comes from an observant study of the wonders of nature which are spread so lavishly around us. Owing to his peculiar calling the farmer is brought in close contact with the forces of na ture actively at work and he should carefully cultivate his powers of obser vation to become acquainted with the great natural laws which are being enacted about him. And, moreover, h. should strive to impart this knowledge to his family, as they grow up, teaching them the great lessons to see and under stand. For these are the fundamental necessities which qualify a young man upon reaching his majority to exercise his citizenship in a proper and intelli gent manner.

Co-operation, the second great medi um through which the farmer may work out his own salvation, is no new word, and yet, as C. C. James has said, "It is to-day a word to conjure with." As we have already pointed out co-op cration is the secret of the great power wielded by all the large organized in dustries of our country. And for the farmer organization is gradually bring ing about a like result. With a history of which any movement might be proud and a membership extending from the Atlantic to the Pacific, the various farmers' 'co-operative associations (and they represent nearly every phase of agriculture) are rapidly coming to the front.

What the future of this movement will be, one dare hardly predict. Through the agricultural press the most progressive and far-seeing men of the day are urging farmers to put aside all petty differences and unite all inter ests in one large alliance. And the need for this is evident for the interests that are opposed to farmers are strong and well organized, and nothing short of an organization which can claim to be truly representative in its character as well as wide in its membership will be effective in fighting them. farmers everywhere are responding to the call. Roused from the apathy that for many years possessed them they are getting a grip on public affairs and Agriculture-"the oldest of arts and newest of sciences"-is being every where recognized as the greatest asset of the country.

Education and Co-operation are the clarion notes ringing through the land to-day summoning the farmer to that great heritage which it is his undoubt ed right to possess. And surely that day can not be far distant when the farmer will be in politics to the lasting benefit of himself, his neighbor, and the country.

Dry Land Farming in the Orange River Golony

NE of the great difficulties which the agriculturist in the Orange River Colony has to contend with is drought. Scarcely a year has been known when some crop has not suffered more or less from want of rain, notwithstanding years when the rainfall has exceeded 25 inches, an amount which compares favorably with the precipitation of many countries where the production of crops is considered a certainty. It

fall at Bloomfontein for the three years ending June 30th, 1908, was 21.43 inches of which an average of 17.47 inches fell in the six months, October to March inclusive, and the remainder, 3.96 inches, from April to October. Heavy downpours are only partially absorbed by a bare veldt, and in the space of an hour dry river beds are frequently converted into raging tor rents of water which for the most part flows away to the sea. Weirs have



SCENE IN ORANGE RIVER COLONY.

becomes apparent, therefore, that though receiving a very considerable annual rainfall the land is not bene fitted to the extent which there is rea son to expect. This may be ascribed chiefly to two conditions, viz.: nearly all of the rain falls within a short space of the year, and secondly, the rains are generally very heavy and limited in duration. The average rain

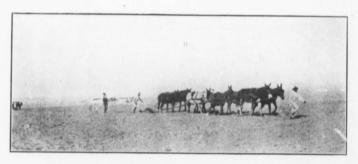
been built in some instances which serve to hold back water for irrigation and on may farms dams are used for the storage of water, but notwithstand in g these works the greater part of the flood water is lost. Nor is the loss of water the only injury suffered under these conditions. Great sluits (croded channels) are formed in the face of the country often twenty feet in depth

from which the soil has been carried away. Close grazing and the burning of the veldt grass have provided for the escape of water and indirectly caused much of the damage from sluits.

A great loss of water takes place through evaporation. The drying effect of the blazing South African sun is enormous and the rate of evaporation is much increased by sweeping winds which pass over the high veldt unchecked. These winds are prevalent from August to December. It is during this period that dry land crops suffer most.

proved greater in the summer months than in the winter season. Observations taken from a water tank the surface of which was exposed to the wind reveal an evaporation of 12.1 inches in one month—December. The evaporation from the ground surface is not comparable with the foregoing results but the figures serve to show the forces which are at work dissipating water from the fields.

The whole territory of the Orange River Colony is situated on the high yeld at an elevation of four to five thou sand feet above the level of the sea.



PLOWING WITH MULE TEAMS.

In passing it may be remarked that though it is doubtful whether tree planting can be carried out to such an extent as to influence the rainfall, the establishment of belts of trees to pro tect cultivated lands from the injurious effects of drying winds is well within the scope of a practical scheme.

Records of evaporation from a water surface made at Kimberley just over the western border of the O. R. C. show that the amount of water evapor ated yearly is seven and a half feet, and this in a situation not exposed to the wind. The rate of evaporation has

The soil is very variable in character. The eastern portion of the Colony ap proaching the Drakensberg Mountains possesses in many places a deep rich loam which during a season of favor able rains is very productive. It is here where agricultural operations are chiefly engaged in. Towards the west ern side the soil becomes sandy and the rainfall less.

The principal crops grown are maize, Kaffir corn, wheat, oats, millet, and to a lesser extent potatoes.

More than half of the area under cultivation is devoted to maize. Wheat and oats succeed best as winter crops, sown in May and harvested in December. The others are sown in October and November, and receive the summer rains of January to March during their period of growth. It will thus be seen that it is the winter cereals which are most exposed to injury from drought, and for which special preparation of the soil with the object of conserving water is necessary.

The period of the heaviest rainfall coming as it does within three months of the time of seeding affords a good out of four determines between a har vest and a total failure. Few farmers practice this improved method but there is reason to believe that the ma jority will soon realize its advantages.

Though the necessity to store soil water for maize is not so great the adoption of a system of previous pre paration of the ground would doubtless ensure much larger crops than are now obtained. Six bags of 200-lbs, each per acre is considered an average yield in the Orange River Colony. The soil is not so rich as on the plains of North



THRESHING SCENE.

opportunity of catching and conserving water. Deep ploughing at the be ginning of the rainy season followed by surface cultivation, in the average year is sufficient to provide a good seed bed stored with sufficient mois ture to carry the crop through until it comes into ear. With the aid of five or six inches of rain in October and November a harvest is assured. Important as the conservation of soil moisture is in every clime it is doubly important in South Africa where attention to water conditions in three years

America, and it is necessary to adopt means of keeping up the fertility. The practice of the old Boers who possessed unlimited land for the plough was to break another piece of veld as often as the land under cultivation showed signs of becoming exhausted—comparatively closer settlement renders this system no longer possible.

The following three years rotation has been adopted at the Government Experimental Farms:

First year-Bare fallow.

Second year-Cereals as a winter

crop followed by lupins and peas grown as a summer crop and ploughed under,

Third year-Maize.

The attention of agriculturalists in all semi-arid regions has been much centered on this subject, and it is prob able that the prospects have in some instances been over-estimated. There is no doubt, however, about the possi bility of utilizing a light rainfall to a greater purpose, that has been found practicable with the ordinary methods of cultivation. In Western Australia land settlement is being promoted by the Government within the eleven-inch rain belt. The chief crop grown is wheat. A crop is produced in every alternate year, and the other year is devoted to growing lupins and peas which are ploughed in to improve the soil. The average yield of wheat for the whole state is 11.2 bushels per acre.

The Orange River Colony possesses a considerable advantage in the amount of rain received though it is not so well distributed to favor crops. Over three-quarters of the Colony the aver age rainfall exceeds twenty inches in a year and the greater portion of the land is suitable for cultivation. There is therefore reason to believe that the principles of conservation of soil water can be applied with far-reaching re sults.

Besides drought the farmer on the veldt has to contend against insect pests of the most destructive kind. Chief among these is the locust.

These insects appear in two stages, first as hoppers and later as fliers, and are in both instances destructive, eating all kinds of farm crops. The hoppers march across the country in a great army sometimes several miles in extent. Later they develop wings and

form into flying swarms which may decend on the unfortunate farmer and destroy his entire crop in a few hours. During the season of 1907 the locust was almost exterminated in the more thickly settled portions of South Africa by means of arsenical spraying. A soluble form of arsenic is used and the spraying solution is sweetened with sugar or treacle. This is sprayed on the vegetation in front of the advancing swarm. It is of course necessary to deal with the locusts in this way, before they take to flight.

The wheat aphis is another serious pest. During the past season almost the entire crop was destroyed by this insect. Laybirds keep the aphis in check to some extent, but no certain remedy has yet been found. It seems probable that a better system of cultivation ensuring a stronger growth will assist greatly in mitigating its ravages. The spread of the aphis appears to be due to certain climatic conditions for in some years it does no appreciable damage.

To the Canadian agriculturist it will doubtless seem that the liability to drought and insect pests is sufficient to discourage even the most enthusias tic farmer, but under the sunny skies of South Africa hope abounds, prices of farm produce are high and the good years afford a recompense for the bad ones, and a little more besides.

There is good reason to expect a great advancement in crop production if better methods of cultivation are adopted. So bountiful is nature that in a favorable year the mere tearing up of the ground and scattering of the seed are sufficient to provide for a har vest.

But preparation is necessary for the years of comparative drought which in South Africa are inevitable. The wise husbandman will use every practical means to store up the rainfall in the soil against these times of need. If

such measures be adopted there is hope that failures, for example in wheat, will become the exception rather than the rule.

E. J. M.

The Benefits of a National Association of Dairy Instructors

BY H. E. VANNORMAN, STATE COLLEGE, PENNSYLVANIA.

HE effort to teach the underlying principles of successful agricul tural practice, and the applica tion of the general sciences to agricul ture is relatively new. Even newer than this is the office of the dairy in structor. Only fifteen years ago there were only two or three men in the agri cultural colleges of Canada and the United States, whose whole time was devoted to teaching or investigation of dairy subjects. To-day, consider able more than half of the Colleges have one or more men whose whole time is devoted to this subject, often including, not only class-room and lab oratory teaching and investigation, but the supervision of a dairy herd, and a commercial establishment in connec tion with the other work of the depart ment, to say nothing of institute lec tures, and other forms of extension work.

In a field so new, is it surprising that all of the men, with possibly two or three exceptions, are under forty years of age, and many of them under thirty-five? Many of them came to their position of responsibility for the direction of the instructional and investigation.

tigational work, without graduate experience, and sometimes without predetermined special preparation for it. Frequently there has been no model or outline to go by, conditions differing from Alma Mater have required radically different treatment, thus, in many institutions have there been many young men evolving, not only courses adapted to their local conditions, but they are groping for the fundamentals which should be common and underlie the work in all Colleges.

When we consider the newness of the field; the youth of the men; the diversity of the conditions, and the breadth of the subject, we cannot but admit the need of exchange of experience; increased uniformity in the application of all that which is good; a more thorough systematizing of the work on solid foundations so far as they have been laid. This, it seems to me, is the object to be sought, and the benefits to be derived by member ship in, and participation in the work of a National Association of Dairy In structors.

All men are not equally efficient in

all of the many branches of dairy hus bandry; few men are gifted with the ability to develop all sides of the work. for which they are responsible, simul taneously, therefore, with many men at work, many different phases will be advanced. By the coming together and exchanging of ideas, experiences, and observations, each may contribute of that which he has made most pro gress in. The others may thus receive in a short time that which will be of material help to them. Only the spirit of friendly co-operation and willingness to help, which is an essential in the successful teacher, makes possible this exchange.

Young as is this Association, I be lieve the results in helpful suggestions to each of its members, confirm the expectation and the benefits derived as outlined above. Every man is broad ened by contact with others, especially if he is sufficiently familiar with those subjects to which he is giving the largest share of his attention. "He de mands a reason for the faith that is in him," and points out, or raises ques tions as to the accuracy of the view point voiced by others.

Contact offers *encouragement be cause of the discovery that others have similar difficulties. The spirit of emulation aroused thereby, stimulates to action; personal acquaintance with others similarly engaged helps to form correct estimations and safer judgments of the credence to be placed in others' work.

The social side of these gatherings is always a pleasant feature, and serves as a reminder that work and study and perplexities are not all.

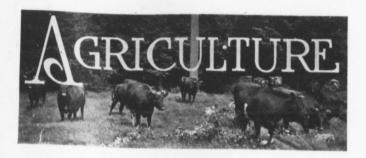
The forty-seven men engaged in this work gathered at the meeting at Ithaca seemed to share these views.

THE PASSING OF SUMMER.

"Summer is dead!"—it was the wind that spake
In the bronze mantle of the sombre pine—
"The sumach bush unfuris a scarlet sign;
The sere rush signals it in stream and lake;
Soundeth a requiem in glided brake,
Where mateless birds a lonely fate repine;
The sky is veiled in tears; each grey confine
Beespeaks the shrunken branch the leaves forsake.

"I laugh with ruddy autumn in the morn; I sound his praises in the golden light; But when high noon has passed and raven night Comes rushing down, I wail with those forlorn; The dying leaves, the lone flowers, pale and torn, The multitudes confronting death or flight."

-Wm. E. Hunt.



Ganadian Horse Breeding

BY J. H. REED, V.S.

HE classes of horses bred by Canadians are the different breeds of draught horses, car riage or heavy harness horses, road sters, standard breds or light harness horses, saddlers, hunters and ponies. We are correct in speaking of horses generally, as classes rather than as breeds, as while there are many Cana dian bred horses of all the above men tioned classes that are pure bred, hence either registered or eligible to regis tration in their respective stud books, a very large percentage of them are of composite breeding, hence we usually speak of a horse as belonging to a cer tain class rather than a certain breed. It is doubtless unfortunate that such is the case, but the same attention has not been paid to the purity of breeding of the dams as in the production of other classes of stock, viz., cattle, sheep, swine, dogs and poultry. Pre sent conditions point to the fact that this indifference will not be so well marked in the near future. This coun try is reasonably well supplied with

pure bred sires of the different breeds. and efforts are being made at present by many breeders to procure pure bred dams also. In our travels through dif ferent sections of the Dominion we have noticed the farmers, especially in the large agricultural districts are pay ing more attention to the production of draught than of light horses. With the average farmer this is probably a wise course, as colts of the heavier classes, by reason of their quieter and more phlegmonous dispositions, are less liable to become injured or blemished during colthood than the lighter, more active and impulsive classes. A breed ing mare of any class or breed will pro duce a better foal if she be regularly worked or driven during the period of gestation than if she be pampered in idleness, but it goes without saying that during the period of lactition it is better for both herself and offspring if they be kept in idleness and well fed and cared for. At the same time the heavy mare can do a reason able amount of work during those

months and also supply reasonable nourishment to the offspring, pro vided she be sufficiently well fed, but it must be remembered that she has not only herself to nourish but also provide food for her foal, hence in order to do her justice she should be given considerably more grain than her mate that has no foal. On the other hand the farmer who is breeding light horses must make provision for work horses without calling upon his brood mares to any considerable extent. Again, the draught colt will sell well without training, so long as he has the necessary size and the desirable con formation, we are justified in assuming that he will make as good a horse as his appearance indicates, provided he is serviceably sound; while the light horse requires training, which, in many cases the breeder is incapable of giving, or if capable, has not the time to de vote to it in order that he may sell for his real value.

Unlike the heavy colt, we cannot judge the light fellow so well from gen eral appearance and soundness. He must, in order to sell well, show his ability and willingness to perform well at the gaits peculiar to his class, whe ther he be a heavy harness horse, a light harness horse, saddler or hunter, of the desired size, conformation, gen eral style and appearance, his value, to a great extent, depends upon his edu cation, manners and ability to perform with speed, grace, courage, ambition and promptitude, the functions de manded or looked for in horses of his class. As regards soundness, we may say that it is not as essential in heavy as in light horses. Slight blemishes as scars, bunches, puffiness, etc., are not considered as serious and do not to such an extent reduce values in

heavy horses. In other words, an un sound or ill-formed heavy horse is more salable than a light horse with similar blemishes or ill-conformation. Taking these facts into consideration, we think we must admit that the aver age farmer, who has no particular fond ness for any special elass, but who breeds essentially for the market, is safer to breed heavy horses. But the breeder who has a decided preference for any special class (and we think that any man who is really a horseman has) will probably succeed better by breeding his favorite class, as he will, in all probability have the ability and inclination (and will in some way get the time) to educate his colts for their special purpose, whether it be for road sters, carriage horses, saddlers or hunters. In regard to the latter classes, we think it a pity that both young men and young women on farms do not take more pains to educate horses to the saddle. In most cases when horses suitable for saddle are bred they are taught to go in harness, but are sold at four or five years old practically green so far as their real functions are con cerned. We repeat that it is a pity that such is the case, as the education of the colt would also be an education of the boy or girl and teach him or her how to ride. No class of men has as good an opportunity to learn to ride as the farmer who produces his own horses. There is no form of exercise more healthful and no recreation more en joyable than saddle work. With few exceptions the young man or young woman who becomes reasonably pro ficient in the saddle would rather spend his spare moments schooling a young horse or riding an older one than in taking part in the ordinary games or other forms of recreations, and, in the

opinion of many, a man or a woman who can ride well looks his or her very best when well mounted. Yet even on farms where half or three-quar ter breeds are produced, how sel dom it is that a prospective pur chaser can get a decent saddle or bridle to try the horse he wishes to buy. There are good harness and rigs, both single and double, but seldom a saddle, much less a person belonging to the farm who can ride.

Then again, how often do we notice in the show ring, where the farmer or his son is exhibiting a saddle horse, probably the best in the ring, that he is so handicapped by the absence of pro per appointments, by the lack of edu cation and by poor riding that he has no chance of winning. He is purchased by a dealer or private individual, given the necessary education and exhibited a few months later in the same com pany, but he shows good manners and the proper paces and is an outstanding winner and worth probably three or more times the price he was purchased for on the former occasion. His breeder is probably present and declares that it is the owner and not the horse that has won. He does not recognize that the animal is now a saddle horse, while when he owned and exhibited him he was merely a green horse that showed the characteristics of an animal that would probably make a high class saddler when educated. A little con sideration would convince him that there was no good reason why he should not have given the horse some schooling and received at least double the price he got for him. Of course it must not be forgotten that in order to properly educate a horse to saddle, a considerable amount of skill is required

and this skill can be acquired only by practice.

If farmers would provide suitable appointments for saddle work and en courage their boys and girls to ride more and drive less they would soon become fond of the exercise and good riders. The pleasure can be made pro fitable. If a saddle horse is well trained the farmer does not need to sell to the dealer, but can get the dealer's price from the consumer. A saddle horse of the proper size and conforma tion that has been trained to the saddle gaits and has the manners required in a lady's saddle horse, will sell for double the amount that he is worth green, and there is no reason why the breeder should not receive this profit in addition to affording his daughters a great deal of pleasure and healthful exercise in training the colt.

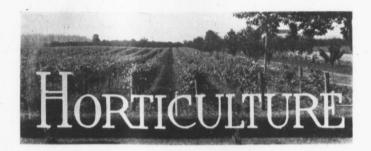
To other classes of light horses the same remarks as regards education apply to a greater or less degree.

Present conditions indicate that the horse interests are about to be serious ly influenced by the automobile, but I do not think that we as yet have much cause for alarm on this score. Notwithstanding the vast number of motors that are used there never was a time that a high class horse of any class would fetch a higher price than at present. The automobile is at pres ent to a large extent a fad with the wealthy classes, and as it is an expen sive, and we may say an unreliable toy, and probably will continue to be so, it is hard to say to what extent it may, at least temporarily, interfere with the popularity of the lighter classes of horses, but we cannot see that there is any danger of the heavy horse interests being influenced by these machines in the near future. This class at least is safe until automobiles can be built with less complications, more reliability, more easily handled, less expensive to run and repair and sold for much less money. If the time ever comes when satisfactory machines for the performance of heavy work can be built and operated at a reasonable cost, the heavy horse will be in more danger than the light, as a true horse man will never allow an inanimate con

cern to take the place of the animal he admires so much. Those who own and use horses simply for the service they can get from them will doubtless be satisfied with an automobile if it gives satisfactory service, but those who like horses will never enjoy the same pleasure in 'an automobile that they do in the saddle, or in a carriage behind one or a pair of good horses.



GOOD HORSES ARE ALWAYS ADMIRED.



Orchard Survey Work

BY T. D. FAULDS, '10.

This article by Mr. Faulds is the first of a series of articles written by students on experience gained and observations made during the summer holidays. In the November number of the Review Mr. A. M. Shaw. '10, will tell about Fruit Growing in New Ontario.—Editor.

THERE is a very interesting strip of country in Western Ontario, interesting in many ways to all but particularly to Horticulturists. It comprises the Counties of Lambton, Huron and Bruce, which fringe the eastern shore of Lake Huron, and is known as the "Lake Huron district." Mr. Todd, our Horticultural Editor, and myself were doing orchard survey work there this summer, and I have been asked to give a short account of our work.

After the examinations were over last April, and, having gone over pre liminaries—drafting blank report forms to be filled up at the various farms we were to visit, etc.—we took train for Forest, Lambton County. During the summer we travelled northward, tak ing the chief towns and villages as centres, and driving or walking out from them in all directions. We visited in all about 250 orchards each, covering the country north from Sarnia, and for

about 15 miles inland, to Port Elgin, in Bruce County.

Orchard surveying is a new branch of Government activity in Canada, this being the first year that any such work has been done. The idea originated, or at least was first put into operation in New York State. The object resembles that of field surveying, in that it may be roughly described as "finding the lay of the land." Here, for instance, is a section of country whose Horticul tural problems it is the Government's duty to assist in solving. It is evident that it would be in a much better posi tion to do this if it knew exactly the kinds and methods of horticulture which were being followed by the in dividual farmers, with such details as the varieties of apple trees planted, which men are spraying, who are en tirely neglecting their orchards, which orchards are in sod, which cultivated, which manured, pruned, thinned, etc., what profits are being made from each of the various methods of culture, how the fruit is being disposed of, whether sold to buyers, by the lump or by bar rel, or shipped on consignment or f.o.b., or sold through co-operative associa tions, etc., etc. Collecting information, therefore, of this, as well as of a more general agricultural nature, asking questions, and answering others—some times! comprised the greater part of our work. Surveys were also made this year, some horticultural and others



TYPICAL EXAMPLE OF CANKER IN SUN SCALD.

agricultural, in Niagara district, Kent, Norfolk, and Simcoe Counties.

Lake Huron district is interesting horticulturally chiefly for two reasons: one, that it is probably the best winter apple section in Canada; and the other, that, generally speaking, hardly any advantage is being taken of this fact. There is enough area here, if covered with orchard, to supply all Europe and the West with the finest quality of winter apples; but, excepting in a few

small districts, there are no large commercial orchards.

the

· pli

lan

sta

íru

the

ty,

rot

Co

ent

oth

wh

tle

bre

fai

fac

CTO

or

CX

110

SO

to

40

Jo

Fe

TI

The peculiar advantages of the country are that it lies to the east of a great body of water, the prevailing winds being thus tempered and moisture laden before reaching the land, and that the country is far enough north to en sure long keeping season and good quality of apple, and yet far enough south to be practically out of the zone of winter injury.

One of the chief drawbacks to the horticultural advancement of the coun try is the scarcity of labor, although we have found that wherever the effort was made, and high enough wages given, help was always available. The "lure of the West," is very strong in these lake counties. Perhaps the "call" is carried down by the waves of the great inland waterway. At any rate, there are more Lambton, Huron and Bruce men in the West than there are from any other part of Ontario. Mr. Crow has experience of this; he was continually being welcomed by these "Huronians" on his Western tour this summer.

Another problem is drainage. This is especially noticeable in Huron County. A considerable portion of which will not be able to grow apples successfully until the land is drained.

A glance at the map will show an other of the "drawbacks." The whole section is miserably supplied with transportation facilities. With the exception of an electric line now being built between Kincardine and Goderich no line runs parallel to the lake. The country is, as it were, tapped by lines running more or less east and west, with termini at the lake harbors of Sarnia, Goderich, Kincardine, and Southampton; but the country between

these lines is most inadequately supplied, large stretches of the best fruit land being six to twelve miles from a station.

What may be called the commercial fruit districts are around Forest and the village of Arkona in Lambton County, between Goderich and Bayfield; round Blyth and Wingham, in Huron County, and parts of north-eastern section of Bruce. There is little to differentiate the country generally from any other agricultural district of Ontario, where mixed farming is the rule. Cat

fact that their orchards are well cared for, and are bringing in generous re turns. The orchards are manured, sprayed four times annually—association rules—and, with one or two exceptions, this work is done thoroughly and intelligently. Each man aims at a large percentage of No. 1 fruit. Culls are not wanted in this association, and are not paid for. The members have in the past picked and hauled their apples to one of two central packing houses. After that the association takes charge of them, It sells, deducts expenses, and



ORCHARD SPRAYING.

tle raising and, in some parts, horse breeding are important. There is a fair amount of dairying. A noticeable fact is that many of the farms are in creasing in size. This is largely due, or said to be due, to the great Western exodus.

We had a unique opportunity of noting the value of a good co-operative society this summer. At Forest, Lamb ton County, there is a group of 30 or 40 live men who swear by Mr. Dan. Johnson, the energetic manager of the Forest Fruit Growers' Association. These men are conspicuous from the returns the balance to the members, who have received for the past three years—in 1906, \$2.35 for No. 1; \$1.90 for No. 2. In 1907, \$3.50 for No. 1; \$3.00 for No. 2. In 1908, \$2.50 for No. 1; \$2.00 for No. 2. The prices received by other growers average only about \$1.00 per barrel per annum for these years; and our figures secured during the summer have brought out something which is perhaps even more important, namely: that the care given these orchards has increased their yield one to three hundred per cent.

The significant reason for this, and

other little oases in the horticultural desert, is that, by co-operation, these growers have obtained possession of their legitimate market. They feel that it is now worth their while to take care of their fruit, because they no longer require virtually to give it away when it is grown.

What is being done at Forest and Arkona, and one or two other places in this district, can be done, as far as natural conditions are concerned, any where in this part of the country; and that it will be done in a few years is beyond question. Horticulturally the greatness of the Lake Huron district is its future—"the best country in the world for winter apples," says Alex. McNeill, chief of the fruit division,—"All Lambton can grow peaches," says Dan. Johnson; and it is, with no great effort of the imagination that one can predict that, in thirty years' time, this strip of country will be as great a fruit section as that of Niagara, and its ap ples surpass in price and quantity, as they now do in quality, those of British Columbia and much famed Oregon.

What Ontario Can Learn from the West in Fruit Culture

BY J. W. CROW.

This aritcle by Mr. Crow is intended to lead up to a series of articles on "What Ontario Offers the Young Man in Horticulture." The first of the series will be by Mr. D. Johnson, of Forest, Ont., and will appear in the next number of the Review.—Editor.

The Editor has asked me to present to the readers of The Review the re sult of observations made this summer on Horticultural Conditions in the Canadian Northwest, and the Pacific States.

A good text would probably be "The Value of a Reputation." It might be interesting to your readers to learn of the reputation Ontario fruit has out side of Ontario, and to compare our reputation with that of other fruit sections. If the comparison will serve to bring home to the boys of the O. A. College the dollars and cents value of a good name, my object will have been accomplished.

Last July the writer attended Winni peg fair at which the Ontario Depart ment of Agriculture made an excellent display of fruit grown in this Province. It was well worth while to meet day after day those who passed through the fruit building on a tour of inspection of the exhibits and grounds. If there is one lesson which stands out as a result of many conversations with the people of the West, it is this: "A good name is rather to be chosen than great riches." Time after time some pros perous agriculturist, mechanic or busi ness man would ask in a half-disgusted tone, after having taken a long look at the Ontario Spies, Baldwins, Kings,

and Greenings on exhibition, "Why can't you send fruit like that out here to us?" We could hardly say in an swer that it was our invariable prac tice to do so, because we knew too well that such was not always the case. We would attempt to dodge the question, and would be met by a statement some thing like this: "I came out to this country from Ontario, and I know what Ontario apples are like. I would buy them if I could feel safe in investing my money in them, but I have long ago given up buying eastern apples. The western apples cost more, but do not compare in flavor with Ontario fruit. We buy them because we know we are getting our money's worth, and that the package will be the same all the way through as it is on top." We would, of course, try to get around this argument, too, but in trying to do so we were very likely to draw out the personal experience of the individual in question with Ontario fruit, would learn, unfortunately all too fre quently, of a high price (\$5.50 or \$6.00 per barrel) having been paid for On tario apples, marked "No. 1," which when opened turned out to be "the worst kind of trash," What answer could one make to statements of this kind? It was impossible to deny them and equally impossible not to be ashamed of such a condition of affairs. It is not intended hereby to besmirch the reputations of all shippers of apples who have been supplying the Western market in past years, but the people of the east do not, I think, realize the extent to which the Western provinces have been made the dumping ground for inferior stock.

As a further illustration of the nature of the reputation we have acquired, I may give an incident which occurred on South Water street, Chicago. This street is the centre of the wholesale fruit and produce business of that city. One of the leading wholesale fruit dealers there, upon learning that we came from Ontario, gave us a very cordial reception, viz.: "You people can't even load a car of rutabagas honestly." I could scarcely accept the truth of the statement, but I was im mediately struck with a very high ap preciation of the value of a reputation for common honesty in business.

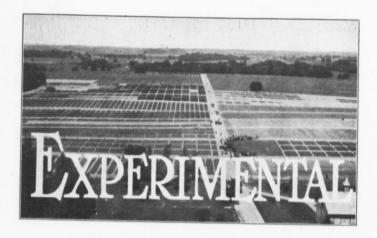
As an example of what is possible in the way of honest packing, I may cite an instance which came to my no tice in Hood River, Oregon. The Hood River Apple Growers' Union has for several years packed (co-opera tively) the product of that famous val ley. In former years their apples were sold under sealed bids. Wholesalers, having purchased Hood River apples through the original buyers, came to know the grade of goods and the re liability of the pack. In 1907, 1908 and 1939, the entire pack of Hood River apples was sold at a stated price per box, according to grade and variety, absolutely without inspection by the buyer. The buyer in 1908 and 1909 was Steinhardt & Kelly, of New York. In the Hood River "News," of Septem ber 8th, 1909, Mr. Jos. Steinhardt. senior member of the firm, is quoted as saying: "I think the greatest proof of the quality of these apples is in the fact that we are willing, after having handled them a year, to come to Hood River and buy outright the whole crop on a practically cash basis, before a box of them is picked or packed." "What prices do these famous apples bring?" may well be asked. The most important varieties grown in that sec tion are Newtown and Spitzenburg,

famous wherever they are known for their excellent dessert quality. Not a tree is left unthinned or otherwise neg lected. Every grower of these varie ties aims to produce apples which will pack one hundred per cent, four-tier, and crops are actually secured grading over ninety per cent. strictly fancy four-tier size. Last year's crop of ap ples of this grade of these two varieties sold for \$3.25 straight, or at the rate of \$9.75 per barrel. It is stated that this price has been exceeded this year, but the actual figures have not at this writing been made public. Do we rea lize what it would mean if ninety or seventy-five or even fifty per cent, of the apples grown in Ontario could be turned into money at the rate of three dollars and twenty-five cents for every forty pounds of apples? And who will say Ontario men are satisfied with an ideal lower than the highest?

There are, and will be for a long time, of course, those who will produce apples extensively and make handsome profits, but the trend of all agriculture is toward intensiveness of operation. Fruit growing is peculiarly a business which puts a premium on care and thoroughness, and the greatest percent age profit is being made in Ontario to day by men who have business acumen enough to concentrate their energies on smaller areas of ground rather than have them unprofitably dissipated over too much land. What is true of the present will be increasingly true of the

future. No less an authority than the "Fruit Trade Journal," of New York. stated recently that there is no reason why the signal successes achieved by certain small and isolated localities in the West can not be duplicated on a large scale in the East. This opinion is shared by all who have carefully looked into such aspects of the ques tion as land values; cost of production: demand and supply; prices and profits; economy of transportation; climatic and soil possibilities. Apples as good as those grown anywhere can be pro duced in the East in larger quantity than in the West and at no increase in cost. They can be so grown and packed as to sell for fully as much per box, or per acre, and they would then leave profits which would on an aver age compare very favorably indeed with those of the much-talked of West ern orchards.

Our Western friends will pardon us for thus inadvertently admitting the superiority of their methods of grow ing and selling fruit. The East should thank the West most heartily for the excellent object lessons they have given us on care and thoroughness in grow ing high grade fruit and on the appli cation of business methods to every operation connected therewith. A special debt of gratitude is owing for the numerous forceful examples, one of which is cited above, showing that in the fruit world, as in everything else, absolute honesty is the very highest business policy.



Experimental Shipment of Tomatoes to Great Britain

URING recent years the grow ers of tomatoes in Ontario have been looking for other and more remunerative markets than those found in the Province of Ontario, and as a result large and profitable ship ments have for several years been made to the prairie provinces, and the market there is a growing one. A few years ago some of the growers in the Burlington district made a shipment to Great Britain with profitable returns. Shipments to this market were, how ever, discontinued, for various reasons. There being a feeling among the grow ers that some trial shipments should be made by the Government, provision was made at the Central Experimental Farm for some shipments in 1907.

Before shipping the tomatoes it was thought desirable to obtain as much information as possible in regard to the size and appearance of the tomatoes most in demand in Great Britain, and also the probable profits from ship ments sent from Canada. A letter was, therefore, sent to Mr. J. A. Finlay, the Canadian agent in Glasgow, Scotland, to which city it was proposed to send the tomatoes. Following are quotations from the letter received:

"I am in receipt of yours of 21st ult. regarding trying experimental ship ments of tomatoes during the ap proaching summer season to arrive from the middle to the end of August. I feel little or no profit would be gained on shipments reaching the Glasgow

market at that period, as it is then the very height of the Scotch season, while the market is likewise handling heavy consignments from English, Guernsey (Channel Islands) and French growers. I have enquired the opinion of the leading fruit brokers and also of various large retail fruiterers in Glasgow, and all are unanimous in expressing their opinion against the venture being a profitable one, unless you can manage to get them forward to arrive about the middle of July or thereabout (or in the event of a partial failure in some of the producing centres).

"Regarding the size of tomatoes, just now tomatoes of about five and a half to six and a half inches in circumfer ence, and averaging about eight or nine to the pound, are the ruling size, and I doubt if a smaller species would find a ready market in August, as then the Scotch are plentiful and quite half as large again, and smooth skinned vari

eties.

"The popular color on the Glasgow market is a deep red. Tomatoes which are more or less wrinkled do not sell freely here, especially at that season. The packages most in vogue are square boxes containing about 12 to boxes containing about 12 to pounds, and in the event of the latter being adopted to have a division in the centre. The Canary Island shippers forward theirs in 12 pound boxes, four rows deep per box, and four boxes be ing strapped together down the ends. and as a box is required, the connecting straps are sawn asunder, thus leaving the remainder intact.

"The market here is supplied from May to October with Scotch, English, Channel Islands and French, and from November to April by Canary Island tomatoes. "For your guidance I give you the wholesale prices generally ruling in August for the various countries produce:

"Scottish, 4d. to 5d.; English, 3d. to 4d.; Guernsey (Channel Islands), 2d. to 3d; French, 1/2d to 2d. per lb. I also obtained the following average re tail prices from the largest firm of re tail fruiterers (Messrs. Malcolm Campbell & Co.), who are also importers: May, 8d. per lb.; June, 6d. per lb.; July, 5d. per lb., and August, 3/2d per lb. for Scotish tomatoes. Perhaps these prices may be of service to you in guiding you as to the possibility of profit at the lowest returns of, say, French produce.

"(Signed) Jas. A. Findlay."

Notwithstanding the unfavorable prospect, tomatoes were planted for the purpose of making some experimental shipments. The Frogmore Selected and Stirling Castle varieties proved to be satisfactory for the purpose as they are about the size and are firm and good for shipping on this account. The Honor Bright was also grown, but it is too late a tomato for the Ottawa district.

Mr. Robert Thompson, of St. Catharines, Ont., who has had considerable experience in shipping tomatoes to the Northwest kindly furnished in formation from the results of his experience.

On September 3rd, 12 boxes were shipped from Ottawa in cold storage along with some apples per str. "Cas sandra," Donaldson line, to Thomas Russell, Glasgow. The tomatoes were picked when they were beginning to turn red, some specimens having con siderable red, wrapped in tissue paper and packed in two tiers in boxes 5 by 11 by 20 inches, or just half the size of

apple boxes, and holding about 21 lbs. of fruit. The tomatoes left Ottawa by freight on the evening of September 3rd, and reached the steamer in time to be loaded before she sailed on the morning of September 5th.

A second lot of 14 boxes was shipped on September 9th, a third lot of 17 boxes on September 16th, and a fourth of 11 boxes on September 23rd. The total number of boxes sent over was

The tomatoes sold as follows:

First shipment4s. 6d. per case Second shipment2s. 6d. per case Third shipment (q

boxes)2s. 6d. per case Third shipment (2

boxes)28. 3d. per case Third shipment (6

boxes)2s per case Fourth shipment1s, 6d, per case

Net returns per box, 1s. 21/2d. (29 cents).

To obtain the net profit or loss it is necessary to take from the above net returns from the sales, the cost of pick ing and packing, and the price of the box. The cost of picking, sorting, wrapping and packing was about 8 cents per box, and the cost of the boxes 14 cents, and the average net profit per per box would thus be 7 cents.

The tomatoes were all shipped to Thos. Russell, Glasgow, and the follow ing letters were received from him after each sale.

"In regard to the tomatoes. The price realized from these cannot be taken as a guide for heavy quantities, as we could not have sold, say, 100 cases at the same price as these 12 cases realized. The fruit looked fairly well, but on examination many of the tomatoes were found to be over-ripe, and some of them beginning to decay, and if they had been a few days longer in the steamer they would certainly have been classed as in bad condition. A percentage of the tomatoes which had been packed are what we designate here as "Greensides," that is showing green on one side of the tomato, and several of the tomatoes were overlarge. In Scotland here Scotch tomatoes are very carefully selected, and any tomato with a green side or slight blemish is kept out, and most growers classify their tomatoes as As, Bs, Cs, the As being all of a uniform size, free from blemish, and of good color, while Bs are tomatoes which are a little smaller in size, and also of good color and free from any blemish, and Cs are large sized tomatoes, and those too small to pack under the B grade. At the present time Scotch tomatoes are very plentiful on our market, and today, for example, we sold As for 4d. to 5d. per lb., Bs from 3d. to 4d., and Cs from 2d. to 3d. Looking at the shipment of tomatoes from Canada to Glasgow in a com mercial aspect, we could not possibly recommend further consignments.

"(Signed) Thomas Russell."
(Second Shipment)

"In regard to the tomatoes, we beg to say that these were in a somewhat similar condition to the previous ship ment, a good percentage of the fruit in each case being soft, and showing signs of decay. Home tomatoes were very plentiful when these arrived, and were selling at even lower prices than advised in our previous letter, and we could not obtain more than 2s. 6d. per case for these ex "Lakonia."

"(Signed) Thomas Russell."
(Third Shipment)

"We beg to send you herewith ac count sales for your consignment of to matoes ex steamer "Parthenia," the total net proceeds of which, 4s. 2d., has been carried to your credit, and will be included in next remittance. We re gret we cannot report any improve ment in the landing condition of this consignment of tomatoes, and as you can see, there is practically no demand for them here, our local supply being very plentiful and cheap.

"(Signed) Thomas Russell."
(Fourth Shipment)

"The tomatoes in this case were in a similar condition to the previous lots, and from the price obtained you will see that there is really no demand for them on this market on account of cir cumstances explained in previous let ters.

"(Signed) Thomas Russell." The following letters were also re

ceived from Mr. J. A. Findlay, the Can adian agent:

(First Shipment)

"Your experimental shipments of ap ples and tomatoes came to hand on Mon day, the 16th inst. The apples were discharged from the steamer's refriger ator chamber in good order and the cases were landed without damage, as were also the boxes of tomatoes. I found the latter were slightly soft gen erally and the papers covering the to matoes damp, the fruits were not too attractive looking from a market point of view, as many were not evenly col ored, some being greenish yellow, spot ted and hard where thus marked.

"I understand they brought about 4s. 6d. per case.

"I shall pay close attention to your various shipments.

"(Signed) Jas. A. Findlay."
(Second Shipment)

"As regards the tomatoes, I carefully examined several boxes of them, and as far as I could judge I thought them to be in better condition than last week, first the wrapping papers were dry compared with last, the fruits them selves seemed somewhat more uniform ly larger and I thought rather more evenly colored, but yet a good few in each box were soft and 'going,' one box I saw had quite room for another row and at either end of the box were several rows of soft tomatoes caused by the play against the ends of the box during course of handling.

"(Signed) Jas. A. Findlay."

(Third Shipment)

"The 17 boxes of tomatoes arrived per the above steamer, but I find no im provement in this parcel from the two previous shipments. Many of the to matoes throughout the boxes still being soft, the larger specimens I think show more inclination to softness than the smaller ones. I called round on Mr. Thos. Russell's sale and watched him endeavor to execute a sale, but it appeared to be unsuccessful while I was there."

"(Signed) Jas. A. Findlay." (Fourth Shipment)

"The boxes of tomatoes on the other hand, I regret to say, show no improve ment in their condition on arrival, each box showing a fairly high percentage of soft and 'going' fruit, but perhaps what serves to their being looked upon unfavorably by buyers as much as any thing is the lack of uniformity of coloring, some I examined being green,

others yellowish red, this coupled with the state of the tomatoes as compared with the well colored and sound condition of the home article is against a ready sale of the Canadian tomatoes.

"(Signed) Jas. A. Findlay."
From the above letters it will be readily seen that even if the tomatoes had presented a more even appearance on arrival there would have been little chance of their bringing remunerative returns. Growers who are shipping to

matoes to Winnipeg have found by experience that the tomatoes are more uniform in appearance on arrival if picked in a somewhat riper condition than those shipped to Glasgow, but the fact that some of the tomatoes were over-ripe on arrival would indicate that if all had been picked as ripe as they were, which was when some green was still showing, the tomatoes would not have arrived in as good condition as they did.



HOME OF PROFESSOR ZAVITZ.

THE O. A. C. REVIEW

REVIEW STAFF.

F. C. NUNNICK, Editor.

S. H. GANDIER, Associate Editor.

C. M. LEARMONTH, Agriculture.

W. R. REEK, Experimental.

S. E. TODD, Horticulture.

F. M. CLEMENT, Athletics.

H. A. DORRANCE, Alumni.

W. DAWSON, Locals.

P. E. LIGHT, College Life.

S. ROGERS, Staff Photographer.

A. C. BAKER, Artist.

MISS BELTON, Macdonald.

O. C. WHITE, Business Manager.

W. W. Emerson, Assistant Business Manager.

Editorial

In the "College Life" department of this number is given a vivid account of the initiation of the initiation which the Freshmen suffered at the hands of the Sophomores. With almost equal truth may the Sopohomores be said to have suffered at the hands of their opponents, though class "13" fought at a decided disadvantage.

Just when and where this custom was first instituted would probably be difficult to ascertain. We find the spirit of initiation present not only among college students, but also among men of maturer and wiser years who take delight in welcoming new members into secret societies, lodges, etc., through some form of demonstration. We would conclude then that the motive which instituted the custom and the spirit in which these demonstra

tions are usually carried out, are be yond attack. Why is there then so much controversy concerning initiation at the O. A. College? Simply because its original purpose has been partly lost sight of. The eagerness, thoughtless ness and fighting instinct of youth have for the moment obscured the idea of welcome, and as a result methods are resorted to which cannot but arouse the enmity and resentment of the in itiated.

Let us for a moment consider present ordinary methods of initation. The battle takes place after dark. The Freshmen are kept in a state of suspense, awaiting they know not what, while the Sophomores creep up upon them under cover of the darkness, and finally a simultaneous rush is made, and with blood-curdling yells they leap upon their prey. One instantly calls to

mind stories of the North American Indians. Then follows a deluge of soft, sticky, ill-smelling articles, which do not add to the enjoyment of the at tacked. Not until the attacking party come within arm's reach are the Fresh men able to raise a finger in self de fense. Then under cover of the dark ness many things transpire which are strictly against all rules and agree ments. By the dim rays of a lantern, the writer saw during the recent scrap a basket which a few moments before was heaped with over-ripe tomatoes, being used as a war club upon the head of a prostrate Freshman. Do not imagine that in citing this incident we wish to criticize the actions of the Sophomores, for while foul play was indulged in to some extent by class "12" the Freshmen are also open to critic ism in this respect since several of clearly demonstrated Tommy Burns has several rivals for pugilistic honors. How are such ac tions to be eradicated so long as dark ness covers them? In the heat of battle the temptation to resort to some such measures is very great. Then again a very decided disadvantage of "night initiation" is that urged by the specta tor. All he sees is a mass of struggling humanity, he hears the shout of the Sophomore, the howl of the Freshie; a confused medley of foul odors is wafted to his nostrils; in the excitement of the moment he presses rather too close to the battle ground and perchance carries away on his clothing a portion of the ammunition and ill-smelling ingredi ents. Small wonder then that the ma jority of on-lookers adversely criticize present methods of initiation as carried on after Old Sol has sunk below the horizon.

How then should this time honored custom be demonstrated. We do not attempt to make any suggestions be yond recommending that it take place during daylight. It appears that the Sophomores object strongly to this since they are usually outnumbered and their chances of winning are therefore greatly reduced. Let them then exercise greater ingenuity and strategy in laying their plans. From the specta tor's standpoint a "daylight initiation" would be a decided improvement in so far as he then has an opportunity to see the fun without approaching too near to the scene of conflict. We be lieve also that if this change were made it would tend to promote the feeling it was originally intended to create between initiator and initiated. Let class "13" then exercise originality when they meet class "14" on the cam pus next September.

While this is a threadbare subject to some of us we feel justified in our de

sire to throw out a hint or two to the new Macdonald students and Fresh

Patronizing Advertisers

men regarding our advertisers. It is assuredly in the best interests of every student to patronize our advertisers. Why? Because you can depend upon it that you will be constantly treated and fairly dealt with, and beside, by so do ing you confer a favor on the Business Manager, making easier the securing of advertisements. Do not be afraid to tell our advertisers, when you go in to make purchase, that you saw their advertisement in the Review. It will not hurt you and it will greatly help us.

We are always pleased when we see a step taken in the right direction by

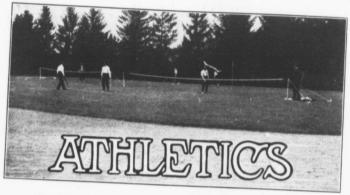
Collection of Hees

the various College organizations. This time it has to do with the change in

the method of collecting the fees for the different societies. Heretofore, there has been very little method about it, but has been done in a somewhat haphazard fashion, going about from room to room several times by each society until the Freshmen began to wonder "when will these things cease." It meant a larger amount of work for those responsible for the collecting and also was a nuisance to those wishing to study, to be interrupted from time to time by men parading the halls and do ing the talking necessary to get the fees. This year, with the consent of the President, the fees required for the College organizations were collected at the time the students entered, and we believe this arrangement to be highly satisfactory. The executives can now go ahead and lay their plans for the work of the year, knowing how much money they have, and can lay it out to best advantage.



MEMORIES OF SUMMER.



The Rugby Situation.

E have, this season, for the first time in the history of the instition, two rugby teams entered in a regular inter-collegiate series; our first and second rugby teams being respectively entered in the intermediate and junior series of the Canadian Inter Collegiate Rugby Football Union. This doubles the number of men required to represent College on the football field, and thirty men will receive one or more trips to Toronto, instead of fifteen as formerly.

This means that more men are required for practice every night. We have sufficient playing ground for four teams, and we have enough men in College to make up the four teams. What we want now is to establish connection between the two—to get the men out to practice. The game may appear, at first sight, somewhat intricate and difficult of comprehension, but the principles of the game are simple. One never knows what he can do until he tries, so we urge every man to give it a fair trial. Come out and practice, we need you.

The Athletic Association was en abled to meet the extra expense inci dental to entering two teams in the league, by the extra funds afforded by the higher fee that is charged this year. They were also in a position to look around for a coach for our football teams, and our football manager, Mr. Ias. B. Fairbairn, was so fortunate as to secure the services of Mr. Leckie. Mr. Leckie comes to us highly recom mended as a man experienced in both Inter-Collegiate and O. R. F. U. foot ball, having graduated from McMaster University, Toronto, and having cap tained her football team for the last two years. He has lost no time in get ting to work, and has at this early date built up a team from the raw material at hand-the majority of last year's first team not being here this yearthat is beginning to work together and round into shape fairly creditably.

Mr. Reeds having resigned his position at the end of last year has been succeeded as Physical Director by Mr. Nixon, of Hamilton. Mr. Nixon is a graduate of Mr. Barton's training school, and has played with the Tigers'

intermediate team for some years. So try and O. A. C. walked off the field in we may congratulate ourselves upon disgust.

Association Football.
On Saturday, September 25th, O.
C. tackled the Scots on the latter



MR. GEORGE P. NIXON. Our New Physical Director.

having the services of these two men in our endeavor to lift the intermediate and junior championships in the Inter Collegiate Football Union.

St. Jerome vs. O. A. C.

A practice match was arranged be tween College and St. Jerome's Col lege, Berlin, to take place at Berlin on Saturday, September 25th. As an ex hibition of football, the game was a decided failure, the game being delayed at every turn by disputes between officials and players. The gasmatch fizzled out when the ball from a return kick struck a spectator standing on the field bounded into our goal and was collared by Berlin. Berlin claimed a

On Saturday, September 25th, O. A. C. tackled the Scots on the latter's grounds, at Exhibition' Park, and were trimmed 2 to 0 in a game that was void of any really good football. Both teams gave evidence of lack of training, but Scots had somewhat better combin ation and earned their victory.

O. A. C. was represented by—Goal, Harries; backs, Unwin, Powley; halves, Main, Robb, Peart; forwards, King, White, Smith, Toole, Light.



A. M. SHAW, President of Athletic Association.



THE summer has passed away, the autumn has come and with it, the students of agriculture have returned. Five months have come and gone, yet each student feels as though it were but yesterday that we said goodbye beneath the sunshine of early spring.

It has been said that "where woman is 'tis heaven there." If that be true, then this old College of ours is immor tal, for, from the 16th of April until the end of June, the College halls were full of sweet perfume and blushing maidens. Their advent marks another step in the work of advancing the Science of Agriculture. These young ladies came to the O. A. College from the Normal Colleges of Ontario, to take a short course in Agriculture and Manual Training. The course was en tirely satisfactory, both to the members of the class and the faculty of educa tion.

The student-booths were again in full swing during the June excursions, and the receipts were very satisfactory indeed. Mr. Wm. Squirrel, sr., and wife, accompanied by their son and daughter-in-law, paid a visit to their native land, during the summer. Al

though a resident of Canada for many years, Mr. Squirrel is still interested in his English home. Mr. Wm. Squirrel, jr., is still wondering at the power pos sessed by the London policeman, who, he says, can stop a mile of traffic by the raising of one hand.

The Physics Department has had four men out surveying the farms of our Province. (These men) Messrs. W. Reek, S. H. Gandier, O. C. White and J. Spry were the men to whom this important work was entrusted. In almost every case demonstrations were given and were well attended. The farmers of Ontario are awakening to the fact that a system of drainage is a paying investment. Many of the applications sent in have not yet been ful filled owing to the great number of farmers who desire to have their farms underdrained.

The College Organizations

Opportunity is the metal of which the key to success is made. If you are wise and wish to become a success as a student of this institution, and a suc cessful student means a good all-round man, you will seize the opportunity which the different College organiza tions offer you, whether you be Fresh man or Senior, and establish yourself as a unit of each and everyone of the in struments of education which this College boasts.

The versatility of the Literary So ciety places it first in importance. It is a society which aims to develope in every sense of the word, the literary, musical, and social aspects of college life. The literary division embraces public speaking and debating and receives the larger part of attention by the association.

As a student of Scientific Agriculture it is essential that you should be able to express your views clearly and logically upon the public platform. Here is your opportunity! If, as a member of the Literary Society you take advantage of every opportunity offered you to appear in public before your fellow students, you will be conscious of a marked improvement in your plat form ability. It is desirable that every man enrolled in this institution, join this society as soon as possible, and take an active part in its proceedings.

The Union Literary Society is divided into three divisions—the Fresh men forming the Maple Leaf, the Sopho mores, Juniors and Seniors, the Alpha and Delphic. The divisions are made by a special committee. The election of officers for these different sub-socie ties takes place at the commencement of each term. The President and officers of the Union Literary Society for the (years of) new year beginning January, 1910, will be elected in December.

The oratorical and public speaking contests, and the inter-collegiate de bates are the most important events of the Literary Society year. Valuable prizes are offered and great interest is taken in these contests.

Regular meetings of each society will be held every Saturday evening in Massey Hall. Joint meetings of the three sub-societies and the Macdonald Hall Literary Society will be held once a month.

The Young Men's Christian Association is an undenominational organization which deals solely with the problems of life and its deepest interests. Problems which must be solved, if one would be a man in the truest sense of the word. Interests which must be respected if one would give oneself a square deal.

There is a place in this world for one kind of man only—the all-round man. The man who is educated, mentally, morally, physically and spiritually. The four-sided man whose life is not triangular, whose ideals are high and whose code is a code of honor. The Y. M. C. A. seeks to help in the develop ment of such a man and therefore it lauds the work of the different College societies. But each society has a work peculiarly its own.

The Athletic Society seeks to develop muscle and brawn, the Literary Society, mind and speech. Here then we have the means to increase the mental and physical forces. But there is a part of man, which these societies cannot reach. Educated to a fault, man finds that he is limited to certain realms of thought, beyond which he is not strong enough to see. This is the spiritual or religious side of man's character calling for recognition, and unless it is given its place in his life, man cannot truth fully say that he is a balanced being. It is this religious trait that has uplifted humanity. It is the power of higher ideals, that has given us our present

highly developed state of civilization, and it is the expresion of our inner being which has helped us to see vic tory when clothed in the rags of defeat.

It is the desire of the Young Men's Christian Association to develope through the bible-study classes, this side of man's character, and to teach him to recognize a greater power in life than himself, upon whom he is dependent, and at whose word he lives.

The Executive of the Philharmonic Society are placing before the students an interesting and varied programme this year, and they hope that every student will help to carry it out. This year, as last, there is to be a College orchestra and all musicians are asked to give their hearty co-operation. The general practices of College songs will be held once a week in the College par lor. Every student is invited to take part.

The Initiation.

After twelve months' of eager anticipation, the outcome of a personal acquaintance with the mysteries of initiation, class '12 reached the goal of their hopes, when they met the men of the Freshmen class in mortal combat upon the College campus, on the eve of September 10th.

After the custom of the Mohawk Indians, the Freshmen adorned their faces with a generous streak of lamp black, and with the true spirit of war fare swelling in their bosoms, rushed in doubtful anticipation to the flag pole erected at the southern extremity of the campus.

Arranging themselves in a circle some ten men deep, around the pole at the summit of which flew the flag whose downfall meant victory for the Sophomores, the men of "class '13,"

awaited the attacking forces. The sig nal was given by the physical director, and in less than ten seconds, a miscel laneous collection of carbon bisulphide. over-ripe tomatoes, lampblack, musk melons, blackstrap, and low-grade flour, was finding its way toward the centre of attraction, from all directions, Whilst the result of the bombardment could not be seen by the spectators, owing to the darkness, it was very obvious that the Freshmen were not overjoyed to receive so much attention from strangers. In fact, if one could judge by the sound of things, the toma toes, lampblack, blackstrap and musk melons, were making themselves felt in a manner better to be understood by the defenders of the flag, than by the onlookers. Needless to say, the carbon bisulphide spoke for itself,

In less than five minutes the Sopho mores had exhausted their supplies of ammunition. With a series of yells, which would have been no disgrace to an Assyrian army, the class of '12, bore down upon the waiting Freshmen. The defenders, eager to vent their pent-up feelings upon some tangible objects, received them with open arms, and the manner in which they were embraced must have been extremely embarassing to the Sophomores. In less time than it can be told, a generous portion of the spent ammunition was transferred from class '13 to class '12, through the agency of personal contact. oughly unrecognizable the one from the other, both classes wrestled and grappled in grim determination. The air was full of fragments of shirts, trousers, hair, caps and unearthly noises. Men were struggling on the ground for the uppermost place. Those who once were clothed in accordance with the laws of civilization, were now

a sorry spectacle, for the scarcity of shirts and the need of a good wash, were obvious even to the lookers-on in the dark.

Numerous attacks were made upon the centre where the flag pole was planted, and after many vain attempts, to climb (the) to the fluttering flag, were made, the Sophomores were suc cessful in capturing the desired troubly.

Whilst the Sophomores gained the day, the Freshmen can be congratulated upon their defensive powers, for al though there was a ratio of two to one in favor of the Freshmen, the darkness, combined with the knowledge the Sophomores possessed of the campus, placed the two years on an equal footing, which in Irish terms, was slightly in favor of the class of '12.

The object of the initiation is to create a feeling of good fellowship be tween the two years. Whether the result is in accordance with the desire, is a matter for rash speculation. We must admit that the feeling must be distinctly Irish. However, we can safely say, that the good sportmen will see the real spirit underlying this annual so-called relic of barbaric ages, and profit by it. In the words of one gritty Freshman, "It was a jolly good scrap. I never was so gloriously dirty in my life before."

Changes in Staff.

The summer of 1909 witnessed several staff changes and additions, which mark another mile post in the history of the O. A. College.

A very popular appointment is that of Mr. G. H. Unwin, B. S. A., to the position of Dean of Residence. Mr. Unwin, though an Englishman, claims Chefoo, China, as his native town, his father being Commissioner of Imperial

Maritime Customs in that country at the time of his son's birth. At the age of eight, Mr. Unwin went to England and received his early education at Berkhamsted grammar school, in Hert



MR. G. UNWIN, B.S.A.

fordshire. He subsequently spent one year at Oxford University, and two years on the continent, in Switzerland, France, and Germany. After teaching for two years in preparatory schools in England, Mr. Unwin came to Canada in September, 1905, and entered the Truro Agricultural College. In September, 1927, he registered as a third year student at the O. A. College, and graduated this spring. The Review predicts a brilliant future for our present Dean of Residence.

The Review is pleased to record the appointment of Mr. R. R. Graham, B. A., late Dean of Residence, to the position of lecturer in soil physics. Mr. Graham fills the position lately vacated by Mr. Thom, who sometime ago accepted a position at Washington, D. C. Mr. Graham is a graduate of the

Athens High school. After teaching public school for three years Mr. Graham entered Queen's University, graduating in Arts in 1902. He then took the Normal College course at Hamilton, and taught school for a short time in Saskatchewan. Returning to Ontario, Mr. Graham spent two years as Senior Master of Athens High school. He then came to the O. A. College and after completing his course here, he was appointed to the position of Dean of Residence. While serving in this capacity Mr. Graham was evidently very popular among the students. His appointement as lecturer in physics is highly satisfactory to the student body.



MR. A. SLATER, B.S.A.

One addition to the O. A. College staff is the appointment of Mr. A. Slater, B. S. A., as lecturer in soil chemistry and geology. Mr. Slater hails from Southern India, and received his early education at Bishop Cotton's school, Bangalore. At the age of eleven years, Mr. Slater went to Eng land and continued his education at Bishop's Hartford College, in Hertford shire. Returning to Bangalore, he



L. D. JACKSON, B.A.

worked in the government laboratory under Dr. Lehmann, chemist to the Mysore Government, and an ex-gradu ate of this College. Upon the advice of Dr. Lehmann, Mr. Slater entered the O. A. College in 1904, graduating in 1908, as specialist in chemistry and physics. He then went to Trinity Col lege school, Port Hope, in the capacity of Science Master. This year he ac cepted an appointment on the O. A. College staff, as lecturer in soil chemis try and geology. Mr. Slater is held high in the esteem of both the student body and the staff, and we wish him every success in his present capacity as lecturer.

Mr. L. D. Jackson, Mr. M. F. Cog lan's successor as fellow in chemistry, comes to us from McMaster, of which he is a graduate of '09. He is a native of Lambton County, and received his early education at the High schools of Sarnia and Petrolea.

Mr. Jackson is a rugby man and is already in line for the first team. He is not only a player, but he is also an enthusiast and is already making him self felt among the students.

The College wishes him every success, both in the laboratory and upon the football field. We feel sure that Mr. Jackson will not fail to uphold the traditions of our College in whatever situation he may find himself placed.

Obituary.

In the death of Charles Ferguson, of class '10, the College has lost a man of whom it was justly proud. "Old Fergy" was the type of man who makes a success of life. True to him self, generous to his classmates, with a single purpose in life, he was ad mired by all who knew him. On ac count of ill-health, Charlie did not enter his third year with class '10, but in tended coming back with year '11. In the early days of summer he passed away without suffering, and in full pos session of his faculties. We extend our sympathy to his sorrowing family, feel ing that the loss is partly ours. The memory of this man will ever be fresh in the hearts of those who knew him, and the place he filled in our College will always be vacant.

All students who attended the O. A. College during the past year, will regret to learn of the death of Neil Black. The sad event, which took place at Orillia, on 6th July, was the result of an accident which occurred in a planing mill. Deceased was operating a rip saw, when a piece of board was thrown back, striking him violently in the ab domen, and inflicting internal injuries from which he died three days later.

Neil Black was a man of exemplary character, his life being dominated by high ideals. Quiet and unassuming, self-denying, and God-fearing were amongst the characteristics which adorned his life. A diligent student, courteous and obliging, he was re spected by all at the O. A. College. His life, therefore, was one which the Col lege and the world can ill afford to lose. Much sympathy is felt for his widowed mother and brothers and sisters.

The funeral, which was a large one, took place from his home in Orillia, the remains being laid to rest in the burying-ground of the old Presbyterian Church at Hawkestone, some nine miles to the south. The College was represented at the funeral, a beautiful wreath being sent by the class of '12, of which Neil was a member. The College representative was Mr. McTag gart, a classmate of Neil Black. On behalf of the College we wish to thank Mr. McTaggart for his thoughtful kindness.

Alumni

Some of our Old Boys in B. C.

BY H. R. MACMILLAN.

There is on the coast, where lumber, fish, minerals and shipping are building a great fort and developing a busy city, a colony of O. A. College men, nearly all of whom have, like Joseph of old, forsaken the tilling of fields and the herding of flocks. A few of them have still further emulated the ancient manipulator of the wheat market, and are now making themselves secure for all time by securing at a low price tracts of B. C. timber, which we, who are not on the inside, will be buying at a high price.

The dean of O. A. College men in the lumber business it T. F. Patterson, Patterson was not born in the purple, and did not work up in He went into it sideways, He was educated as a biologist, and when youthful his ambition was to as sociate with insects and search for cells. When he graduated into the timber business this latter part of his training he turned to good account. During a depression in the biological market Patterson became editor of the Vancouver World. In those days logs were an uncertain quantity on the Van couver market, they were brought into the harbor in booms by loggers, who were hard up for money, and did not care to wait a few weeks until a pos sible shortage might improve the prices. There were speculators who bought the booms from the loggers,

and held them. There were two chances. One was that storms or rainy weather might delay logging op erations and prevent booms from reaching the mills-in this case prices went up. The other was that more booms might be brought in than the mills could manufacture-in this case the logs were sold at a loss, if they were not first destroyed by teredoes. This gamble looked like a good busi ness proposition. He employed him self at it so profitably during his spare time that soon no Vancouver news paper could afford to hire him. Thus he became a lumberman.

At this juncture the Patterson Tim ber Company was incorporated, with T. F. Patterson, his brother, and his uncle as partners. Timber land was purchased and logging camps estab lished. Logging on the coast requires a large investment. By the time the company had a boom of logs ready for sale, nearly all their money was in vested in that boom. The logs were towed to Vancouver, where the market was dead, and after long trips were finally sold to an American mill on Puget Sound for but little more than paid the towage fees. Thus Patter son got his experience. But little ex perience has been used to better ad vantage. During the past few years the lumber business has prospered ex ceedingly, and Patterson has kept well

in advance of any advance in prices every time. The firm had one year ago over one hundred square miles of the finest British Columbia timber, more logging camps operating than any other British Columbia Company, and extensive interests in shingle and saw mills. Thus Patterson has prospered.

The next O. A. College man to in vade the lumber business of the coast was Dr. I. F. Clark. He had been for several years telling the Ontario Government how by a few little changes in their Crown Land Administration they could make more money out of their timbers, and at the same time leave their timberlands in better man agement for generations to come. But a general impression prevailed that a forester, especially a college-trained one, was a poor authority on profit and finance particularly as applied to Gov ernment timber lands. So Clark un dertook to show them. B. C. was just then, only two years ago, renting for less than twenty-five cents an acre per arnum all her public timberlands, and there yet remained choice areas where shrewd individuals could lay bets with the government, wherein they waged \$140.00 against a square mile of tim ber that they could cut the aforesaid timber or dispose of it to advantage before it fell a victim to forest fire. Dr. Clark took a hand in the game, and during the summer of 1907 he in creased the height of his brow by two inches, where the tump line wore off the hair, and succeeded in placing forty very advantageous bets on as many square miles of British Colum bia timber. Having demonstrated that as a forester he was a financial success he proceeded to prove as thoroughly

that, of the permanent management of timberlands he knew something. Dr. Clark has identified himself with the timber interests of the coast, and has been appointed as Forester to the representative lumbermen's association, the British Columbia Lumber, Logging and Forestry Association.

The third O. A. College man to take to the timbers of British Columbia for a living was R. D. Craig. He adopted this course from motives of economy. After getting married he found he had to double his salary, and this was the surest way in sight. As manager of the Adams-Powell Timber Company he laid in a few bets with the govern ment, and succeeded in covering some twenty square miles of timberland, all carefully located with reference to streams and tide water-before legis lation declared the game over. Craig is raising a family at the coast, and has two to start with, one of which, the eldest, is a son.

At least one of the O. A. College men has achieved success on the coast as a manufacturer. In 1907 Timmy Gad, once a dairy man, always ener getic and resourceful, secured a job as foreman of the night shift in a shingle factory, the assets of which were logs, machines, Chinks and a ready market. The idea was to keep the machines going all the time, using as few logs and Chinks as possible to do it, and to thus produce a maximum number of shingles from a minimum number of logs and Chinks. Timmy did this to such good purpose that the tireless Chinese operated as if driven by the same power as the machines. Soon the night shift was manufacturing more shingles than the day shift; Timmy

then became day foreman, then mana ger of another mill and made good until he is part owner of a good shingle mill in Vancouver.

After leaving Guelph Will Gunn went to Toronto and Montreal where with two of the best commission houses of the country he learned how to look an egg in the eye and how to lay out a chicken in its Christmas trous seau. These and many other things he learned, not the least of which at Vancouver might be developed a pro duce business receiving farm and dairy products from the East and the plains, and distributing them over the whole of the mountain country, and to the whole seaboard, from New Westmins ter to Nome. Since 1907 Gunn has been a partner in the commission firm of Milne & Gunn.

When Bob Deachman was editor of The Review the specialties were ad vertising and illustrations. After leav ing The Review, in which he gradu ated about the time he stopped study ing agriculture, he went to Calgary as western outpost for the Farmers' Advocate. From there he was pro moted to the Winnipeg office as adver tising, and finally as business manager. But Winnipeg was too far east, and Deachman went to Vancouver, finding a place on the staff of a new weekly, the B. C. Sunset. From this he gradu ated to the Noble Advertising Agency, at last finding an outlet for his genius of publicity, his creed of optimism and contagious faith in optimism, and hence he became connected with the agency. His interests have grown un til he is now a half owner, and the business has grown from a one-man power in 1908 to a six-man concern in

1909. Another Review man has been taken into the firm, this time one with a family, C. A. Esmond, late of the Nor' West Farmer.

G. F. Clark, '96. Clark came to the Province about the same time as Craig, and is interested in the same work, as he is representing here a large Eastern syndicate, and has located for them some excellent limits. He is also asso ciated in business here with Thos. Gadd, '98, in operating The Cedar Cove shingle mill. They have worked up a very extensive business in this line.

Goulding, Geo., Vernon, B. C. R. D. Craig met Goulding up country when he was working up there, and has just advised me that Goulding has a very nice fruit ranch. He is married to Miss Mazie Bussell, of Guelph. They are both very happy and prosperous.

Livingston, J. N., 'oo. Since leaving College Livingston has given his attention to dairying almost altogether, with an occasional deal in real estate as a side issue. In both these lines he has been very successful. Livingston has been for some time the manager for the Richmond Dairy Co. here, but has just recently become interested in the City Dairy and Produce Co. in Van couver. He is making a splendid success of it. Livingston isn't married yet, the rascal. He should have been at College after they started the Macdonald Institute.

Dr. A. A. King, '95, Ladners, B. C. Dr. King since leaving the College went in for the medical profession, and is now established in a very large practices at Ladners. At College King was known as "Fatty King." Although he

has given his attention to other lines in the pursuit of agriculture, he is still one of our most enthusiastic fellows when it comes to having our annual ex-students' banquet. At the last ban quet he recited his old favorite "Snoring" recitation.

E. McMaster, '96, is manager here for McMaster & Sons, a wholesale clothing business. It is one of the largest establishments in this line in Vancouver. McMaster is also very en thusiastic about the good times he had while at College. McMaster is married and a very influential citizen.

W. H. and J. A. Higginson, '03. Both James and Will Higginson are operating their own farms at Chilli wack Valley, near Sardis. They have two of the most desirable farms in the valley and are enjoying much prosper ity. Both are married.

F. B. Linfield, of the class of '91, is one of the O. A. College men who has made a large place for himself in the agricultural development of the West ern United States. For nine years, commencing 1893, he had charge of the animal husbandry and dairy work in the Utah Agricultural College, and did much to develop the stock and dairy interests of that State. In the fall of 1902 he was elected to the head of the agricultural division of the Montana Agriculture, and became director of the Montana Experiment Station in 1904. Linfield's work along dairy and general agricultural lines has brought him into prominence throughout the Western States, and he is in much de mand as a speaker at all the large agri cultural and industrial gatherings in the West. He works just as hard each day as he did when he drove the head team on the farm at O. A. College.

W. J. Elliott, '98, better known as "Billy" Elliott, graduated in Dairving, and immediately took up practical creamery work in Minnesota. In Sep. tember, 1903, he was elected Instructor in Dairying in the Montana Agricul tural College at Bozeman, and two years later was made Professor of Dairving. Elliott has met with marked success in developing the dairy inter ests of Montana and in his instruction work at the college. In 1909 was elected to the position of Principal of the School of Agriculture which in cludes all courses below college grade. "Billy" is the proud possessor of a bouncing baby, which, unfortunately, is not built on the football plan. Her "dad" is still the same old enthusiastic "knight of the pigskin" in spite of his 205 pounds of personality.

Alf. Atkinson entered the O. A. College with the class of '03. During the vacation between his junior and senior years, he was appointed to the position of Assistant Agronomist in the Iowa Experiment Station at Ames, and left Guelph to take up this work. He graduated from the Iowa State Col lege in 1904, and was elected to the position of Instructor in Agronomy in the Montana Agricultural College at Bozeman during the same summer. In 1905 he was made Professor of Agron omy. In addition to instruction in soils and crops in the College, Atkinson has had charge of the soil and crop investigations under the irrigated and dry farming conditions of Montana. He has given up boarding-house life, and gets home in good time Sunday even ings.

The marriage took place at Morden, Man., on September 2nd, of W. C. McKillican, B. S. A., to Annie Mary, daughter of Mr. and Mrs. F. B. Stewart. The Review joins with their many friends in extending congratula tions and best wishes for a happy and prosperous wedded life.

That graduates of the O. A. College are popular with the Farmers' Advocate is evidenced by the fact, that to son of Mr, and Mrs. E. M. Bracken, of Sceley's Bay. The ecremony was per formed in the parlor, which was pret tily decorated for the occasion, by the Rev. R. J. M. Glassford of Chalmers Church, in the presence of only the immediate family friends. When the congratulations of all present had been tendered a tasty wedding repast was served, following which the young couple departed for the East. Their honeymoon will conclude at Regina,



the already large number of men employed by them, they have added L. H. Bowes, B. S. A., '08, with headquarters at Calgary.

Bracken-Bruce. A pretty and quiet June wedding was that celebrated yes terday afternoon at the residence of Mrs. Bruce, Oxford street, and which united in the bonds of holy matrimony, Miss Alice Wylie Bruce, eldest daugh ter of the late George R. and Mrs. Bruce, and Mr. John Bracken, B. S. A.,

where they will make their home for the present. Miss Bruce is a daughter of one of the best known families of the city, and is a young lady who has been very popular in the city, and many while tendering their hearty con gratulations on the occasion, will re gret to see her leaving Guelph for a western home. Professor Bracken is also known in Guelph, being a gradu ate of the O. A. College. He is now a Professor at the Agricultural College at Saskatoon.



The Reopening of Macdonald

NCE more the doors of Macdon ald Hall are thrown open, and the spacious corridors resound with the ring of merry voice and cheer ful laughter. As the girls flock in many may be seen who are familiar with the grand old place and the reunion of old friends bespeaks the joy that returning has brought. Others there are who ap proach with awe and entering the strange halls a silent voice within them selves seems to whisper "There's no place like home." But how long does this strangeness last? We need only to look back upon our own entering to realize what it means to be a new girl and then it becomes so much easier "to do unto others" and we do not hesitate longer to make the strangers feel at home.

It takes but a short time to discover that Macdonald Hall offers almost per fect freedom to its residents, and what a very home-like place it is. Then the work. What wonderful opportunities are offered those who study within its walls. Not merely an inkling of a num ber of subjects, but a thorough practica al knowledge of something of vast im portance in after life and that which every woman should pride herself in knowing.

Many students there are who have passed out of these halls, but of the vast number there are few, if any, who have anything but the very best to say of Macdonald Hall in every respect. Therefore we wish to welcome the new girls to the old hall, hoping that they will enter into the spirit of College life as their predecessors have, to enjoy to the full all the advantages offered and to take part, heart and soul in every thing, whether it be work, athletics or any of the different societies here formed. We also hope that the girls will carry away with them pleasant memories of the happy times spent here whether their sojourn has been three months or two years, and that in the time to come they may be able to look back and be glad that they were once residents of the grand College.



Among Ourselves

The Initiation-Jessie A. Allen.

On Saturday evening the much-dreaded, much-talked-of, initiation was held and the poor innocent Freshettes were shown their littleness and insignificance by that noble body of girls, commonly called Seniors.

The new girls were led by four stal wart policemen, one by one, like lambs to the slaughter, into the darkened gym, and were gently, but forcibly, seated on the floor, thus indicating their lowly and humble position. When all were assembled the Juniors found that they were to be tried for their sins by a court and jury.

The roll was called and each girl found added to her name some highly descriptive epithet. It was found necessary to send the policemen after a few delinquents. The speech from the throne followed this proceeding, and the Freshettes were informed that the key note of all intercourse between

the Seniors and Juniors was Respect, with a capital R. The rules and regula tions were read and the hearts of the new girls filled with dismay. The cases were then tried, the accusations being such as "being met at the station by a man (one not wearing an O. A. C. tag), "talking too much," "attracting undue attention,' "modernism in riding," "mal-nutrition," etc., etc. The lawyers by their questioning made some inter esting disclosures. The penalties were somewhat varied, being the natural consequence of the offence, those ac cused of mal-nutrition were found. when the lights were turned on, to be eagerly devouring a huge bowl of bread and milk, fed to them by the kind Seniors.

The address of welcome was read and at the same time the opportunity was taken of welcoming the new Presi dent of the school. This was followed by "three cheers" and the various col lege yells, then the rest of the evening was spent in dancing, after which light refreshments were served.

Athletics-By E. B.

The Macdonald girls have always been more or less interested in athle tics, but this year the work is to cover a much broader field than ever before. Toward the end of last term the present body of Seniors formed an athletic association, and this fall have taken up the work in earnest.

The officers are as follows: Miss Mar jorie Smyth, as President; Miss Mar garet Smellie, Secretary, and Miss Florence Belton, Treasurer.

The association was divided into several different branches, among them being tennis, basketball, ground hockey and a walking club. A Senior was elected to manage each of these with a Junior as her assistant, the tennis be

ing under Miss Grace Edwards, basket ball Miss Amoret Kendall, ground hockey Miss Jean Flavelle, and the walking club Miss Maebelle Stuart. Needless to say the girls are looking forward to these sports with much pleasure.

Last, but by no means least, is the gymnasium work, which is being under taken by Dr. Ross. The girls seem to be taking more interest in this work than they ever have before. The fact that it is to be considered a school subject and have a place on the regular time table is appreciated greatly, especially by those who in the past have had their gymnasium classes between the hours of four and six o'clock in the afternoon.

Dr. Ross promises to excel in her new line of work. She has already won her way into the hearts of the new girls to say nothing of where she stands with her old girls."



SCENE ON NORTH SHORE OF LAKE SUPERIOR.

Much Ado About Nothing

I love my Two in One, But, Oh, you Packard.

Editing a paper is a great thing. If we publish jokes, people say we are rattle headed; if we don't we are fos sils. If we publish original matter, they say we don't give them enough selections; if we give them selections they say we are too lazy to write. If we don't go to church, we are heath ens; if we do we are hypocrites. If we wear old clothes they laugh at us; if we wear good clothes we have a pull. Now, what are we to do? Just as likely as not someone will say we stole this from an exchange—so we did.—

Senior at the Freshman rugby practice—Oh, say girls, look at that chap, he kicks with his left hand.

Overheard in passing—And which is it the repel or lapel of a coat?

Miss B.—I have been calling Miss Cupboard, Miss Sideboard all the time and just discovered her name was Wardrope.

New girl—What is House Practice, is it waiting on tables and that sort of thing?

Miss V.—Speaking of autos and not knowing the difference between or the correct pronunciation of chauffeur or chiffonnier, said—"Oh, you know the bureau that drives a motor car.

Miss A—As the men passed on their way to church.—That chap hasn't brushed his boots, they just look like elephant's breath.

Miss G.—No, I don't suppose they ever do that over there.

Senior chaperoning Juniors—Next time I take this crowd to the roller rink my alarm clock goes with me, set for ten o'clock.



Schools' and Teachers' Department

Deboted 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, Agriculture and Horticulture.

Foreword.—Commencing with this number the management of The Review has kindly granted the use of a few pages monthly to be devoted especially to furthering the interests and enhancing the work of the College-students who are coming to us in increasingly large numbers to receive training to teach those special lines of work, for

which the Macdonald Institute was founded.

In this Department of the College paper an effort will be made to hold together all our isolated workers in their scattered and several fields of endeavor; to keep open lines of communication between the College and all our teacher-students who care to regard the Macdonald Institute and Ontario Agricultural College in any respect as an Alma Mater; in every way possible, to help, encourage and direct those who represent us in the schools in the newer lines of educational work.

Teachers who have taken courses at the College will not receive all our care. Those who are trying to give the children in their schools some training along vocational or industrial lines, without having themselves received special training for the work, will be

kept in mind as well.

The hope is held, that by a unity of interest, aim and effort amongst our teachers, the work amongst the children in our individual schools may be the more greatly blessed, and in some measure the educational development of the country at large be directed and helped.

Co-operation Asked.—Success in this project depends largely on the active goodwill of our former students. From each is asked sympathy and help. These can be shown in some of the following ways:—

1. Keep us informed concerning changes in address or work.

- Let us have suggestions for making the Schools' and Teachers' Department more and more useful,
- Send in news items about our teacher-graduates that will be of general interest to former classmates.
- 4. Forward copies of photographs of your school, school grounds, laboratories, school gardens, children's excursions, school-room decorations, etc. Other teachers may get helpful suggestions from their reproduction.
- 5. If you teach in a new well-planned, up-to-date school, try to let us have copies of the architect's plans, with the details of cost. If your school board puts in for you some well-devised equipment for your work, let us have rarticulars of construction, use and cost.
- 6. If you have had success in teaching some new branch of work, let us know your plan of taking it up. If your efforts have resulted in failure, let us have the benefit of your experience.
- When you read a paper at your Teachers' Association, let us have a brief report on it. Keep us informed regarding the progress of industrial education in your district.
- If you find any particular book or text, especially useful to you or your pupils, inform us about it. Let us know how the O. A. C. Review has been used in your school library.
- Let us have discussion of changes in school regulations, which you consider desirable,

We hope to have support from the Public School Inspectors of the Province as well as from our former students.

Address communications in matters pertaining to Home Economics to Miss Watson, Industrial Arts to Mr. Evans and Agriculture and Nature Study to Mr. McCready.

AGRICULTURE.

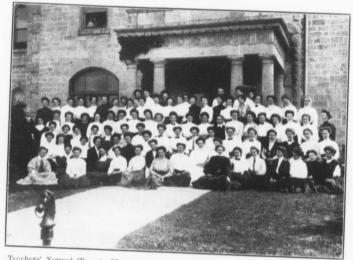
Class of 1909.—The first Ontario Teachers' Normal Class in Elementary Agriculture and Horticulture entered the College on April 19th last. The course lasted through ten weeks, the term closing on June 29th.

The class was comprised of ninety-seven teachers who had been successful at the Easter examinations, and completed their professional training at the six Provincial Normal Schools. Eighteen were from London, fifteen from Stratford, twenty-three from Hamilton, fourteen from Toronto, eight from Peterborough and nineteen from Ottawa. Nearly every county in Ontario was represented.

The object of the course as it was officially stated in the departmental circular outlining the work was, "to train teachers in the scientific principles and practices of modern farming so that the country or village school may adequately sympathize with, and direct farming, so that the country of vinage school may adequately sympathize with, and direct the life-interests of country boys and girls." It was not "for students preparing to become experts in the Science of Agriculture, but for teachers who have to deal with Public School pupils." The course was intended primarily for rural school teachers

In carrying out the work with the class, practically every department of the College was employed. An insight into every phase of Agriculture and Horticulture was given and emphasis lad on using the knowledge given in the instruction of children in the schools. At the present time it is impossible to know whether the College has been successful in the cause of improving the nature of the work done in the few country schools where our students are at work. We await the verdict of the teachers themselves. their inspectors and their trustees. The experiment is still under trial.

The Departments of Education and Agriculture were joint partners in the experiment. The Department of Education met all expenses for the students' board and travelling. The Agricultural College gave instruction free, gave the use of its entire staff and equipment to the work, and turned over the Main Building as a Women's Residence.



Teachers' Normal Class in Elementary Agriculture and Horticulture, Spring Term, 1969.

too, became indirectly, parties in the partnership, by undertaking to carry on the work to the best of their ability in the schools of the Province for a term of three years; this in consideration of having all their expenses paid.

News Items.—It is expected that this work will be continued by the Department of Education next spring.

At the Summer Course, in July, there were six teachers in Agriculture and fifty-three in Nature Study.

The new regulations regarding the size of School Gardens, qualifying for special grants, are not yet announced. Teachers commencing garden work this year may expect liberal consideration in this regard.

From all reports that have been sent in, it is judged that nearly all the class are teaching in rural schools, and receiving fair salaries.

Word has been received from Miss H. Johnson, of St. Thomas; Miss C. Loveless, Fanshawe, and Miss J. L. Young, Brockville, telling of a recovery of health. Miss Young, however, has not been able to resume teaching.

Several members of the class are arranging this fall for commencing active school garden operations next spring. Many tell of carrying on successful Agricultural instruction along the lines of weed and weed-seed studies.

INDUSTRIAL ARTS.

Class of 1909.—The teachers' class in Elementary Industrial Arts entered the College at the same time and under the same auspices as the class in Agriculture. Their course lasted the same length of time, but was taken entirely in the Department of Manual

The class was comprised of forty Normal School graduate teachers, Twelve of these were from London, seven from Stratford, eleven from Toronto, one from Peterborough. and nine from Ottawa. There were six male teachers in this work, whereas there were

no men in the class in Agriculture.

The object of the course was "to prepare a body of teachers for organizing and carrying out Elementary Industrial Training in the schools of the Province, in centres which are unable to provide well equipped manual training departments." It is expected that through these teachers children, in the schools of the smaller towns and villages of the Province, will receive some share of their education along lines fitting them for



Teachers' Normal Class in Elementary Industrial Arts, Spring Term, 1909.

better service in workshop and factory. It will be some time before the urban schools at large swing into line in this educational advance, but for such as wish to take up the

work, these teachers have been prepared.

Their work consisted of Drawing, Applied Art and Design, Wood Working, Constructive Work in paper, cardboard, clay, sand, bookbinding, etc. Great stress was placed on the training in Drawing, and a large share of time spent at it on the principle that "every workman should for the most part be able to conceive clearly and accurately in his own mind the shape of everything he may have to make or to work with. This makes it the first condition of skill that he should master shape in his own mind and that mastery requires him to be a geometer.'

As the work taken in this course is accepted towards a certificate as Specialist in Manual Training, this allows the teachers to continue the training in subsequent courses and to qualify for positions in regularly organized Manual Training Departments in High

Schools or the larger Public Schools.

General Notes .- Mr. T. J. Later, of Listowel, and Mr. J. W. Whiddon, of Goderich, are attending the twelve months' course in Industrial Arts.

Mr. Geo. K. Casselman is appointed to Morrisburg. He is giving a pa Industrial Arts at the Dundas County Teachers' Association, held Oct. 6th and 7th. He is giving a paper on

Miss Edna Copp is in charge of No. 5, Pilkington, Ponsonby P. O.

Miss A. C. Laing is initiating the mysteries of Industrial Arts to the rising generation of Waterloo.

Miss A. A. Phillips has secured an appointment under the Board of Education, Toronto. The State of Oklahoma is forging ahead in the matter of Industrial Training. Agricultural, Industrial Training, and Domestic Science are required by law to be taught in every school in the State.

Those interested in Industrial Arts would do well to secure a copy of Circular No. 7, just issued by the Ontario Department of Education. It is a booklet of thirty-one pages, containing upwards of twenty illustrations, explanatory and descriptive of Industrial Arts as may be carried on in Public and Separate Schools of villages and towns. It deals with Regulations, Organizations, Accommodation, Equipment, Details of the Course and gives a list of helpful books bearing on the work.

Trustees requiring competent teachers to give instruction in Elementary Industrial Arts in addition to the ordinary subjects of the schools, should write the Deputy Minister of Education, Toronto, who will supply a list of such teachers, with their addresses,

HOME ECONOMICS.

Graduating Class of 1909.—Fourteen teachers of Domestic Science were graduated from the Macdonald Institute in June. The class comprised the following:

Miss Miriam A. Ames, Toronto, Ont. 9. Miss Beatrice L. Williams, Pewamo,

Miss Gladys M. Black, Acton, Ont.

Mich., U. S. A. Miss Edna E. Hartley, Brantford, Ont. Miss Emily Blenner-Hassett, 10. Miss Anita E. Hill, Guleph, Ont. Forest, Ont.

5. Miss Katharine James, Charlottetown,11.

Miss Ethel E. Gromitt, Toronto, Ont. P. E. I. 12. Miss Netta M. Nixon, St. George, Ont. Miss Mary Longstreet, Brantford, Ont.

13. Miss Ellen E. Pearson, Stratford, Ont. Miss Annie MacDonald, Lanark, Ont. 14. Miss Susan L. Tyson, Wiarton, Ont.

Miss Bessie H. Peebles, Hamilton, Ont.

NEWS ITEMS.

Miss Helen McDunnough, '06, has been appointed Dietitian in the City Hospital, New York City, U. S. A.

Miss Mildred K. Armstrong, '06, has joined the Toronto Public School staff of Household Science teachers.

Miss Joan Hamilton, '06, has resigned her position in the Guelph Consolidated School to take charge of the Domestic Science work in the Regina, Sask., Public Schools.

Miss Mary McLennan, '07, is now Dietitian in the Pennsylvania University Hospital in Philadelphia, U. S. A.

Miss Edna Burns, '07, has been appointed to the Stamford High School as teacher of Household Science and High School work,

Miss Kathleen Vaughan, '08, has been appointed Domestic Science teacher in the Institute for the Deaf and Dumb, Belleville.

Miss Netta Nixon, '09, is now the Household Science teacher of the Guelph Consolidated School.

Miss Anita Hill, '09, has been appointed Dietitian in the Finley Hospital, Dubuque,

Miss Ellen Pearson is now Housekeeper in the Y. W. C. A., Cleveland, Ohio,

Miss Eva Pickett has been appointed Domestic Science teacher in the Y. W. C. A., Ottawa, Ont.

Miss Edith McKenzie has resigned from the Halifax Ladies' College and is opening a tea room in Ottawa. Miss Ethel Gromitt, '07, joins her this month.

GENERAL.

Technical Education.—Dr. Seath, Superintendent of Education for Ontario, is making a visit to Great Britain and Europe to investigate the matter of Technical Education. will study the problem in connection with elementary schools as well as the secondary schools. The future policy of the Department of Education will likely be determined by

National Educational Association of the United States.—The programme of the recent convention of this association held in Denver last July was remarkable for the attention given to industrial education. Nearly one-half of all the papers, addresses and reports presented dealt in some direct way with one or more phases of industrial education. sides of the question were under consideration—Agriculture, Industrial Arts and Home Economics. The desirability of changing school curricula so as to admit of the introduction of the work was almost universally admitted. Most of the concern related to methods, administration and the training of teachers.

Evidently the trend of educational readjustments in the United States is strongly marked by the same tendencies as we are showing in Ontario.



ADVICE TO FRESHMAN.

The Freshman just up from the coun try,

Who thinks he is awfully smart; Had better put pride in his pocket, And humble himself from the start.

If perchance, when you come to the College,

Your lip is all covered with down, Just follow this bit of advice, sir,

And get a close shave in the town.

Don't cultivate locks like a poet,

For though you may shed bitter
tears,

The lamb must come forth to the shear ing,

When the shepherd produces his shears,

If, when your first shyness is wearing, Perhaps you may feel a bit gay; Don't dump a Sophomor's bed, sir, I promise you it will not pay. If at football, out on the campus, By a crack on the shins you are

caught,

Don't swear and kick up a fuss, sir, Just grin and play up like a sport.

If she smiles on you, during the term time,

Doing her utmost to charm,

Don't flatter yourself for a moment,
She won't look at you, down on the
farm.

—W. H. W.

Here we are again!

Let's pass the hand around,

And give a welcome to each man,

On our good old College grounds.

Here we are again!
Let's pass the word around,
And we'll do our best to stand the test,
On our good old College grounds.

Freshman (nervously)—Could you tell me where to join the College?



Save the Rain, Yes, Even the Dew

Every drop of water is precious around the farm. You would always have plenty of water if your roof shed every drop that fell. Do you realize how much good water the average roof wastes? Notice how the steam rises as soon as the sun strikes

the roof after a rain-fall—what is not absorbed by the spongy wooden shingles evaporates—very little reaching the reservoir,—in a light rain, practically none. How different with a **metallic roof**,—it is perfectly dry a few minutes after the rain ceases, for as fast as it falls **almost every drop** runs to the reservoir—no absorption, no evaporation.

A Metallic Roof is not only valuable in saving rain water but a heavy dew will sometimes bring a barrelful of clean, fresh water off the metal roof of an ordinary house or barn—every drop, a clear gain—meaning so much to you in the summertime when the creeks

How the farmer's wife appreciates the **clean**, soft water that flows from a metallic roof—so different from the murky, brown fluid, made so impure from draining through the old moss, dust and dirt that quickly collects on the ordinary wood shingle roof.

"Eastlake" Metallic Shingles

not only make a clean roof but are absolutely **Lightning**, **Rust**, **Fire and Weatherproof**. They can be laid by yourself or anyone cheaper and quicker than any other shingle, and will last a lifetime. Roofs shingled with "**Eastlake" Steel Shingles** 25 years ago are in perfect condition to-day—an actual test—the best guarantee.

Our interesting booklet, "'Eastlake' Metallic Shingles," gives

Our interesting booklet, "'Eastlake' Metallic Shingles," gives inside information on the roofing problem. Write for it, also send measurements of your roof for estimates of cost. Let us quote you on rat and mice proof sheet metal granary lining.

"A Metallic Roof and Galvanized Corrugated Iron Siding on your barn make it positive proof against fire from outside sources, and greatly reduces your insurance rate."

-The Philosopher of Metal Town.

MANUFACTURERS



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

SHI

Freshie (after initiation)—Say fellows, what was that stuff that looked like smoke?

00

McIlquham—Say Knapp! Did you hear the boys were going to organize a soccer team?

Knapp—No! Is that so? I must join the athletes.

Johnston (aside)—How will he ever spare the time?

00

The Freshman's Prayer.

Now I lay me down to rest, To have some sleep, I'll do my best; If I should die before I wake, The blame, the Sophomores will take.

For ever and ever. Amen.

(Rev.) R. H. Wilson, graduate of Class '12, spent a few days in College last week, taking part in the opening exercises, and continuing his research work in anatomy.

00

Freshman (after initiation)—Well! What did you think of it? I didn't mind the water, the black stuff, flour or tomatoes, but those flat things, Oh! Oh!

The Freshmen are highly elated over the great opportunity given to them by Mr. Tothill, when he said, "I want every man in the first year, who can sing, to do so in conjunction with the girls of Macdonald Hall."



USE ____

VANCO

BRAND

CANADIAN MADE

Spray Chemicals

Lime Sulphur Solution

Lead Arsenate

Sixteen per cent. Arsenic Oxide. 40 per cent, moisture average.

THIS IS THE INSECTICIDE TO GIVE RESULTS ON ALL LEAF-EATING
INSECTS, POTATO BUGS, ETC.

Bordeaux Mixture

All our products are made from the Purest Chemicals, under the supervision of Expert Chemists.

MADE IN CANADA BY

CHEMICAL LABORATORIES

LIMITED

148 Van Horne Street

TORONTO

THE REASONS WHY THE MASSEY-HARRIS CREAM SEPARATOR IS POPULAR

Easy to Fill.—Because the supply can is low—only waist high—and there is no danger of running the can over as there is with a high supply can.

Easy to Turn.—Because it has cut gears and easy-running bearings.

Saves More Cream than any other Machine at all Temperatures.—The Improved Massey-Harris Bowl readily handles hot or cold milk.

Easy to Clean.—Because there are but two parts inside the bowl and these are easily removed.

No Danger from Exposed Gears.—Because all gears are enclosed, yet are readily accessible.

Durable.—Because made from highest grades of material, carefully finished, and on account of the easy running bearings.

Simple,-and will not get out of order.

SEE THE MASSEY-HARRIS AGENT



Here We Are Again!

Ready for season '09 and '10, with a full range of the best lines of Footwear. We have the Heavy Tan Shoes that are so popular with the College Boys. Try us, The New Shoe Man.

J. D. McARTHUR

The Store around the corner, Market Square.

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



ONTARIO WINTER FAIR PROVINCIAL WINTER FAIR

WILL BE HELD AT

Guelph, Ontario, Dec. 6th to 10th, 1909

Exhibits of Horses, Cattle, Sheep, Swine, Poultry and Seeds. Students note the Live Stock Judging Competition. Ask your friends to come to the Fair.

OVER \$13,000 IN PRIZES

A \$50,000.00 Addition Has Been Made to the Fair Buildings. A Splendid Program of Lectures Has Been Arranged.

SINGLE FARE RATES ALL RAILWAYS ON

For Prize List, Entry Forms, or Program, apply to the Secretary

LIEUT. COL. R. MCEWEN President

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

BICYCLES Bicycles are rapidly coming back into popular favor, the demand this year being five times what it was five years ago. We have planned for it in two ways-by getting the very best English wheel we can for popular selling, and saving to our customers all intermediate profits by filling orders direct by mail instead of through agents. In this way we can offer

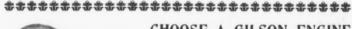
\$50 Wheels for \$25

and give better satisfaction all round. The quality of the wheels is all right - only the best materials used and only skilled mechanics employed in construction. The equipment is right up-to-date and the machines throughout are such as we can thoroughly recommend. We sell automobiles as well as bicycles and our plan is to make wheels serve as a good advertisement to the entire business. Send for illustrated folder.



HYSLOP BROS., Limited High-Class Automobiles and Picycles TORONTO, ONT.







CHOOSE A GILSON ENGINE GOES LIKE SIXTY

is the advice of experts, authorities and users--"The Men Who Know."

¶ For Quality Counts, and the Gilson Gasoline Engine is the Engine of Quality-The highest type produced at any price.

Positively guaranteed, all sizes, all styles, for all purposes.

¶ Send for large catalogue and pamphlet by Prof. Ocock, University of Wisconsin, "How to Choose a Gas Engine."

MACDONALDS' OVERGOATS

Every Student wants to be smart and prosperous looking, every man can be so if he buys one of our overcoats.

Our Coats are fashioned on those correct lines that instantly add a welldressed, gentlemanly appearance to the wearer, ours are not the ordinary cut, far above that, and there is assured you a fine measure of comfort owing to the aptness of the fit and the goodness of the new fashion fabrics, from which our coats are made.

Everything new and good, not an 1908 overcoat in our stock, from the Chesterfield to the College Ulster, our showing is complete.

It will cost you merely a visit to the store to prove our statements, and we do not expect you to buy unless you really believe that we merit it.

Cloths—Cheviots, Meltons, Beavers, Tweeds and fancy Ulsterings, prices from \$8.00 to \$28.00.

Selling agents for Christy's English Hats, and Fowne's English Gloves.

D. E. MACDONALD & BROS.

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

FINE Tailoring

0. A. C.

FURS

We would like the boys to visit our store—UPPER WYND-HAM STREET. Civility being part of our business, and business to us is a pleasure, you are not called on to buy, but should you require anything in our line you will surely get value at THE GOLDEN FLEECE. Style and endurance is what we aim at in Fine Tailoring, and we rarely miss the mark.

KELEHER & HENDLEY

MODEL MERCHANT TAILORS

Fine Furs.

Fur-lined Coats a Specialty.

The Guelph Mercury

As an Advertising Medium has few equals. It thoroughly covers its own district—one of the best agricultural and stock sections in the Province of Ontario. It has a weekly circulation equal to all other weekly papers in the County of Wellington.

THE JOB DEPARTMENT :

Is up-to-date and can turn out the best work on the shortest notice.

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

♥ IF YOU APPRECIATE ♥ GOOD VALUES

You will be sure to buy your

SHIRTS, TIES, COLLARS, HATS AND FURNISHING GOODS

Here. The Choicest stock in the city.

My Tailoring Department is one of the most reliable in the trade. First-class, stylish clothing made to fit perfectly, and satisfaction always assured. See my stock of fine up-to-date goods. Only one price. Goods marked in plain figures. Be sure and give me a call

R. E. NELSON

Next Traders Bank.

Just above the Post Office.

Men's Furnishings. Hats and Fine Tailoring.

In Press

A Most Important Contribution to Canadian Agricultural Literature.

THE CANADIAN APPLE GROWERS' GUIDE

By Linus Woolverton, M. A.

Author of "Fruits of Ontario," Editor of "Canadian Horticulturist," and Secretary of The Ontario Fruit Growers' Association, 1886-1903; Inspector of the Ontario Fruit Experiment Stations, 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 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 photogravuers 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 Quarto, beautifully Illustrated, Price, \$2.00; by mail \$2.25.

Price to advance; subscribers before publication, \$2.00 postpaid. Order now.

At All Booksellers,

WM. BRIGGS, Publisher

29-37 Richmond Street West, TORONTO.

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

a \$3,000 Stock Book

Contains 183 Large Engravings.

Contains 183 Large Engravings.

This book cost us over \$3,000 to produce. The cover is a ceautiful live stock picture. Ilthographed in ceautiful live stock picture. Ilthographed in ceautiful live stock contains 160 pages, size \$45,8916, lors. The book contains 160 pages, size \$45,8916, lors. The book contains 160 pages, size \$45,8916, lors. The book contains 160 pages, size \$64,8916, lors. The book contains 160 pages, size \$64,8916, lors. The book contains 160 pages that the product of the variety of the variet

MAILED FREE. POSTAGE PREPAID.

Write for it at once and answer the following questions:

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

ADDRESS AT ONCE.

International Stock Food Co.

TORONTO, CANADA. Sole Manufacturers of

INTERNATIONAL STOCK FOOD THREE FEEDS FOR 1 CENT

THREE FEEDS FOR 1 CENT
INTERNATIONAL STOCK FOOD, 3 FEEDS
FOR ONE CENT, is a purely vegetable MEDICINAL preparation composed froots, herbs,
seeds, barks, etc. it is equally froots, herbs,
seeds, barks, etc. it is equally froots, herbs,
seeds, barks, etc. it is equally froots, herbs,
ready froots, herbs, seeds, barks, etc.
purifies the blood, tones up and permanen it
purifies the blood, tones up and permanen the
purifies the blood, tones up and permanen
strengthens the entire system, keeps them
strengthens the entire system, keeps them
strengthens the entire system. Keeps them
strengthens the entire system is
strengthens the entire system. Keeps them
strengthens the entire system is
strengthens the entire system.
The system is the system of the system
strengthens the entire system.
The system is system is system in the system
strengthens the system is system in the system
strengthens the system is system.

The system is system in the system is system
strengthens the system is system in the system
strengthens the system is system in the system is system.

The system is system is system in the system is system
strengthens the system is system in the system is system.

The system is system is system in the system is system in the system is system.

The system is system is system in the system is system in the system in the system is system in the system is system.

The system is system is system in the system is system in the system in the system in the system is system in the system in the system is system in the system in the system in the system in the system is system in the s

THREE FEEDS FOR 1 CENT

Dan Patch Mailed Free

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

International Stock Food Co.

TORONTO, CANADA.

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

Our Dairy Outfit



Most Complete
in
Every Detail.





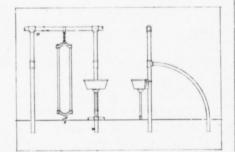


Waterous Engine Works Company

-Also manufacturers of-

Sawmill and Pulp Machinery, High Speed Automatic Engines, Boilers, Etc.

THREE IN ONE



Q. Our Pipe Stall, fitted with our Champion Stanchions and our Woodward Water Basins. These are for up-to-date farmers and are the latest labor and time savings devices.
Q. Once used, always wanted.
Q. Ask for circular.

Ontario Wind Engine and Pump Co., Limited, Toronto and Winnipeg



FOOTBALL, RUGBY AND GYMNASIUM SUPPLIES::::

Rugby	Boots \$2.50, 3.00, 3.5	0
Rugby	Suits, complete \$2.5	n
Gymna	ium Knickers	c
Gymnas	ium Jerseys, cashmere \$1.00	n

Full line College Athletic Supplies

Write for Illustrated Catalogue

J. BROTHERTON 550 Yonge Street

SUBSCRIBE FOR

The Farmers' Advocate AND HOME MAGAZINE

- ¶ Admitted to be the Most Instructive Agricultural Journal in America.
- Best Edited, Best Illustrated, Best Printed.
- The Best Farmers are not Satisfied with Anything but the Best.

Only \$1.50 per Year.

THE WILLIAM WELD CO.

LONDON, GANADA LIMITE

me see the menu card? Tomato soup for mine.

Freshies-Will you please show me the way to Macdonald Hall?

Ryrie-Why sure! But have you got the password?

Packard (discussing initiation)-Say fellows, I move that we skin and grease the pole.

Mr. T.-Isn't Canada's drink bill an enormous one?

Mr. U.—Terrible indeed! I must see if nothing can be done to reduce the price of liquor.

Freshman (at initiation) - Here. stop! I'll tell ma. You've torn my shirt.

Freshie (at initiation)-Please let Freshman-Could you tell me what time the bazaar's office opens?

Freshman to Miss Dwight-Please mum, I want ter jine the library.

Wanted-A room for single gentle man, large, airy and square.-R. L. Moorehouse.

Professor Reynolds-Mr. Cooper, why do you use that word, why, so often?

Cooper-Why -

00 Bob and the Professor.

Say Weir, I was mimicking Doc Reed the other day, and he caught me.

Weir-What did he say, Bob?

Wilson-Ha! Ha! He told me not to make a fool of myself.

THE WHITE HOUSE

LADIES' FINE SHOES AT \$2.50

In our Ladies' Shoe Department we have shoes at one price only, \$2.50. These are quite the equal of shoes sold at \$3.00 and \$3.50 elsewhere. They come in all Leathers, and only the very newest styles.

JAMES RAMSEY

Armstrong Cutters



GUELPH, CANADA

SLEIGH CATALOGUE NOW READY-MAILED FREE ON REQUEST

G. B. RYAN & CO., Guelph

Noted for STYLE & FINISH

In General Dry Goods, Millinery, Ready-to-wear Clothing, House Furnishings, and Ladies' Shoes.

Character and Exclusiveness are the Two Great Features of Our Merchandise



Buying Offices in London, Paris and Glasgow, keep us right in line with the very newest fashions and fabrics.

G. B. RYAN & CO., Cuelph MEN'S CLOTHING STORE

A store devoted wholly to the dress wants of modern men

Ready-to-wear Clothing, Special Order Clothing, Furnishings of all kinds; always in keeping with gentlemanly ideas of good form



Our advertisement, our aim and our accomplishment: — "SQUARE DEAL FOR EVERY MAN."



...To...

Patronize

KANDYKITCHEN

The Favorite Resort for O.A.C. and Macdonald Students

A Complete Assortment of

Candy Bon-Bons Ice Cream Fresh Fruit

Always in Stock



The Royal Canadian Cafe

LOWER WYNDHAM STREET

NEILL'S SHOE STORE



If you appreciate style and quality in footwear you can get it here

The Neill Shoe and Slater Shoe our specialty

A complete line of Gymnasium and Rugby Shoes.

NEILL, THE SHOE MAN.

37 Wyndham St. Phone 285 H. E. COSFORD, Manager





And the best value for the money of them all is TOLTON'S

No. 1 DOUBLE ROOT CUTTER POINTS OF MERIT:

To change from pulping to slicing is but the work of a moment.
 There are two separate wheels, one for pulping and the other for slicing.
 The united force of both wheels is always used in doing the work in either

capacity.
4: The hopper is between the wheels and does not choke.

THE ONLY DOUBLE ROOT CUTTER MANUFACTURED. Fitted with Roller Bearings, Steel Shafting, and all that is latest and best in principle, material and construction. Send for descriptive Circular and Prices.

TOLTON BROS. LIMITED,

GUELPH, ONT.

LUMBER

LATH and

SHINGLES

All kinds

Bill Stuff ETC.

DOORS

SASH

FRAMES

All kinds of

BUILDING

MATERIAL

MANUFACTURERS OF

Washing Machines. Stair Building and Interior Fittings a Specialty.

H. A. CLEMENS Co. Limited GUELPH, CANADA.

Phone 50.

A HIGH GRADE

ESTABLISHMENT FOR THE

PRINTING

Of CATALOGS, BOOKS and COMMERCIAL JOB WORK

本 本

Society and College Work a Specialty

R. G. McLEAN

26-34 LOMBARD STREET,

TORONTO. ONT

Telephone, Main 637-638.

Cooper (after initiation)—By jove! | WE HAVE A VERY COMPLETE Boys, I'm sorry my leg was sore last night-I'd just loved to have been there. (Voice aside) Ha- Ha!

Big Toole-I wonder how the Fresh men would prove that they had discov ered the pole.

Monroe-By the smell, of course,

Underhill-Mr. Crow, what kind of a vegetable is an antelope?

Freshman (pointing towards cow barn)-Say! Is that the chapel?

Cooper (examining cauliflowers in garden)-Your cabbages are no good, Mr. Crow, they are too lanky; doesn't seem to be any head to them at all. Alas! Alas!

STOCK OF

Entomological

Botanical Supplies

For Students

At Students' Prices

Alex. Stewart

CHEMIST

NEXT TO POST OFFICE

FRUIT

We make a specialty of Fruit. You can always depend on getting everything in season fresh here.

BUSCUITS

If you want quality buy Christie's. We have a large assortment.

Prompt Delivery. Phone 160.

Benson Bros.



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.



Edmonton, Alta., Nov. 19, 1907.

Dear Sir .-

I have used your ABSORBINE on a bog spavin on my two-year-old colt and have cleared it off.

Yours truly,

R. M. McDermott.



SCOTT KNITTING COMPANY

Makers of High-grade, Pure Wool Goods, Sweater Coats, Sweaters, Jerseys, and Athletic Suits, Hose, Toques, Etc.

Write for Catalogue.

352 Queen Street West, TORONTO.

The People's Store

Is head-quarters for MEN'S HIGH-CLASS READY-TO-WEAR CLOTHING, also made to measure

CLOTHING

Have also a big assortment of Gents' Furnishings in all the up-to-the-minute styles.

We specially solicit the patronage of the O. A. College Boys and Faculty.

Prices Moderate.



Benor, Scott & Co.

29 and 31 Lower Wyndham Street, Guelph, Ontario.



Well, Do You Like it?

AH SING'S idea may suit some people, but from a sanitary stand-point—pardon our lack of enthusiasm Modern methods of laundering—used here—do not conform to the Mongolian's conception of cleanliness, yet how superior!

Guelph Steam Laundry

PHONE 95

80 NORFOLK ST.

E. M. HUNTER, Mgr.

DOWLER CO.

Ladies'
and Gentlemen's
Garments

Made to your order, or ready to put on

Modern merchandise at moderate prices. Your patronage is earnestly solicited.

THE DOWLER CO.

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

THE THIEF OF TIME

"Procrastination is the thief of time," is an adage, old and true. This putting off things causes lots of harm; for instance, the opinion that the use of glasses should be postponed as long as possible, is wrong. Just as soon as you find your eyesight failing you should have your eyes examined. I give you a most thorough scientific examination.

My service combines accuracy, quality and reasonable prices.

A. D. SAVAGE

Guelph's Only Exclusive Optician,

Phone 571 - - 21 Wyndham St



We sell the best makes of Shoes, The Walk-Over, Geo. A. Slater INVICTUS, the Beresford, the ART, and many others. We AIM TO PLEASE. Give us a call,

KNECHTEL'S

SHOE PARLOR.

Opposite the Winter Fair Building.

R. B. KENNEDY

Photographer

275275275

The best place to get a good Group Photograph or a Portrait of yourself.

Book Store

Opposite where the Street Cars stop.



Text Books, Exercise Books, Foolscap Writing Pads, Up-to-Date Note Papers and Envel-

opes, Papetries, Etc., Etc., Bibles, Hymn Books. Books by Standard Authors, Poets,

Prayer Books. In fact, everything kept in a well-ordered Book Store.



C. ANDERSON & CO.

Petrie's Drug Store

For Kodaks, Cameras and Photographic Supplies



Special attention given to developing and printing for amateurs



PHONE 498 LOWER WYNDHAM STREET

Students' O. A. C. Supplies

Botanical, Entomological, Nature Study, Manual Training.

Plant Mounting; Butterfly, Insect and Larva Collecting; Weed Seed Collecting; Microscopes; Slides and Cover Glasses; Drawing and Painting Outfits; Mathematical Instruments; Dissecting Tools; all kinds of Note Books and Fillers; Fountain Pens; Pencils; Inks; in fact, everything to make a student happy, contented and successful in his work. :

WATERS BROS.

41 WYNDHAM STREET, GUELPH

Phone 350

O. A. G. Students

Will find the biggest Book Store in Guelph on Upper Wyndham Street.



The ONLY Place

That carries the full stock of all Text Books required at the College and Macdonald Institute.

G. L. Nelles

PHONE 45

ABOVE POST OFFICE

STUDENTS!

We carry a full and complete Stock of

Shavers' Needs

RAZORS, BRUSHES, MUGS, SOAP, STROPS, ETC.

AND DON'T FORGET

McKee's Shaving Cream

The proper finish to every shave. Allays irritation, soothing and emollient, and highly antiseptic.

25 Cents

At McKee's Drug and Book Store.

JOHN D. McKEE, Phm. B.

Druggist, Bookseller and Stationer

18 Wyndham St. GUELPH, ONT.

Please mention Review when purchasing.

BOYS!

We have a splendid assortment of Forsythe's Rugby and

Association Footballs,

Rifles, Shotguns, also

Razors and Pocket Cutlery.



McMILLAN BROS.

Phone 31.

20 Wyndham Street.

City Dairy Requirements

WE ARE MANUFACTURERS OF

MILK BOTTLE FILLERS MILK BOTTLE WASHERS MILK BOTTLE CRATES PASTEURIZERS and COOLERS

Our Illustrated Catalogue explains our full line. Sent on request.

W. A. DRUMMOND & CO.

173 King Street East,

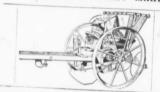
TORONTO.

PRINTING, CATA-LOGUE AND BOOKLET WORK. - Unusual facilities for large orders-linotype machineslarge hand composing room, 3 cylinder, perfecting, job and embossing presses, etc. Original ideas, good workmanship, economy, promptness. Opportunity to estimate solicited.

ADVERTISER JOB DEPARTMENT Phone 175.

LONDON, ONT.

POTATO CROP A MONEY



No. 3 POTATO PLANTER

Automatic. Requires no human aid other than the

No change of pickers necessary for different size of seed or different distance of planting.

Booklet on Potato Culture mailed free.

Aspinwall Mfg.

112 Sabin Street, Jackson, Mich, U.S.A. Canadian Factory, - GUELPH, ONT.

GUELPH AND ONTARIO INVESTMENT AND SAVINGS SOCIETY

(INCORPORATED A. D. 1876)

SAVINGS DEPARTMENT. - Deposits of One Dollar and upwards received and interest allowed at highest current rate. facility afforded depositors. Office open until four o'clock every week day (including Saturday). Interest allowed on both current and savings accounts.

DEBENTURES ISSUED for sums of \$100.00 and over, for periods from one to five years; interest, 4 and 4½ per cent. per annum, pay-able half-yearly.

Both the DEPOSITS and DEBENTURES are legal investments for trust funds,

J. D. ELDERRY.

Managing Director

Office: Corner Wyndham and Cork Sts., GUELPH, ONT.

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

ONT

xxxii.

THE O. A. C. REVIEW.

THE

The Bell Piano



MAKES **FVFRVBODY** A MUSICIAN



RECOGNIZED AS CANADA'S BEST.

Ask for our Free Catalogue No. 71

The Bell Piano and Organ Co.,

Canada's Largest Makers.

GUELPH.

ONTARIO.

Atwell Fleming Printing Co.

CATALOGUE



PRINTING

Duncan and Pearl Streets,

TORONTO

We printed the O. A. C. 1909 Conversazione Programmo

Physical and **Chemical Apparatus**

Supplies of every description for work in Botany, Biology and all forms of Nature Study

WRITE FOR PRICES

The Geo. M. Henry Co. Ltd

20 Temperance St. Toronto, Ont.

CLASS PINS, MEDALS ETC.

Ryrie Bros.

have an appearance that only careful designing and expert workmanship could produce.

Our designing department on the premises will gladly furnish designs and estimates, with full information, free upon request.

RYRIE BROS. LIMITED

134-138 YONGE ST.

TORONTO

FOR PARTICULAR MEN

We like to make clothes for the particular man, Anyone can suit the fellow who is easily satisfied, but it takes and the fellow who satisfied, but it takes and the feet of tailoring experience and ability to suit really careful dresser. Ask the particular man really careful dresser. Ask the particular man what he thinks of the last suit or overcoat we make the best he ever had, even for double the price. Suits and Overcoats \$16.00 to \$28.00.

R. J. STEWART,

Opp. Knox Church, Quebec Street, Phone 456

"T. & D." Clothing for Men Makes Optimists. -A man could hardly be a pessimist if he tried in a suit of new fall clothes from "T. & Ds."

They are the kind of clothes that make a man feel like "getting busy"—like radiating cheerfulness and energy.

They look right and they live up to their looks-they have been built that way, from their all-wool materials to the sewing on of their last

From \$8.50 to \$25, at the Men's Store,

THORNTON & DOUGLAS, Ltd.

Lower Wyndham Street.

Mutual Life 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 Lowest of all Canadian Companies Every Dollar accumulated by this Company, from whatever source, is the sole property of its 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



During the month of July our Employment Department received over 400 applications for stenographers. We filled 351 positions in Toronto alone. This service is free to employer and employee.



UNITED TYPEWRITER CO, Ltd. TORONTO

and all other Canadian Cities.

SNOWDRIFT. PEOPLES' MAPLE LEAF

Three Well-Known Brands of Flour, Ask for them and be sure you get them.

GUELPH, ONTARIO.

Telephone 99.



REFERENCES

AGRICULTURAL COLLEGES

At Guelph, Truro, St. Anne de Bellevue, Winnipeg, and the trade generally.

HEADQUARTERS FOR

HARDWARE

AND SPORTING GOODS AT LOWEST PRICES.

G. A. Richardson

Upper Wyndham St., Gl

GUELPH.

DOUGLAS STREET LIVERY AND SALE BARN

For up-to-date rubber-tired light outfits, hack, carriole, Talla Ho, Phone 41 or Call at 26 Douglas Street. Just around the corner from Post Office.

McCANNELL & PATTERSON,

Proprietors,

Successors to P. Spragge.

Horse Owners! Use

Caustic Balsarn A SAFE, SPEEDY and POSITIVE CURE

The Safest, Best BLISTER ever used. Takes the place of all liniments for mid or severe action. Removed Blumches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish.

possible to produce scar or Diemish, 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.



PRINTING

We execute the finest grades of printing, plain or in colors, promptly.

KELSO PRINTING COMPANY

St. George's Square,

Phone 218. Opp. Post Office.

CLASSY MEN should wear classy clothes, but they will never mistake the obtrusive fake clothing that is too often seen on the street for the real thing. CLASS IN DRESS for men means REFINEMENT, the other kind bear the earmark of vulgarity. Don't be deceived but come here and be correctly dressed.

J. A. SCOTT.

Tailor, - 26 Wyndham St.

OUR BUSINESS IS MEN'S WEAR

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

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

Cummings' Oak Hall Store

.. OUR ..

GROCERIES

Are always Fresh, Wholesome and Strickly First Class.

JACKSON & SON

17 Lower Wyndham.

Telephone 112.

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

HAMILTON, . . . ONTARIO

WE MANUFACTURE PEEP SIGHTS

For use on home-made draining levels, as designed by Professor W. H. Day.

H. Occomore & Co.

PRINTING

Finest Society and Commercial Printing,
Prompt Service,
Best Workmanship.

O. R. WALLAGE

47 Gork St.

Guelph, Ont.

PRINGLE The Jeweler

Entomological Supplies,
Magnifying Glasses, all qualities
Fountain Pens Rubber Stamps
O. A. C. and Macdonald Institute
College Pins.

BROADFOOT'S RED CROSS PHARMACY



Phone 381 -

St. George's Square

FARM LOANS

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

GREGORY & GOODERHAM
CANADA LIFE BUILDING. TORONTO

McHugh Bros. Tobacconists 28 Wyndham St.

Remember the address when you want to buy Tobacco, Pipes, Cigarettes, and any Smoking Requisite.

High-class goods, moderate prices, and courteous treatment.

STUDENTS ALWAYS WELCOME

HOOPER'S LIVERY.

124 Macdonald Street. Livery, Carryall,

.. Tally Ho ..

Very Best Service. Telephone 149.

Ayrshires 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.

ALEX. HUME & CO.
MENIE, ONTARIO
Phone in Residence

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.

Pine Grove Stock Farm

ROCKLAND, ONTARIO, CANADA BREEDERS OF

SCOTCH SHORTHORNS and SHROPSHIRES

W.C EDWARDS & CO.

JAMES SMITH, Superintendent

SMITH & RICHARDSON, columbus, ont.

Importers of

CLYDESDALE HORSES

This year's importation is by far the best bunch we 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.

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.

MARRIOTT & CO., FLORISTS.

Violets, Valley, Roses, Carnations, always in stock.

Telephone 378.

THE BURGESS STUDIO

High-Class Portraits.

SPECIAL RATES TO STUDENTS

LOOK . . !

SUITS PRESSED
SUITS GLEANED AND PRESSED
FANTS PRESSED
VELVET GOLLARS
Work done by practical tailors.

CHAS. A. KUTT 49 QUEBEC ST.

Gemmell Cleans and Presses Suits Equal to New, on short notice.

GEMMELL'S DYE WORKS,

106 Wyndham Street, - Guelph.



Special Reduced Prices for STUDENTS.

PHOTOS

BOOTH'S for

Royal City Mineral Water Works

Manufacturer of HIGH-CLASS CARBONATED BEVERAGES

247 BROCK ROAD.

hones—Works 582A A. REINHART
Residence 582B Proprietor.

FREDERICK SMITH,

PLUMBER, STEAM AND GAS FITTER,

Sanitary Appliances. Estimates Furnished.
GUELPH.

Dunrobin Stock Farm

Clydesdales, Shorthorns, Yorkshires * *

A choice collection of the above line of stock always on hand .. .: .:

Donald Gunn & Son, - Proprietors Beaverton P. O. & Station, G. T. R. & C.N.O.R

W. J. Thurston

Sporting Shoes and American Footwear. St. George's Sq.

W. A. MAHONEY ARCHITECT

Member Ontario Association of Architects; Associate Member Institute of Architects of Canada. Office, Telephone Building. Phones, 215, 237

REMEMBER McCRAE & SON. FOR THINGS TO EAT.

When you buy little "extras" outside the College you wish something extra good. Seaf Shipt Oysters, Fresh Chocolates, Delicious Fruits, Canned Goods, etc.

J. A. McCRAE & SON.

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

Cor. Wyndham and MacDonnell Streets,

Telephone 14. Over Dominion Bank.

KING EDWARD BARBER SHOP

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

CHAS. BOLLEN. Proprietor.

The College Boys Always Go to The

OPERA HOUSE BARBER SHOP

First-Class Work. G. McFARLANE, Prop.

SAM LEE HING

SAY, BOYS! Patronize the Big Laundry. Only expert workmen employed. Work done by hand only. College Calls made Monday, Wednesday and Friday.

Phone 547 St. George's Square.

ERNEST A. HALES,

68 St. George's Square. Sells the Best Meats and Poultry.

Phone 191.

Open all Day.

R. H. McPHERSON, BARBER.

Hair Cut, 15c; Sat., 5c Extra. Shave 15c, Close 8 p.m. 145 Upper Wyndham St., GUELPH

The New Flower Store

Come in and see our stock of Chrysanthemums, Roses, Carnations, Smilax, etc. Cut Flowers a Specialty.

GEO. DUNBAR,

99 Quebec St. East.

LEE WING, CHINESE LAUNDRY

The best work in the city. Done up like new,

132 Quebec St., opposite Chalmers' Church,

GUELPH, ONT.

LEE LEE 8 COMPANY

Opera House Block

HAND LAUNDRY

Goods called for on Monday, and returned on ednesday. We guarantee best work in Guelph. Wednesday.

NOTICE

The best and most convenient Barber Shop for O. A. C. Students.

WM. COON, ST. GEORGE'S SQ. Street Cars every 15 minutes. No. waiting. Three chairs.

GUTHRIE & GUTHRIE.

Barristers, Solicitors and Notaries

Donald Guthrie, K.C. Hugh Guthrie, K.C.

DOUGLAS STREET, GUELPH.

Oshawa You can't afford to roof a

Galvanized thing without Oshawa Gal-Steel Shingles Good for a hundred years Shingles , Send for the free booklet.

PEDLAR People of Oshawa nto, Halifax, St. John, Winnipeg, Vancouver

PAROID ROOFING

ROOFING FOR FARM BUILDINGS

It will pay you to look well into the question. Carefully investigate the reputation of the manufacturers—not only the manufacturers, but the reputation of the roofing itself, and see that time has proved the durability of the material.

PAROID PERMANENT READY ROOFING

has been made for years, has been used in all climates and on all types of buildings. It has stood the test of time. That is the test that tells.

PAROID ROOFING REQUIRES NO GUARANTEE

The manufacturers stand behind it.

Every Student and every Farmer should have one of our 24-page illustrated book of plans, "Practical Farm Buildings," edited by A. F. Hunter. It goes very fully into the question of farm buildings. Sent FREE on request.

F. W. BIRD & SON, Makers,

Established in U.S. 1817.

Canadian Factories—HAMILTON, ONT., and PONT ROUGE, QUE.
Main Office—HAMILTON, Ont.

Branches - - 123 Bannatyne St. East, Winnipeg, Manitoba.

This Will Make Your Stock Pay Better Prepares the Right Food Right and at the Right Time

You well know that roots make the cheapest and best factor in a well balanced ration for milch cows and beef cattle. To make the best use of them, however, you want a machine that can be relied upon to handle any root product—cut or pulp it to the desired degree—and do its work with a minimum of care and attention for as long as a lifetime. That's exactly the function of the various Cockshutt Root Pulpers and Slicers. Like the Cockshutt line throughout, they embody the maximum of strength and efficiency. Write us for Catalogue—write to-day.





Cockshutt Cylinder Pulper with reversible knives and easy running roller bearings. Grinds up the roots entirely. No large pieces left. New device keeps the roots right on the knives while working. Extra large drive wheel—strong at every point—a tried and proven favorite.

The Cockshutt line of Farm Implements includes more than 120 styles of plows, seeders, cultivators, harrows, etc.—emphatically the Implements to aid the business Farmer make more money. Investigate.

Cockshutt Pulper and Slicer with combined Double Hopper —one side for pulping—other for slicing; dividing leaf shuts off either side as desired. Automatic device keeps the roots always on the six reversible knives. Runs easily and smoothly on roller bearings aided by large drive wheel. A heavily built machine that will do its work better and longer than the ordinary kind.

Cockshutt Plow Co. Brantford



Honest Capacity Cream Separators

Capacity is an important consideration in the purchase of a cream separator. It enters largely into the cost and value of the machine, and there is no way of properly gauging either without reference to it.

A large capacity machine separates the same amount of milk in just so much less time. This saving of time means something in dollars and cents every time the machine is used. It means a great deal in the course of a month or a year. Moreover the wear of the machine is just so much less and it lasts that much longer.

But capacity must always be determined with CLEAN SKIM-MING under the PRACTICAL. EVERY-DAY USE CONDITIONS,—with ordinary separator speed, cows old as well as fresh in lactation, milk cool as well as warm, and thick as well as thin cream. Capacity means nothing if any of these conditions have to be sacrificed to obtain it.

Hence capacity marks one of the BIG DIFFERENCES between the "ALPHA-DISC" DE LAVAL and other cream separators. The DE LAVAL machines fully meet these conditions. All other machines either lack the capacity "claimed" for them or can only reach it through sacrifice of one or other of the important practical use considerations named.

A DE LAVAL catalogue makes plain the reasons for this difference and is to be had for the asking.

The DeLaval Separator Co.

173-177 William St. Montreal.

14-16 Princess St. Winnipeg