



THE
O·A·C·
REVIEW

M·A·R·C·H
NUMBER · 1912

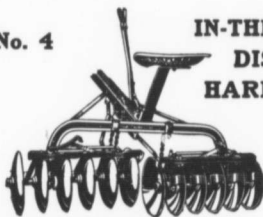
Be Sure It's a "Cockshutt" Then Harrow

HERE are two of the lightest draft Disc Harrows made anywhere—and the strongest. They are made of the very best materials, and no matter how rough or uneven the soil may be, these Harrows will do the work better, quicker and with less strain on the horses than any other Harrow.

No. 3
**OUT-THROW
DISC
HARROW**



No. 4
**IN-THROW
DISC
HARROW**



WE have great pleasure in offering to our patrons this harrow, which we believe to be the best out-throw harrow manufactured. We desire particularly to draw your attention to the spring pressure which is applied to the boxings at the inner end of the discs. The users of out-throw harrows no doubt have experienced great difficulty in keeping the harrow cutting level when set at the full angle, as the outer end of the harrow will have a tendency to go in deep, leaving the inner ends out. The spring pressure we have on these harrows prevents that, and this spring pressure is regulated by the use of a convenient lever. The amount of pressure to be applied can be easily adjusted, which insures the gangs cutting evenly no matter at what angle they are set. We oil these harrows with tubes from the top of our scraper holders, and we use hard maple boxings in these harrows, which we have found will outwear any other style of boxings in an out-throw disc harrow. Besides they are easily and cheaply replaced in case it is necessary to do so after years of wear.

We wish to call your attention to the bracing of this harrow. The hitch is very close to the work, and is in a class by itself with regard to any out-throw made.

Samples of this harrow you will find at your nearest Cockshutt agency, and we believe if you would see one that you would purchase it in preference to any other.

Drop us a post card and we will send you our Catalogue free so that you can read all about these Harrows, and also get acquainted with the full line of Cockshutt Implements.

WE sold a great many thousands of these harrows last year—every buyer was highly pleased.

Before commencing the manufacture of this new In-throw Disc Harrow, we noted all the merits and defects of disc harrows, and we have combined in this one all the good features of all disc harrows, with many of our own which we have proven to be beneficial.

The frame is made of channel bar steel—strong enough to stand the strain under all conditions.

Notice how the braces are set on this harrow—also how convenient the lever for setting the harrow to cut at any desired angle. Notice the chains attached to the beam for regulating the depth of the harrow and preventing it from going too deep at inner end when harrow is set at full angle. Oil is conveyed to the bearings by tubes running from top of scraper holders, keeping the bearings dust proof and making them last longer.

Steel balls, accurately turned and perfectly polished, run in chilled bearings—this relieves end thrust of sections and makes draft very light.

Cast balls (commonly used) soon wear flat on one side and bearings then become useless. With a touch of the foot, scrapers can be set to clean the harrow in heavy or sticky soils. Notice the shape of the discs—they are made to cut and turn all the soil. This is not only the best looking disc harrow but the best working disc harrow—examine it at any of our dealers.



THE COCKSHUTT PLANT

Send us a postcard to-day and we will send you a Catalogue of Cockshutt Implements

COCKSHUTT FLOW CO. LIMITED **BRANTFORD**

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



STANDARD
CREAM SEPARATOR

Are Built To skim closest
To turn easy
To give their users good honest returns for the money invested

And Do It

Send a Post Card to-day for our Catalog

We want every farmer interested in Cream Separators to know about the "STANDARD"

THE RENFREW MACHINERY CO. LTD.
SUSSEX N.B. Renfrew Ont.
Western Branch, Winnipeg, Man.

The Dominion Bank

GUELPH

CAPITAL PAID UP	.	.	.	.	.	.	\$4,700,000.00
RESERVE FUND	.	.	.	.	.	.	5,700,000.00

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, - GUELPH BRANCH.


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

STUDENTS!

KEEP A CHECKING ACCOUNT

Some men use the bank merely as a place to keep their surplus cash, and carry in their pocket the money they need to pay living or working expenses. Giving a cheque is handier and safer than paying cash. It introduces system into your private accounts.

Let us explain how it works out.

<p>CAPITAL AND SURPLUS \$6,897,900</p>		<p>TOTAL ASSETS Over \$50,000,000</p>
--	---	---

The Traders Bank of Canada

F. J. Winlow, Manager.

GUELPH,

ONTARIO.

"BUILT TO LAST A LIFETIME."

The Bell Piano

is the piano of to-day and to-morrow. Not only is the tone rich and full, touch sensitive, case beautiful, but it has many individual features which mark THE BELL, "Canada's Leading Piano."

Sold at

GUELPH'S LEADING MUSIC STORE

The home of Musical Instruments of Quality.

Victor Gramophones, Victrolas, and the famous Victor Records.

Edison Phonographs, and the Amberol Records.

All Stringed Instruments and Strings of A-1 quality.

Vocal, Instrumental, Standard, and Popular Music.

Pianos rented and tuned.

All Musical Instruments Repaired.

KELLY'S MUSIC STORE

133 WYNDHAM STREET,

GUELPH.

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

Quit Doing This → Get a GOOD Spreader

EVERYONE knows that if soil is not fertilized it will soon wear out. The barren condition of thousands of farms in this country proves this statement. A large percentage of this number could be improved if manure were spread judiciously.

Field experiments prove that eight tons of manure evenly spread are as good as twice that number spread in a haphazard way. Hand spreading requires at least twenty loads to cover an acre. With a manure spreader, eight loads will cover the same amount of ground more evenly, but—

Your problem of soil fertility is only half solved when you decide to get a manure spreader. The other half—of equal importance—is in deciding just which spreader is best for you to buy.

If you investigate thoroughly and decide carefully, you will select a spreader that thousands of other progressive farmers are having great success with—one of the



I H C Manure Spreaders

The simple design and unusual strength of all working parts of I H C Spreaders account for their long life and light draft.

The method of transmitting power from the wheels to the beater is simple and direct. There are no unnecessary parts to wear. The beater is large in diameter and the teeth are long, square, and chisel pointed. By using this style of tooth, the manure is thoroughly pulverized and is thrown out before it wedges against the bars. By using a square tooth, rimming of the bars is overcome.

The apron is supported by steel rollers and the slats are placed close together, so that manure does not sift down and interfere with the movement of the rollers. The steel wheels have ample strength to carry many times the weight they will ever be called upon to bear. The rims are flanged inwardly to prevent cutting and rutting of meadows and accumulation of trash. Z-shaped lugs give the wheel a practically continuous ground-bearing surface and do not jar the machine to pieces. There is no reach to prevent short turning.

In the I H C line, you have choice of these two famous styles—

Cloverleaf Corn King

All are simple, strong, and durable—
all are easily and instantly adjustable to spread light or heavy,
as the soil requires, and all three are made in sizes suitable
to any size farm. See the I H C local agent—and get cata-
logues from him, or, write nearest branch house.

CANADIAN BRANCHES—International Harvester Company of America at
Brandon, Calgary, Edmonton, Hamilton, Lethbridge, London, Montreal, North
Bathford, Ottawa, Regina, Saskatoon, St. John, Weyburn, Winnipeg, Yorkton.

INTERNATIONAL HARVESTER COMPANY OF AMERICA
Chicago (Incorporated) USA



THE ROYAL BANK OF CANADA

Capital Paid-up	- -	\$ 6,250,000.00
Reserves	- - -	7,450,000.00
Total Assets	- - -	110,000,000.00

Branches throughout all the Canadian Provinces, the West Indies, Cuba, and Newfoundland; also at London, England and New York.

Travellers' Letters of Credit and Money Orders, or Drafts issued, payable in any part of the world. Remittance Drafts cashed at ruling rates. Savings Bank Accounts carried for Students and Staff (interest allowed).

Manager, **R. L. TORRANCE,** Guelph.

KRESO

AN IDEAL DISINFECTANT, GERMICIDE, DEODORANT,
ANTISEPTIC AND PARASITICIDE.

For Hospitals, Veterinary and Domestic Use. Write for
Descriptive Booklet.

Parke, Davis & Co.

Manufacturing Chemists and Biologists,

WALKERVILLE, ONTARIO

EASTERN DEPOT, 378 ST. PAUL STREET, MONTREAL, QUE.

Cook Your Dinner in a Paper Bag

Paper Bag Cookery is the invention of M. Soyer, a French chef, and it is now being introduced into Canada for the first time.

The London Advertiser controls the sale of The Earmaline Patented Paper Bag and is distributing them to its subscribers in large numbers.

SPECIAL FREE OFFER—Send 50c for 3 months' subscription to the Daily Advertiser and receive The Advertiser Cook Book entitled "Paper Bag Cookery" and 5 each of the three standard sizes of paper bags free.

ADDRESS

The London Advertiser Co.

LONDON, ONT.

PERRIN'S Newport Chocolates

Delicious creamy centres

Pure fruit flavors

Snappy, crisp centres

Nut and novel combinations that appeal to particular tastes

ASK YOUR CATERER FOR THEM

E. D. SMITH

Helderleigh Nurseries

WINONA, ONTARIO

Makes a specialty of a full line of General Nursery Stock—all Home-Grown—thrifty and clean.

Immense Stock of **FRUIT TREES** (all of the best standard varieties)

SMALL FRUITS (Currants, Gooseberries, Raspberries, Etc.)

GRAPE VINES ROSES

ORNAMENTAL TREES and SHRUBS

850 ACRES—ORCHARDS AND NURSERY BLOCKS.

Always pleased to quote prices and show visitors over our nurseries.

The LOUDEN Bulletin

Series A.

GUELPH, MARCH, 1912.

No. 3.

Educated Farmers

AS the scientific farmers and dairymen of to-morrow you ought to know how easy and simple farming and dairying can be made through using

The Louden Line of Barn and Stable Equipments.

consisting of hay forks (harpoon and grapple styles), Bird-proof Barn door Hangers, Stalls and Stanchions and Feed and Litter Carriers. The employment of these devices takes the backache out of farming, saves hours of time and tons of labour, and makes pleasant what may now be dreary drudgery.

Spend a few minutes studying the Louden Catalogue, "Everything for the Barn." It is valuable as a text book.

As educated farmers and dairymen, know what specialists have done and are doing to lessen the labor and losses of farming, and to conserve soil fertility. Become acquainted with us, and let us become acquainted with you. A post card inquiry for our Catalogue will serve as an introduction.

LOUDEN MACHINERY CO.,
Guelph, Ont.



CONTENTS

VOL. XXIV.

MARCH, 1912.

NO. 6.

SPECIALS FOR MARCH—

Drainage Survey Work—J. Miller	286
Apiary Inspection in Ontario—F. E. Millen	292
The Keeper of the Jewel—Short Story by Henry Van Dyke	297
If—Poem by Rudyard Kipling	303
Track and Field—J. Miller	316
Character—Miss Long	324
Letters to the Editor	335

PRACTICAL ARTICLES UPON AGRICULTURAL OPERATIONS—

Brooding and Rearing Chicks—H. B. Webster, B.S.A.	289
The Tripod of Agriculture—L. Stevenson	294
Systems of Breeding—L. Stevenson	296
The Works of the C. S. G. A.—L. H. Newman	299
Early Tomatoes—A. H. Tomlinson	300
Agricultural Editorials	301

DEPARTMENTS—

Editorial	304
Alumni	309
Athletics	313
College Life	320
Macdonald	324
Schools and Teachers	330
Locals	337

The O. A. C. Review is published by the "O. A. College Students' Publishing Association," O. A. College, Guelph, Canada, monthly, during the college year.

Annual subscription—Students, \$1.00; ex-students, in Canada, 50c; others, \$1.00; single copies, 15c. 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 1912

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., Ltd.

TORONTO

HAMILTON

WINNIPEG

THE O. A. C. REVIEW

THE DIGNITY OF A CALLING IS ITS UTILITY.

VOL. XXIV.

MARCH, 1912.

NO. 6.

Drainage Survey Work

J. MILLER.

“WELL boys, you're ready to go now and I wish you all success!” So said Professor W. H. Day, head of the Physics Department, that last night before we started, and so went we—and were not unsuccessful.

The work of the drainage expert is hard and exacting. There is much physical labor and worry, and many late hours about it. But it fascinates the observant student for all that. The freedom of the fields and the open air life are attractive, and the knowledge that the work is of practical benefit to the farmers of Ontario entuses one. But best of all is the opportunity of studying human nature in its various phases, at close range, in the rural farm homes of the province.

What a Surveyor Does.

The men entrusted with this work are in every case personally selected by Professor Day, and are students of the O. A. College who have taken a course in surveying and soil physics. It is their duty to travel to any part of the province from which applications for assistance are received, to make a drainage survey. They take levels over the farm every 100 feet apart each way, to determine the fall over the land surface. Then after considering these grades, the character of the soil, and the general sur-

face features of the surrounding farms, they map out a complete underdrainage system. This map shows the location of all drains required, the size and number of the tiles, the depth and grade to which they are to be laid, the depth of all outlets, and all landmarks upon the farm, as trees, fences, and buildings.

The most important drains are indicated so a farmer may put them in as he desires, and thus he always will have a map to record their location. For these services he pays the railway fare of the surveyor at the rate of one cent a mile, and boards him while he makes the survey. The time taken to complete a survey of 100 acres, under average conditions, is about three or four days, and the expenses are from one to two dollars. A card dropped to Professor Day, Physics Department, O. A. College, Guelph, will bring a surveyor at any time during the summer months.

Public Demonstrations.

Another important feature of the experts work is his demonstrations. In each locality he conducts a field meeting, explaining the benefits of underdrainage, the practical features involved in installing drains, and the investment possibilities of it. All the farmers in the neighborhood are invited and usually a considerable number gather at the appointed place.

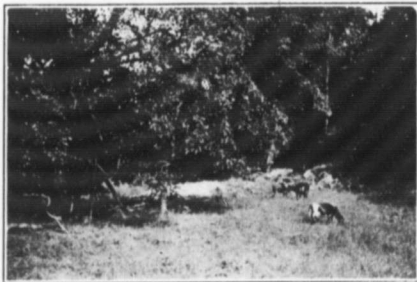
The department managing this work has been in existence for some years, and facts have been collected showing the net returns. It is estimated that the average cost of draining soil per acre is \$30.83, and that the average net returns per acre is \$15.10, so that money borrowed at 6 per cent. and invested in under-drainage will pay an annual return of 40 per cent.

But money may now be borrowed from every township council at 4 per cent. on a 20 year loan. For each \$100 borrowed a yearly payment of

introduce a mining stock proposition to the public. Very complete information may be secured upon this subject by applying to the department of physics for bulletins Nos. 174 and 175, which will be sent free.

The Extent of the Work.

The student employed at this work sees a great deal of the province. He has a splendid chance of studying first hand, the different kinds and conditions of farming. The more remote parts of Ontario are often visited, but these trips are always more satisfactory when several farmers

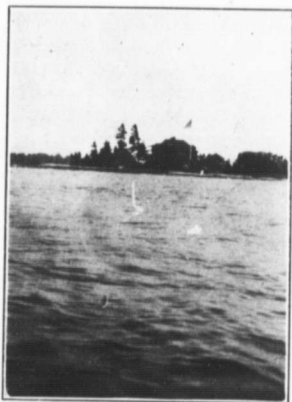


AT THE BASE OF THE MOUNTAINS, NEAR HAMILTON.

\$7.38 is required for 20 years, which covers both principal and interest. So the yearly payments on \$30.83 would be \$2.26; add to this a 3 per cent. maintenance tax of 92 cents, and a total yearly outlay of \$3.18 is required to drain an acre. But it has already been stated that the yearly net increase per acre is valued at \$15.10. Now what is the investment return? To me it seems that money thus secured and invested will pay 475 per cent. per annum—and some people think the government doesn't assist agriculture. But I'll leave these calculations to my readers, or it will be thought that I am about to

send in applications at the same time, as the expenses of the expert will be divided among them. In this case the sum each man pays is very small, whereas it may be heavy if one has to pay it all himself.

Essex, Kent and Lambton require a great many surveys each year, owing to the lowness of the land. The more hilly districts usually request smaller surveys, and on the whole the surveyor who is stationed there has an easier time than in the flat counties. This work is by no means confined to a few districts, and there is hardly a county that has not been visited many times in old On-



THOUSAND ISLANDS, ST. LAWRENCE RIVER.

tario, from Essex on the west, to Glengarry on the east, and to Muskoka in the north.

Personal Reminiscences.

This life is never one-sided. All sorts of conditions are met with, and all kinds of people encountered. Many of the characters I have already forgotten, but many I shall never forget. My first impressions of the work were gloomy, but my last were bright.

I was sent to Essex in May, and was ordered to do a good deal of work in a short time. The farms were large, the sun was hot, the people talked French, and I was homesick. What a dismal combination! But I was entertained with true French hospitality, and eventually, with some difficulty, began to feel almost human again. When at last I was able to complete a survey at the approach of a thunderstorm and pray that lightning would only strike the instrument, I knew I was recovering. In those first days I suffered through the inexperience of the

novice, and burned the midnight oil—and the moths and June beetles—many a night over a belated map.

Gradually, as the season advanced, my troubles grew less, although when I was ordered to the insane asylum at Hamilton, in June, I feared I would be given a permanent position in that institution. After surveying a section of the farm I had acquired so fine a brunette glaze among the Hamilton mountains that in Niagara I was mistaken for a Dago. When an Irish-Canadian would say under these circumstances I leave you to imagine—a student surveyor must be prepared for many things.

During the months of June and July I was much entertained by the bridal parties, while travelling. I saw many amusing things and many that I wondered at. Imagine my surprise upon seeing Howitt, of ours, upon such an occasion, clothed in a frock coat and a high tile—mostly. He was painfully attaching a white slipper to the already over-burdened neck of a stout individual who appeared to like it. Then in the beauti-



LEEDS PEACH DISTRICT.

ful Thousand Islands district who should unexpectedly walk in one morning but a member of our faculty. When he announced that he was to be married the next day a reproduction of the Johnson-Jeffries mill took place. When it was all over we hadn't any pudding for dinner, and I had to sweep up the rice. In truth—just to be candid—in my many wanderings I was smitten myself with the matrimonial malady. But after seeing the dejected appearance of Maurice, and often watching the Lansdowne boy put a shoulder out gathering rice from the small of his back, I determined that any venture of that nature, for me, would be indefinitely postponed.

And now to conclude this article I

have only to say that the farmer who does not take advantage of this opportunity is not making the use he should of government assistance. For by having his land surveyed at the government's expense, and by draining it with government money he is laying the foundations of success.

And the student who has an opportunity to do this work is missing a great deal of valuable experience if he does not take it. He will come back a wiser, a more competent, and a better all-round man than when he started. But he must expect much hard work and many unpleasant experiences, for such, beyond a doubt, will be his lot.

Brooding and Rearing Chicks

H. B. WEBSTER, B.S.A.

THE several systems which are commonly practised in the brooding and rearing of chicks are so numerous that it is impossible to mention all in detail. We will confine this article to a consideration of one or two of the most important methods.

The method of brooding chicks depends largely on the method of incubation. The natural method of brooding is usually associated with the natural method of hatching, while artificial brooding is sequel to artificial incubation. These methods are, however, interchangeable.

As a comparison of the two methods of brooding, the natural method is better adapted to the raising of a small number of chicks—up to two hundred—as chicks raised by this

method are usually considered to be stronger and of greater vitality. On the other hand where large numbers of chicks are to be brooded, the artificial brooder is necessary, as it permits of more intensive methods with less care.

We shall first deal briefly with the natural method. When the chicks are ready to leave the nest in a day or two after hatching—they and the hen are kept in a separate pen, or, if weather conditions are suitable, are taken directly to a coop on the grass. The first feed should consist of fine grit. No grain food should be given for from one to two days after hatching. For two weeks the chicks should be fed five times per day. At first this may consist of three feeds of moist food, and two of grain, gradu-

ally increasing the grain until chicks are on full feed when all grain is fed. The moist feed may consist of stale bread crumbs, moistened with sour milk or buttermilk, and squeezed very dry; or hard-boiled eggs mixed dry with bread crumbs. The grain for chicks should be composed of finely cracked corn, wheat and hulled oats, mixed, to which mixture any small seeds may be added. Be it here stated that the present tendency is to eliminate the moist feed, depending entirely on cracked grains and green feed. When chicks are on the grass, no other green feed is necessary, otherwise some must be fed—as finely chopped cabbage, mangles, onions, or sprouted oats.

Fresh water should always be supplied, also grit and charcoal.

The mother hen may be fed on the same rations as the chicks, though larger grains are more desirable.

If the weather is warm and the grass is dry, the hen and chicks, after a few days, may be allowed their liberty in the day, always being cooped at night.

The chicks should be brooded for at least four weeks, at which time the hen often deserts them. If it is desired that they be brooded longer, the hen should be kept cooped, fed largely on corn, and all water kept away from her.

When the chicks are large enough to look after themselves, the hopper system of feeding may be introduced to decrease labor. A hopper of chick feed may be kept in an enclosure to which the chicks can secure entrance, and to which they may resort at any time.

Chicks fed in this manner, while on free range, should develop large, strong bodies, with abundance of vigor and vitality.

If at any time the chicks are attacked by vermin, both chicks and hen should be treated with insect powder, in addition to greasing the chick's head.

The successful rearing of chicks artificially is more difficult. When the chicks are ready for the brooder their future is more or less assured. If they are strong and vigorous their chances of life are good, while if at this time they show lack of vitality they may not be worth an attempt at raising. If the incubation process has been carried on properly the chicks have an impetus which nothing else can give; conversely, they may be permanently weakened and have vitality impaired.

There are many systems of artificial brooding, but we will consider the indoor heated brooder, which may be used in a colony house, or in a heated or cold brooder house.

The common style of indoor brooder is called a hover. It is very simple in construction, consisting of a circular frame of metal or wood, two and one-half feet in diameter, set on legs about eight inches long. A curtain is hung from the outer edge of the frame. Heat is supplied from a heated drum at the top of the hover. This system has the advantage that it can be used any time of the year, while the other systems are only seasonal.

After hatching, the chicks should be left in the incubator for at least one day before being removed to the brooder, which should be heated to its normal temperature. It is best to remove the chicks in the evening, they may learn from the first where to go to keep warm.

Overcrowding should be avoided, as this is disastrous to the welfare of the chicks. Fifty chicks is considered the limit for one brooder. Crowd-

ing is also caused by improper heating. The temperature of the brooder should be about 95 degrees at the backs of the chicks, and 105 degrees in the hottest part of the brooder. Too great heat must also be carefully avoided. The condition of the chicks is probably as safe a guide to the proper temperature, as is the thermometer. Good ventilation is very necessary also. This is regulated by an opening at the top of the hover.

The feeding of brooder chicks is very important. Various methods of feeding are in vogue, each method being attended with more or less success. The ration for brooded chicks must be well balanced in every particular, from both chemical and physical standpoints. It must contain a plentiful supply of all the materials required for the building up of a strong frame, with sound vital organs. The ash content of the food is not the least important, and probably the palatability of a ration is of more importance than the chemical balance.

The first food for the chicks, as before stated, should be grit. This is necessary to assist in the assimilation of the unabsorbed yolk of the egg. Recent experiments show that for chicks moist feed is not necessary, and that unless fed in very limited quantities, is injurious, causing digestive derangements.

For two weeks the chicks must be fed five times per day, with chick feed, green feed being given at least twice per day. Very little should be fed at a time. The grain food should be scattered in soft litter, preferably shavings or cut oat straw. Fine charcoal should be available at all times, also clean water or buttermilk. All feed dishes should be kept clean. From the first the chicks must be

given abundance of sunshine, fresh air and exercise. They thrive better if they can get their feet on moist clay. If exercise is lacking the chicks become weak in the legs, and unless carefully handled, will die. If the weakness occurs, it is best to change the feed, raw onions being one of the best tonics.

Normally, when the chicks are about ten days of age, the mortality is greatest, as it is at this time that one of the forms of white diarrhoea, known as "lungers"—becomes most fatal. Post mortem examination reveals mould spots in the lungs. Treatment for this is of no avail, other than maintaining the vitality of the chicks.

After two weeks of age, three feeds per day are sufficient, and as soon as chicks have freedom out of doors, feed hoppers may be introduced.

Chicks thrive best on free range, especially if raised on fresh land every year. To secure this, the colony house containing a hover of chicks is taken to an orchard, corn field or meadow, where range is unlimited, insect life is abundant, and shade is plentiful.

Chicks are raised for one of the following purposes — for broilers, roasters, layers, or breeding stock. For all purposes the chicks are raised in much the same way—pure food, free range—serving to produce sound bodies with strong constitutions. The broiler stage is reached at eight to ten weeks of age, when the weight of one and one-half to two pounds is reached. At this age, chicks are usually plump; but they may be forced by feeding animal food, and by confinement. There is a constant demand for broilers, and they usually bring a very high price.

Surplus cockerels and immature stock serve as roasters. These are usually fattened in crates for two or three weeks. Those raised on free range fatten most readily. Birds weighing from three and one-half to five pounds are most desirable for fattening. Crate-fed roasters are always in demand.

Pullets intended for layers must be handled carefully. They must be well fed in the summer in order that they may lay early. On the other

hand, care must be taken to not force them too rapidly, as they may moult in the autumn, and not lay until the following spring. Stock for breeding must not be forced, but be allowed to maintain a steady natural growth. Exercise is absolutely necessary, and over-feeding must be assiduously avoided.

Poultry raising consists of innumerable small details, each one of which must be carefully studied to insure success.

Apiary Inspection in Ontario

As it Affects the Farmer and Student

F. E. MILLEN.

IN the summer of 1911, Ontario Agricultural College students were, for the first time, appointed Apiary Inspectors for the suppression of fowl brood.

Some beekeepers were a little afraid that a college man would not make a successful inspector without some years of experience, but as we had had some practical work and were deeply interested in bees, we were able to overcome any little difficulty, and the college man will probably become a fixture on the list of apiary inspectors.

Inspecting for Fowl Brood.

The work of an inspector is primarily to suppress both the American and European fowl brood, which are doing so much damage to the bee industry throughout Ontario.

As a brief description, I shall explain their characteristics.

In American fowl brood, the larvae die, either just before or just after being capped over, and in place of the raised cappings on healthy brood, we find the cappings shrunken, and often

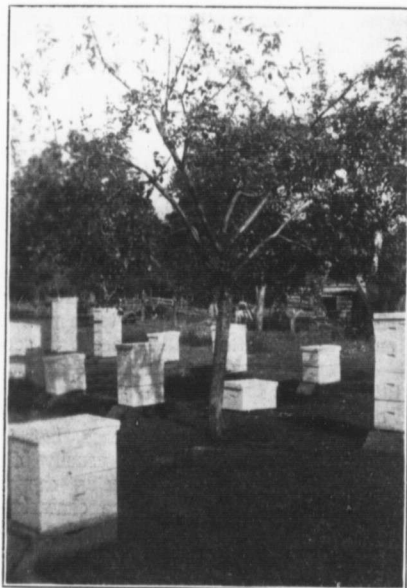
perforated. Or decomposing, larvae turn a coffee brown, and are very stringy or ropy. If a tooth pick is inserted, they will rope out to several inches, and they have a smell similar to cheap glue.

European fowl brood is like the American, a brood disease, but in this case the larvae usually die earlier, many before being capped over. They soon lose the characteristic healthy color and circular position, and drop down in the cell, turning from a light brown to a deep brown color. They do not rope nearly as much as in the American brood disease, and when the disease is bad, the smell is very strong, as of some putrifying matter. Colonies rapidly dwindle, and in a short time are wiped out.

With the American fowl brood, the disease takes longer to clean out a yard, and unless robbing takes place it may exist in a few colonies and not spread very rapidly. Thus a man may have A. F. B. for years, and only wonder why his bees are not

doing as well as they should. But with E. F. B. things are different, and while he might not suspect disease, he would find that in about two years his bees would all be dead. Whenever a beekeeper finds his bees are not doing well, he should inspect

with the starters. The hives should be thoroughly burned out. The honey is not fit for feeding bees, and should be kept away from them. If the shaking takes place when no honey is coming in, feeding will have to be resorted to.



AN APIARY IN AN IDEAL LOCATION.

the brood and ascertain just why they are unthrifty.

The treatment for both A. F. B. and E. F. B. consists of shaking the bees from the diseased frames, into a clean hive, on new frames, with $\frac{1}{2}$ inch starters of foundation, then in four days the shaking is repeated, on full sheets of foundation. Great care must be taken that no honey is spilled, and all old combs must be burned, or rendered into wax, together

persons it enables one to be a better judge of his fellowman. Then it helps the student to better realize some of the problems that confront the beekeeper himself. Most important of all, it shows him that there are thousands of tons of honey wasted every year, because there are not enough bees to secrete the precious nectar, which nature offers and mankind refuses.

After a little inspection work the

In addition to shaking, to complete the cure for E. F. B., Italian queens must be introduced into every colony.

Fuller directions are given in Bulletin 190, from the College.

Besides inspecting for foul brood, the inspectors always try to get the beekeepers to improve their methods, thus helping the bee industry as a whole.

Demonstrations were also given during the summer. These were always well attended, and the use and advantage of the wax press was shown, and if possible some diseased colonies were treated.

What the Student Learns.

From the student's standpoint, inspection work is very interesting. It takes one over a section of the country not seen before, and by coming in contact with so many different

desire to own an apiary is very strong, and there will be many student inspectors decide that beekeeping offers sufficient inducements to be taken up as a life work.

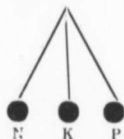
There are few, if any, agricultural industries in Ontario today that offer the same opportunities for the individual as does beekeeping.



AN APIARY DEMONSTRATION AT LONDON FAIR.

The Tripod of Agriculture

L. STEVENSON.



NITROGEN. This element has received more consideration as a plant food than any other essential element. Existing in its free state as a gas and it makes up in this form nearly three fourths of the atmosphere. Three-fourths may sound like an immense quantity when we realize that the atmosphere extends to a height of thirty-five miles or more. So it is, and it figures out

to be more than 70,000,000 lbs. above each acre. If this were all available it would meet the demands of the very heaviest crops for one-half million years. So we need not worry about the available nitrogen supply.

Nitrogen is an essential part of the structure of every plant and animal and is present in all our crops in all vegetable and animal refuse, in the humus of the soil, and in certain

mineral salts. It is from the decomposition of such that nitrogen is furnished to growing crops.

The fixation of atmospheric nitrogen by electrical process and by the plants of the legume family, are the only extensively employed ways and means of obtaining direct control of atmospheric nitrogen.

Some day, perhaps, our common grains used largely for breadstuffs, will reach that stage of development in which they can live as the legumes do in symbiotic relationship with nitrogen fixing bacteria. Our grain breeders and improvers spend their energies in improving the part of the plant above ground. Why would it not be possible to develop the affections of certain wheat and corn roots for certain bacteria of nitrogen fixing type, getting them into one and the same grove of living together for mutual benefit, and thereby aiding in "pulling down" nitrogen for the benefit of those that follow.

Phosphorus.

The element phosphorus is closely associated with the beginning of all forms of life, making up a part of the nucleus of every living cell in plants and animals.

This element upon which the future of Ontario agriculture depends, is decreasing rapidly on a very large per cent. of the farms long tilled. Lands that have been injudiciously cultivated for fifty years or more, and are today past the turning point of profitable production, are most likely deficient in phosphorus. This element is one of the absolute necessities where growth of crops is desired.

Ontario's natural supply of phosphorus is already on the ground, in the soils. We are not as fortunate

as certain other provinces and states, some of which have, in addition to their soil supply of phosphorus, beds of calcium phosphate and deposits of phosphate iron ores.

About three-quarters of the phosphorus taken from the soil by plants is deposited in the seed. If the grain is sold the phosphorus goes with it, never to return. If the grain is fed, about three-quarters of the phosphorus is returned to the soil, the other quarter going to market with the animal product. Probably not one part in fifty of the amount of phosphorus shipped from Ontario farms in the form of dairy products, beef and pork, is returned by purchase. This drain has been going on since the day the first settlers came. How long will it last? Not very long for some farmers if they do not change their methods.

Live stock farming offers a partial solution to the question of phosphorus conservation, but we can't all be live stock farmers. The people to whom we sell our farm produce can not live on meats and dairy products alone, so a large quantity of grain must be sold from many farms. What can these grain farmers do? The application of rock phosphate, basic slag, or bone meal is the easiest way for them to keep up the supply of phosphorus in their soils.

Potassium.

Potassium, a metallic element, is absolutely essential to the growth of all agricultural plants. It is contained in all Ontario soils with the exception of certain peaty or swamp lands.

One of the essential functions of potassium is as a carrier of nitrogen and phosphorus in the form of definite salts. It is the common belief that potassium has considerable in-

fluence over the formation of carbohydrates, and takes some part in the reactions involving the transference of nitrogen or phosphorus from inorganic compounds to the living organic combination. It is found in largest proportion in the embryo tissues.

Potassium has a recognized money value in fertilizers, but little need be purchased on farms where an abundance of organic matter is incorporated in the soil during each rotation.

By the introduction of such sys-

tems that will conserve or increase the supply of nitrogen and potassium at hand in the surface soil of our farms, our agriculture should go on forever. But what about phosphorus? The soil supply of this element, limited as it is, will need careful conservation and additions from outside sources frequently. The apatite rock areas of our province may supply this need cheaply when science has advanced sufficiently to reduce the cost of preparation, but until then hang onto all the phosphorus you have.

Systems of Breeding

L. STEVENSON.

THE object of breeding is to produce animals that will yield what is required of them, energy, meat or milk, and also to produce animals capable of producing like animals.

There are two fundamental laws that underlie breeding operations. The first is that like produce like, and the second, that variation is more or less spontaneous. The first law can only be said to apply to breeds that have been uniform in type for many generations. Every animal has a pedigree, but it is a good pedigree only when the animals' ancestors were possessed in a marked degree of the desired qualities of the breed to which the animal belongs.

In the early days, before breed improvement began, the animals had pedigrees of the unrecorded kind. They had a certain uniformity of type, they were big, strong, coarse, largely the result of the "survival of the fittest" method in animal husbandry. They were not what was de-

sired. The breed improvers wanted an animal of quality, and to obtain such, they resorted to the system of in-and-in breeding.

This system of breeding animals closely related resulted in a general toning down, and much of the roughness and lack of quality disappeared. This system was carried on until the breeding powers began to suffer.

The great advantage of in-breeding is to produce rapid fixity of type, and it may be resorted to with profit when a desirable variation appears in an animal which it is advisable to fix in the strain or breed. Some variations are very stable, others, again, are very unstable and disappear in spite of in-breeding. Breeding in-and-in must be done with the greatest care, and only with the most robust stock likely to withstand any ill effects it may produce.

Breeding-in-line.—When the breed builders had toned their stock down to the desired quality by in-breeding, they divided the animals into fami-

lies, and crosses were no closer than a sire mated to his grand daughter. This system is employed quite extensively today. It is practically inbreeding but the blood crosses are not quite so close in the mating of individuals of a single line of descent. This system combines animals very similar in their characters, and it also narrows the pedigree to a few closely related lines of descent. It also conserves the blood of desired individuals and discourages variability. It is the best system for improvement.

Cross Breeding.

The mating of animals of quite different breeds and types. Good results can be obtained if the animals have many points in common. Great extremes should be avoided, breeds very unlike should not be crossed.

Breeding for Early Maturity.

Early maturity is promoted amongst farm animals by breeding from animals rather younger than usual, coupled with proper care and feeding.

The Keeper of the Jewel

HENRY VANDYKE.

THERE was an outcry at the door of the great hall, and suddenly a confusion arose. The guards ran thither swiftly, and the people were crowded together, pushing and thrusting as if to withhold some intruder. Out of the tumult came a strong voice shouting, "I will come in! I must see the false king!" But other voices cried, "Not so, he is mad—you shall not come in thus!" Then the king said, "Let him come in as he will!"

So the confusion fell apart and the hall was very still, and a man in battered armour stumbled through the silence and stood in front of the throne. He was breathing hard, for he was weary and angry and afraid, and the sobbing of his breath was like the pulse of a clock. But his anger was stronger than his weariness, and his fear, so he lifted his eyes hardily and looked the king in the face.

It was like the face of a mountain, very calm, and very high, but not unkind. When the man saw it clearly

he knew he was looking at the true king, but his anger was not quenched, and he stood stiff with drawn brows, until the king said, "Speak!"

For answer the man drew from his breast a golden chain, at the end of which was a jewel, set with a great blue stone. He looked at it for a moment in scorn, as one who had a grievance. Then he threw it down on the steps of the throne and turned on his heels to go.

"Stay," said the king. "Whose is this jewel?"

"I thought it to be yours," said the man.

"Whence had you it?" asked the king.

"From an old servant of yours," answered the man. "He gave it to me when I was but a lad, and told me it came from the king, perfect and priceless. Therefore I must keep it as the apple of my eye. No harm must come to it, nor any stain. None must take it away by fraud or force. I must carry it waking and sleeping, fight and fend for it, guard it with

my life blood, and bring it back to the king unbroken and untarnished."

"And you have done this?" said the king.

"Yes, and no," answered the man.

"Divide your answer," said the king. "First, the yes."

The man delayed a moment before he spoke. Then his words came slow and firm as if they were measured and weighed in his mind.

"All that man can do, oh king, have I done to keep this jewel. Against open foes and secret robbers I have defended it. Through storm and peril, through darkness and sorrow, through the temptation of pleasure, and the bewilderment of riches, I have never parted from it. Gold could not buy it, passion could not force it, nor man nor woman could wile or win it away. Glad or sorry, well or wounded, at home or in exile, I have given my life to keep the jewel. This is the meaning of the yes."

"It is right," said the king, "and now the no."

The man answered quickly with heat. "The no also is right, oh, king! But not by my fault. The jewel is not untarnished, not perfect. It never was. There is a flaw in it. I saw it first when I entered the light of your palace gate. Look, it is marred and imperfect, a thing of little value, I have been deceived. You have claimed my life for a fool's errand, a thing of naught, no jewel, but a bauble. Take it. It is yours."

The king looked not at the gold chain and blue stone, but at the man.

He looked quietly, and kindly and steadily into the eyes full of pain and wounded loyalty, until they fell before his look. Then he spoke gently.

"Will you give me my jewel?"

The man lifted his eyes in wonder.

"It is there," he cried, "At your feet!"

"I spoke not of that," said the king, "But of your life, yourself."

"My life," said the man, faltering, "What is that? Is it not ended?"

"It is begun," said the king. "Your life—yourself, what of that?"

"I had not thought of that," said the man, "only of the jewel, not of myself, my life."

"You may think of it now," said the king, "and think clearly. Have you not learned courage and hardness? Have not your labors brought you strength; your perils wisdom; your wounds patience? Has not your task broken chains for you, and lifted you out of sloth and above fear? Are you not another man braver, purer, because of it? Do you say that the stone that has done this for you is false, a thing of naught?"

"Is this true," said the man trembling and sinking on his knee.

"It is true," answered the king, "as God lives it is true. Come stand at my right hand; my jewels that I seek are not dead, but alive. But the stone which led you here—look! has it a flaw?"

He stooped and lifted the jewel. The light of his face fell upon it, and in the blue depths of the sapphire the man saw a star.

LIFE'S BEAUTY.

What seems to grow fairer to me as life goes by, is the love and peace and tenderness of it. Not its wit and cleverness and grandeur of knowledge, but just the laughter of little children, and the friendship of friends, and the cozy talk of the fireside, and the sight of flowers and the sound of music.—John Richard Green.

The Work of the C. S. G. A.

L. H. NEWMAN.

THE improvement of plants and animals by selection has been in vogue for a considerable time. In fact, ever since man has taken charge of these for his own use, he has been constantly endeavoring to shape them in accordance with his own ideals. Where judicious and systematic selections have been made, he has been fairly successful and usually has succeeded in at least an approach to his ideal.

But nature seems to be ever in a sportive mood, and many are the disappointments handed out to the beginner who is working toward some definite end. However, if he perseveres and continues in his work of selection of those types approaching what he has in mind, and eliminating those varying from it, success will eventually crown his efforts.

Complex and all as is the question of "heredity" and "the inheritance of character" by the offspring from the parent, it has been amply proven that continued selection will shift the type in any desired direction, and after a few generations it will breed true in its new form.

It is upon this principle that the members of the C. S. G. A. are working. A member begins with a variety of grain best suited to his own locality and of as good stock seed as he can obtain. He sows this on a small plot of ground and when it reaches maturity, goes through the plot and selects a sufficient quantity of typical heads to sow another plot the following year. By following this system each year for a number of years—selecting only heads of the same conformation—he is able

to fix the type permanently, and if his work has been satisfactory to the association, he is entitled to register his seed in the records of the association.

Such methods as these when carefully followed, are bound to have a beneficial effect in raising the standard of the variety with which he is working. Results that members have had seem to verify this. Many of them showing satisfactory evidence that their crops have increased from five to fifteen bushels per acre by the use of selected seed.

At the meeting of the Experimental Union in Guelph, the importance of sowing the best obtainable seed was fully discussed, and suggestions offered by Prof. Zavitz, as to the best sources of seed grain for 1912. Among the others was mentioned the members of the C. S. G. A., whose names can be obtained by writing the secretary of the association, L. H. Newman, B. S. A., Canadian Building, Ottawa. Many of these men have quite large quantities of this registered and improved seed for sale, and it would pay the farmer who is purchasing his seed grain to write him for a list of growers.

This year the farmer will need to be more careful than usual, especially with seed oats. Owing to the fact that many of the late oats rusted very badly, there will be any amount of immature seed on the market. The farmer should guard against this class of seed. It would be poor economy, indeed, to buy it, when good seed is obtainable, even though it could be bought for less than half

the price. In fact, the careful farmer would not use it at any price.

One of the strong features to recommend the seed of the C. S. G. A. is the fact that they allow their grain to fully mature before cutting. It is becoming more generally recognized that for seed purposes grain should be allowed to stand in the field until well ripened. Experiments have shown this to be true time after time. Grain cut before it has become fully matured loses in vitality and in strength of germination for seed purposes. The practice of allowing part of the grain field to become more fully ripened and cutting

this part for seed, has been advocated for some time by the best authorities, but owing to rush of work at that season the average farmer does not take the time. Thus it would often be to his advantage from this standpoint to get seed where it has been especially grown for seed purposes.

Associations such as the one we have been speaking about are doing a good work. They are helping to increase the production from Canadian farms very materially. They stand for seed improvement, and their work is far reaching in its effect.

Early Tomatoes

A. H. TOMLINSON.

IN Ontario crops of early tomatoes are proving to be a most profitable investment for the farmer. If he has a southern slope or a section of his land protected from the north and south winds, also the soil a well drained sandy loam, these advantages should induce him to grow this kind of crop.

Should there be a hothouse on the farm there is no trouble to start. If not, it will be necessary to provide a means of raising the plants so that they may be ready to put outside as soon as weather and conditions are suitable. For an acre or so it will hardly pay the grower to erect a hothouse, but for more than ten acres, a small but temporary structure would pay. In the case of a small grower an ordinary hot bed would answer well. The hot bed system will be the one dealt with in this article.

Probably on the farm are already

some cold frames. These will do if they are high enough at the back and front. The respective heights should be 18 and 10 ins. in each case. The frames need to be large enough to take three sashes 6x3 feet each. Such a frame would measure 18x9 feet. If there are none on the place it won't be a difficult matter to procure them. In fact the frames can be easily made at home, whilst the sashes may be secured from a local dealer at a nominal cost. Two or more cold frames with sashes covered with either glass or cloth will be required to harden the plants as they develop, and one or two hotbed frames with glazed sashes for raising the plants. For the hotbed it will be necessary to choose a well drained spot exposed to the sunlight but yet sheltered from winds if possible. The "bed" must be near a building where a warm place may be found to enable one to transplant the

seedlings satisfactorily. Young plants in the early stages cannot stand exposure to the cold at all. The hotbed should be made in the ordinary way, strawy manure put down in layers and tramped till about 3 feet high. After the frame is placed on the top, manure should be banked against the sides. On the surface of the manure inside the frame, sifted ashes or soil should be spread about 2 or 3 inches deep and levelled. Flats are the best things to use for sowing the seed in. They can be so easily transferred from one place to another. The seed should be sown thinly in rows 2 inches apart.

The soil needed to start tomato seed is a very sandy loam; for potting a more loamy compost is preferable.

Tomato seed germinates best in a temperature not less than 70 to 80, and up to 90 degrees Fahrenheit. As

the seedlings thrive a gradual decrease in temperature is necessary until 65 degrees Fahrenheit is reached in the day time. This can be done by judicious ventilation. In severe weather burlap, etc., should be placed on the sashes. When the plants have got their second leaves they may be "potted" into old strawberry baskets, these can be inserted in the ground with the root ball of the plant within. After "potting" the plants should be placed in the same temperature as before until they restart, then gradually hardened off in cold frames, etc., prior to planting.

In choosing varieties, the better way at first is to grow the varieties that do the best in the district. The grower then can select those which suit him. Selection work should be continued until the desired type is found, experimenting with both local and commercial varieties.

Agricultural Editorials

If you want to raise a calf that will be strong and rugged at birth feed the dam those feeds rich in ash, the materials which cannot be burned in the body and makes the frame work of the calf.

When a two ton crop of clover is plowed under, 125 lbs. of nitrogen, which has been largely gathered from the air, is incorporated in the soil. More than that, clover being deep rooted, considerable phosphorus and potash are brought from the lower strata and mixed with the top soil. A crop of clover can be produced at a labor and seed cost of from \$2 to \$5 per acre, or nitrogen

obtained in this way at a cost of from 1.7 to 4 cents per pound. Hence we see that a two ton crop of clover returned to the soil is worth as much, or more, than 800 lbs. of nitrate of soda costing \$20.00. The land will be benefited in tilth, humus and bacterial content as well as in the nitrogen, phosphorus and potash by the return of clover. So why pay 16c per pound for nitrogen, when we can secure better results by good farming and paying proper attention to clover growing.

Every animal possesses secondary sexual characteristics. In other words every male has female char-

acteristics in an undeveloped form. If this were not so, a cow could not transmit her milking qualities through her son to her granddaughter.

The treatment of the ewe before the birth of her young should be such as to prepare her for the strain of supplying a generous flow of milk. Nothing is more pitiable than the sight of a pair of hungry twin lambs making an effort to satisfy their insistent demands for growth with the milk furnished by a small, lean under-fed mother. A ration consisting of grain, 1 lb. per day, pulped roots, 2 lbs., and clover hay in abundance will put a ewe in condition to produce and rear strong lambs. The grain part of the ration to be made up of a mixture of oil meal, bran, oats and corn.

Question—Why are better digestion results obtained from a ration

made up of a variety of feeding stuffs?—E. A.

Answer—Some foods are digested principally in the stomach, others in the small intestine, while others undergo the chief digestion in the large intestine. A mixture of several food stuffs, therefore, spreads the work of digestion over various parts of the digestive tract, and for this reason such a ration is more suitable than one made from large quantities of a single material.—L. S.

Question — Does milking three times per day give greater quantity than milking twice?—F. B.

Answer — No. Under ordinary conditions there will be no increase. With very heavy milking cows milking three times a day is a matter of comfort. Under such circumstances the milk flow may be increased 6 or 7 per cent. over that obtained by milking twice.—L. S.

A New Book

THE Farm and Garden Rule Book is the title of a work recently compiled by L. H. Bailey, a well known authority on agricultural topics. The book was not written with the intention of making pleasing reading matter, or with any expectation that anyone would absorb all the information which it contains, but evidently the author had the idea of a reference book on agricultural matters in his mind, while preparing it for publication.

To attempt to fully outline its contents would be foolish in this limited space, but it contains invaluable information for the scientific and

practical farmer, fruit grower, poultryman, and in fact any person who is interested in agricultural pursuits.

It explains weather data, deals with the physical and chemical composition of soils, soil moisture, fertilizers and their correct application, farm crops, weed poisons, fungicidals and insecticidals, with the diseases and insects which they control. It gives many valuable pointers on animal husbandry, poultry raising, dairying and some facts concerning agricultural engineering. This volume would be a handy reference and source of information in any farmer's library.

L. B. H.

THE O. A. C. REVIEW

REVIEW STAFF.

J. MILLER, Editor-in-Chief.

L. STEVENSON, Agriculture.

H. M. McELROY, Athletics.

E. BRADT, Experimental.

L. B. HENRY, Alumni.

W. M. AIKENHEAD, Horticulture.

MISS ISABEL SHAW, Macdonald.

J. H. FAY, Poultry.

J. H. WINSLOW, Locals.

C. W. STANLEY, College Life.

F. WATERHOUSE, Artist.

E. A. WEIR, Business Manager.

G. J. JENKINS, Assistant Business Manager.

Editorial

One hundred and seventy-four persons have been killed on level crossings and two hundred and eighty-eight injured by our railways during the last three years. As the majority of these were country people, we read letters and articles, from time to time, in different farm journals urging our legislators to enforce methods of protection. But the fault in Canada is not so much the absence of good laws as an ignorance of the laws which are passed.

How Many Lives Have You Saved.

As a matter of fact the death of each person killed in your locality hereafter is due personally and entirely to you, my friend. For, by simply writing a letter, you can have that crossing so protected as to avoid accidents. Three years ago the government voted the sum of one million dollars to be spent at the rate of two hundred thousand dollars a year, for the purpose of protecting dangerous crossings. The railways

and the municipalities of the country can be compelled to spend at least four million dollars additional for the same purpose. With this money the Railway Commission can pay twenty per cent. up to \$5,000, of the cost of protecting crossings and can compel the railways and municipalities to pay the rest. But the Commissioners themselves are not instructed to go ahead and do this work on their own initiative. They can act only when a complaint has been received. And the Government has placed upon each one of us the responsibility of making this complaint. Anyone knowing of a dangerous crossing has merely to write to the Board of Railway Commissioners, Ottawa, Ontario, stating the fact. His duty is then done, for an inspector is sent to the specified locality and a thorough investigation takes place. The one sending notice to the board is not called upon at all, in any way, and need not even be a resident of the municipality in which the crossing is situated. Up to the

present time not many people have taken advantage of this law—perhaps few know of it—for in the last three years only 129 crossings have been protected, no complaints that have been received have been disregarded. In response to a question asked by Mr. Haughton Lennox, M. P., the Board of Commissioners reported:

"The board is not aware of any application having been refused."

A large number of our students will return to their home districts this summer, and will be expected to know a great deal along all lines. Knowledge of agriculture alone is not all that is required to make a good citizen in a rural community. The broad-minded man has a wide general outlook upon all phases of human endeavor, and those influences tending to destroy the life of his fellow beings particularly concern him. He realizes, as indeed we all do, that it is a noble deed, rendered both to the individual and to society, to save a human being from death. But is it not just as noble to remove the cause? Make yourself known as a leader in your district this summer by having every dangerous crossing protected. You know now how to accomplish this, so the responsibility rests directly upon you. Perhaps some one dear to you may be the next to be caught unawares. Will it ease your conscience then, to realize that you might have prevented it all? Think of the helpless little children that may be crushed to death on the way to school! Surely every mother who values the safety of her little ones will take action in this matter. It is a great thing to save a life, but a small thing to write a letter. Please don't forget the ad-

dress. The Board of Railway Commissioners, Ottawa, Ontario.

In the February number attention was briefly drawn to this prize. But we feel that it merits more space. The Manufacturers' Association is offering prizes to students at this college who will write essays on any one of the following subjects:

1. The Co-relation of Agriculture with Manufacture.
2. Sheep Raising for Wool and Mutton.
3. The Development of New Ontario.

These essays must be sent or handed to President Creelman not later than July 1, and the competition is open to Ontario Agricultural College students only. No limit has been set for their length, and the prizes are: 1st, \$50; 2nd, \$30; 3rd, \$20. They are to be judged by a committee formed of college professors and must be approved by the executive committee of the Manufacturers' Association. The prize winning essays are to become the property of the association and will be published in the monthly magazine of that organ.

The object in offering these prizes is to stimulate reading and investigation in regard to industrial matters in Canada. There is a belief in some quarters that the interests of the farmers and the manufacturers are opposed, and that policies which are of assistance to one class are detrimental to the other. During the recent Dominion elections we heard this opinion repeatedly expressed in terms which caused us to think it was quite generally accepted as the truth.

But a study of economic conditions, and indeed plain common sense alone, tells us that the farmers and manufacturers are not two great factors struggling for supremacy, with the success of one involving the defeat of the other. Once, in time long past, the farmer was independent of any man on earth, simply because he was self-sufficing. But the world has advanced since then and the person advocating a return to that primitive condition knows little of the pioneer privations of our great-grandfathers. In the present age of commercial, industrial, and agricultural progression each economic factor within Canada is dependent upon all others, and no one part of this economic structure can hope to succeed when separated from the whole. These facts should be better known than they are, and the fellow who studies any of these given subjects with the intention of ascertaining the inter-relation of agriculture and manufacture will gain a great amount of useful knowledge. The prizes are large and in themselves are well worth working for, but the information secured in the study will, in the end, be of greatest value to the students. The Manufacturers' Association is surely to be commended for establishing this influence which, we trust, will tend to bring about a better understanding between the two greatest economic factors in Canada.

In a recent number of a contemporary farm journal we saw an editorial deploring the tendency of the graduates of this institution to enter professional rather than prac-

Why Graduates Don't Farm

tical farm life. The sentiments expressed in that article, we fear, are more or less generally accepted. There seems to be a feeling abroad that a college education, even of an agricultural nature, turns men away from the soil. The small proportion of graduates who actually do return to the old homestead is no doubt responsible for this belief. But there are many circumstances which are not at all considered.

In the first place the studies of the last two years are of a scientific nature and the students who begin the third year usually do so with the intention of following professional work. Many of these are from cities and are studying the profession of agriculture just as they would the professions of law or of medicine, and have not the opportunity of operating a farm. Assuredly these fellows have not been lured from the land, since they didn't come from it. Moreover, most of the fellows who do enter the college with the intention of returning to the farm usually go back at the end of the second year. These are really graduates, in that they have completed the practical farm studies, but they seem never to be considered by those who claim the college is turning boys away from agriculture.

The majority of the graduates are in no way averse to farm life. They don't farm simply because they have not farms. After investing \$1,000 or \$1,200 in an education they have little capital with which to buy land, and a little money, like a little learning, is a dangerous thing. With the prevailing high price of land and stock and the high rate of interest, a man starting with from \$2,000 to \$4,000 will, under ordinary condi-

ions, be in debt for a long time. To free himself he must undergo much worry and trouble and a vast amount of unpleasant drudgery. His wife is called upon to toil just as unceasingly, and altogether the prospect can hardly be expected to appeal to many young men.

It is sometimes argued that the graduate should return to his father's farm and apply, at home, the knowledge he has secured. Some of our fellows do this, but in most cases there are obstacles. There may be other sons in the family; the father and son, owing to a difference in methods may not be able to work to advantage with each other; or perhaps the farm is not paying large profits, and the son, even with an agricultural education, hesitates to return to the land which he will not be able to control until the retirement or death of his father.

On the other hand he can usually command an average salary of about \$1,000 a year after graduation. Is it much wonder that he turns to professional work, in the hope of eventually saving enough money to purchase a farm. And that a large number have this end in view may be proven by talking to the members of any graduating class that leaves this college.

Others again may enter professional work because they have the interests of agriculture very much at heart. They consider that in their particular sphere of labor they can accomplish more good than they could upon a farm. After all, we are suspicious of high motives, we fear, and seldom give the human heart credit for half the good it does. Money is not the only consideration. Assuredly many of the men working

in the professional ranks of agriculture, in trying to educate the farmer to a fuller perception of his possibilities, are not wholly influenced by the dollars they receive.

So the belief that an O. A. C. course entices students from the farm, we believe, is unfounded. A few it may lead away, but the majority who never return would do so gladly if circumstances were favorable. Economic conditions upon the farm, and a desire to widen the scope of his work may cause the graduate to turn from the soil, but he hardly will do so because of any distaste for farming that he acquires at this institution.

The editorial "Have We Time," in the February number, has brought upon the editor much severe criticism. Some of this is directed at an

That Dairing

alleged misrepresentation of rural conditions; some of it questions the truth of the statements made in regard to rural life, and much censures our opinion of college dances.

And now for the dancing! Contrary to the belief of many, we do not condemn dancing in itself. It is the influences surrounding dancing—the formal features that are developing at this institution to which we object. The question we asked was, have we time to spend arranging for affairs so important as these threaten to become?

But there are other reasons why the dances should always be simple, informal affairs. Just as an example, let us make a brief review of certain features already to be noticed. At the Cosmopolitan Club dance, held some months ago, very few men at-

tended in evening dress. At the last dance a large number did so. Even at so simple an affair as the Leap Year At Home a student was observed thus dressed. But—you will say—is not this entirely proper? Is not a form of dress of which all good society approves one to be worn without comment? Is it not indeed an evidence of modern culture, the removal of which would tend to lower our standard of civilization? Though the general truth of these statements were admitted, it is surely reasonable to suppose that peculiar circumstances may sometimes render even so long an established custom undesirable.

At this college the great majority of students do not own dress suits. We are not, as a student body, very wealthy, although perhaps as much so as are most mixed student bodies. Moreover, most of us are not spending our own money, but the money of those who may be sacrificing a good deal to give us an education—you know you can't always tell. So is it so very desirable, after all, that we attend our dances dressed in what we perhaps can ill-afford to buy or have to rent from some one else! We feel that the average student should not be expected to buy that which he will so little use and should not at all require before he is graduated.

But it is argued that there is no compulsion in the matter; that every one can dress as he chooses. Yet, except for those who judge by character rather than clothes, or who have little natural pride, there is compulsion in the matter—the compulsion of a man's own self-respect. Because evening dress is supposed to represent the very things already

mentioned, and because we all are influenced by the opinions of others, we feel uncomfortably cheap when dressed in a manner that is thought to be of an inferior type by those present.

We are attaching undue importance to this question of dress it may be thought. But it is considered only as an example of the general affect formality will have upon our college functions. It simply means that if these conditions are allowed to develop sufficiently, in the future certain wealthy men will become a privileged class. Because they have more money and the advantages arising from riches—than the majority of the students. They will have more exclusive rights at Macdonald Hall. The dances will be arranged for them and the society of the hall largely reserved for them, and all because the majority of the students have not the money or the desire to keep up the appearances that at that time will be considered necessary. It little accords with our sense of fair play that those who shall be most benefited by the social life of the college shall be excluded from it. Neither does it show a very unselfish disposition on the part of those who desire these conditions.

We do not wish to imply that such a state of affairs now exists, nor do we wish to say that they certainly ever shall exist. But there are influences at work that seem to point in that direction. Those who advocate a more complex social structure should consider the situation very seriously. Public opinion alone will decide which course is to be pursued. Upon this force alone must we depend for the final decision, for no rule or custom that any man or group of

men may frame or establish can long remain effective. Your move next!

We are glad to see an interest taken in the matter. We hope to see the Review the organ which shall voice the sentiments and thoughts of readers. Letters upon any topic of interest shall always be published.

Two appear in the present number from college students upon this social question. In the next number other phases of the problem shall be considered. Get in line now. Don't let your eloquence be confined to a few of your friends. Get your thoughts down in print. That's what the O. A. C. Review is for.

IF——

<p>If you can keep your head when all about you Are losing theirs and blaming it on you; If you can trust yourself when all men doubt you, But make allowance for their doubt- ings too; If you can wait and not be tired by waiting, Or being lied about, don't deal in lies, Or being hated, don't give way to hating, And yet don't look too good, not talk too wise.</p> <p>If you can dream—and not make dreams your master; If you can think—and not make thoughts your aim, If you can meet with Triumph and Disaster And treat those two in posters just the same: If you can bear to hear the truth you've spoken Twisted by knaves to make a trap for fools, Or watch the things you gave your life to, broken, And stoop and build 'em up with worn-out tools;</p>	<p>If you can make one heap of all your winnings And risk it on one turn of pitch-and- toss And lose, and start again at your be- ginnings And never breathe a word about your loss: If you can force your heart and nerve and sinew To serve your turn long after they are gone, And so hold on when there is nothing in you Except the Will which says to them: "Hold on!"</p> <p>If you can talk with crowds and keep your virtue, Or walk with kings—nor lose the common touch, If neither foe nor loving friend can hurt you, If all men count with you, but none too much: If you can fill the unforgiving minute With sixty seconds worth of distance run, Yours is the Earth and everything that's in it, And—which is more—you'll be a man, my son!</p> <p>—Rudyard Kipling.</p>
---	---

ALUMNI

PRESIDENT SOULE

(Continued from last issue)

In 1904, President Soule was elected Dean of the College of Agriculture and Director of the Experiment Station of the Virginia Polytechnic Institute. During the three years of his incumbency he reorganized the Experiment Station; established a department of field experiments covering an area of sixty acres; outlined experiments in feeding beef and dairy cattle and hogs, and conducted among the first comprehensive tests to determine the relative cost of finishing beef cattle in the stall and on grass. In the experimental field a strain of barley was discovered and disseminated which is of superior merit and is now being extensively cultivated. Special buildings and equipment were secured through the legislature for the College of Agriculture, and new barns erected on the farm. The course of instruction in the College was reorganized, and the first appropriation secured from the state for the establishment of tobacco substations. Through his efforts a truck station was established at Norfolk, Va., the only one of its kind in the United States. He organized the Virginia State Farmers' Institute, which at one time had a membership of over 600, and its annual meetings were attended by more than 1,200 farmers.

President Soule has been wonder-

fully successful in getting in touch with the farmers and organizing them effectively, redirecting their efforts and stimulating their interest in agricultural education. Through their aid he has been successful in securing large sums of money for the equipment of the institutions with which he has been connected, and the promotion of agricultural education and research in general. The efficiency of the work done in Virginia is witnessed by the fact that while there, he was called to Pennsylvania as Dean and Director of the Pennsylvania State College..

In 1907 Professor Soule was called to Georgia to become President of the State College of Agriculture and the Mechanic Arts, and since that time the largest, most handsome and best-equipped building for instruction in agriculture in the South has been erected. Thirty-five specialists are now employed in the College of Agriculture alone, while the attendance of students in the institution as a whole has more than quadrupled. President Soule operated the first educational trains to make complete tours of a southern state. The second train was out for forty-seven days, made more than 160 stops, and was visited by 350,000 people. It gave a new impulse to educational activities in the state, which resulted not only in the liberal endowment of the College of Agriculture, but other

institutions as well. The tour of the train resulted in the farmers' institutes being reorganized and greatly magnified, and in the establishment of an extension department employing fifteen men as an agency under the direction of the College for the dissemination of agricultural knowledge to farmers who can not attend the institution. Consistent work has also been done in encouraging the teaching of agriculture in secondary and common schools, and to this end many extension schools have been organized in co-operation with the state and county school commissioners. A correspondence bureau constitutes a feature of the college work. The interest in the activities of the College is evidenced by the fact that more than 60,000 farmers were reached last year, and it is hoped to increase the number to 100,000 this year. The pioneering efforts of the College in extension work in the south and in the organization of a demonstration field and a department of cotton industry are attracting national attention. This is evidenced by the fact that President Soule was recently offered the position of Dean and Director of the University of Minnesota, which is regarded as one of the oldest and best-organized institutions of its kind in the United States. In recognition of his services to southern agriculture, the degree of doctor of science was conferred on him by the University of Georgia in 1910. He is also an ex-president of the American Association of Farmers' Institute Workers, and is a member of the American Association for the Advancement of Science, the National Geographic Society and other organizations of national and international influence.

President Soule has a strong personality and is an enthusiastic believer in education and the essential relation which scientific investigations bear to the preservation of the national resources of a country and the conservation of its industries and its people. He believes intensely in agricultural education and feels that it is destined in the future to play a much more important part in the success of the civilized nations than it has in the past. Few men have had a wider experience in the field of education and research. It is a great advantage to have an opportunity to associate with the people of several states and assimilate their point of view. It is a fine training in diplomacy, as well as affording excellent opportunities for studying the problems involved in human psychology and sociology. President Soule has not yet reached the prime of life. He is full of enthusiasm, energy and aggressiveness and views the future with rare optimism. It is not surprising, therefore, that at the end of sixteen years of service he should have achieved more than a national reputation in the field in which he has labored so assiduously. He is full of big plans for the future, and given the opportunity and financial support needed, there is no way of reckoning what may yet be accomplished by one possessed of his executive capacity, fluency as a speaker and writer, and ability to organize and lead men.

Thos. H. Binnie left the halls of the College in '07, armed with his B. S. A. degree and full of knowledge, hope and determination to make a name for himself in some line of work. He was interested in dairying

and consequently obtained a position with the Dominion Government for a short time at cow-testing work. Then for six months he was analyzing dairy products and chasing germs in the Ottawa Dairy. About this time he was attacked by the newspaper germ and as a result secured the position of agricultural ed-

Alfred Atkinson left the College at the end of his third year in April, 1902, to accept the position of assistant agronomist at the Iowa State College. He held this position for two years, during which time he continued his college studies and was graduated from that institution in 1904. He has since held the position



T. H. BINNIE, '07



ALFRED ATKINSON, '02.

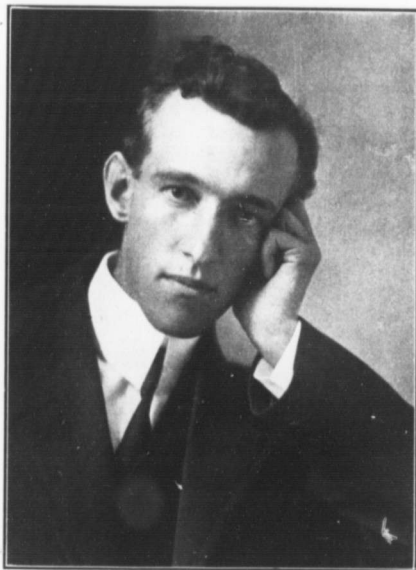
itor of The Central Canada Citizen. As the newspaper disease did not improve, he went to the Canadian Farm as associate editor in December, 1909. For further treatment he became first editor of the Farmer's Magazine in August, 1910, and obtained a complete cure, as he returned to the old homestead at Bunessen, Ont., in the following spring. He says that he is enjoying work as he never did in any of the offices. "Back to the Land" advocates please copy.

of professor of agronomy in the Montana Agricultural College at Bozeman, and now has six members of the regular faculty to assist him in his work, which includes teaching and investigation in soils, crops, farm management and breeding. Professor Atkinson is also chairman of the Division of Agriculture and it is whispered that he is a "cracker-jack" on dry farming conditions and the conservation of soil moisture. He is now on leave, studying in Cornell University for his Master's degree.

G. B. Curran, '08, first learned the inner mechanism of a real paper while editor of the "sports" column of this distinguished journal, which said column he fairly made hum with interest. After he had secured his degree he put his journalistic learning to practice and became editor of Farm Crops, published in Winnipeg, which paper now goes under the name of Country Life in Canada.

the editor had the pleasure of a chat with him, while in Guelph, on his way to Essex, where he is acting as assistant district representative for the winter.

No doubt all 1912 men will remember "Jimmy" Shields, who left this year's graduating class with his associate diploma. Well, "Jimmy" is a present helping out A. P. MacVannel in Prince Edward County in the capacity of assistant district representative and is doing wonders.



CHAS. C. NIXON, '07.

During the last two years he has been homesteading in the Dauphin district and prefers that to cussing printer's devils in an office. Recently

Another one of our "Old Boys," who has thrown in his lot with the journalists, is Chas. C. Nixon, who was graduated in '07. In his fourth year he won a place on the stock judging team and after leaving College went back to the old homestead for a year to give his scientific knowledge a try-out. In 1908 he obtained a position with the Farm and Dairy of Peterboro as managing editor, which position he has held continuously up to a few months ago, when he was appointed advertising manager of the same journal. Mr. Nixon's practical farm experience, together with his wide acquaintance with agricultural conditions throughout Ontario and the West are excellent qualifications for this new position.

Guard within yourself that treasure, kindness. Know how to give without hesitation, how to lose without regret, how to acquire without

meanness. Know how to replace in your heart, by the happiness of those you love, the happiness that may be wanting in yourself.—Selected.

Athletics

The Trip to St. Anne's.

IT was a bunch of sleepy looking baseball, basketball and hockey players who tumbled out of the Pullman at St. Anne's about 7 a.m. on Friday, February 9th.

Notwithstanding the fact that the thermometer registered in the neighborhood of 40 below, the O. A. C. boys were given a warm reception by the students of Macdonald College. We were conducted to the men's residence, and after partaking of a hearty breakfast the forenoon was

spent in looking over the splendid Macdonald buildings. On Friday afternoon our enthusiasm received a check when we lost the hockey game, but the winning of both the baseball and basketball games on Saturday helped our feelings a little. In fact the O. A. C. representatives can consider themselves fortunate in winning two out of the three events from a group of athletes who have been taking a regular course of training, and eating at a training table since the new year.

Hockey

O. A. C. vs. Macdonald College.

The O. A. C. septette lost to the Macdonald seven by the close score of 3-2. The ice was very hard, making the game fast, and the smallness of the rink caused close checking. The O. A. C. team were greatly handicapped by the dimensions of the rink, and the absence of boards. The boards along the side were only a foot high, with the result that the wing men spent most of their time picking themselves up from the neighboring field, after being shunted there by their opponents. O. H. A. rules were played the first half, and Eastern rules the last half. Referees Barton and Squirrel handled the game in a satisfactory manner. College line-up:

Goal, Hoffman; point, Kilgour; cover point, Kedy; rover, MacDon-

ald (captain); centre, Clark; left wing, Herder; right wing, McElroy.

McMaster 5, O. A. C. 9.

The college defeated McMaster in one of the fastest games of hockey seen on the Royal City rink this season, and the few spectators whose love for the game induced them to brave the inclement conditions of the weather, were amply repaid.

McMaster started the ball a-rolling by getting one past Hoffman, a few minutes after the face off; MacDon-ald, however, soon followed with one to even up. McMaster slipped in another, and just before half time was called O. A. C. tied the score. Early in the last half O. A. C. took the lead and kept it throughout, scoring whenever they had wind enough to make a rush. MacDonald, Kedy

and Clark were responsible for the tallies. Full time score, O. A. C. 9: McMaster, 5. Bert Booth handled the game in A 1 style.

Sophomores 7, Freshmen 4.

The Sophomores defeated the Freshmen in the first inter-year fixture by the score of 7-4. The game was fast and characterized by individual work and lack of team play. The Freshmen made a mistake in putting Kilgour in the nets. Kilgour is a first-class defence man, and only a fair goal tender. If he had been playing defence he might have been able to break up the rushes of Mac-

Donald and Kedey. The Sophomores played a strong game and look like inter-year champions. MacDonald and Kedey were the shining lights of the Sophomores, while Fraser, Herder and Oswald played the game for the Freshmen. The teams lined up as follows:

Sophomores — Goal, Creelman; point, English; cover point, Kedey; rover, MacDonald; right wing, Weld; left wing, Duncan; centre, Madden. Freshmen — Goal, Kilgour; point, Kinloch; cover point, Fraser; rover, Herder; right wing, Burrows; left wing, Oswald; centre, Binnington.

Basketball

O. A. C. 26, Macdonald College 20.

The college five defeated the fast Macdonald College basketball team in an exciting game by the close score of 26-20. For the first few minutes Macdonald boys played the O. A. C. off their feet, and things looked bad for the Ontario aggies, but as soon as they struck their stride they begun to even up. At half time the score stood 13-11 in favor of Macdonald.

In the last half the O. A. C. played like fiends and took the lead in the first three minutes of play. Neff and White as guards checked like demons, while Culham, Horobin and Baker tossed them in when possible. Time was called with O. A. C. going strong. Final score, O. A. C. 26, Macdonald 20.

St. James 53, O. A. C. 29.

The O. A. C. went down to defeat at the hands of the fast St. James quintette in their return game in the O. B. A. series at Toronto.

The college were badly handicapped by the woodbox dimensions of

the St. James gym. The game was featured by close checking and good shooting, the St. James boys being better shots. The O. A. C. were represented by:

Guards, White, Miller; centre, Culham; forwards, Bramhill, Neff.

West End B. 44, O. A. C. 20.

The College lost the final game in the O. B. A. series to the champion West End B.'s by the score of 44-20. The champions are in a class by themselves, and they broke up the O. A. C. combination and scored almost at will. Neff and Culham featured for the college.

O. A. C. 29, Dentals 37.

The O. A. C. basketball team went to Toronto to play the champion Dentals for the Sifton cup, and if they hadn't been playing under a hoodoo the mug ought to be resting in the library now. But they lost the game by four baskets to the slowest team they have been up against this year. After playing against a fast aggregation in the O. B. A. series, they were lost against the unwieldy Dent-

als, and forgot how to break away. The guards couldn't guard and the forwards couldn't shoot, result the game was lost.

Juniors 57, Seniors 3.

The Juniors easily defeated the Seniors in handy fashion by the one-

sided score of 57-3. The Fourth Year were weakened by one of their regular players being absent, but the Third Year had all of the play. White and Smith were the pick of the Seniors, while for the Juniors every man played a first-class game.

Baseball

O. A. C. 16, Macdonald College 13.

The baseball game at Macdonald was perhaps the most exciting game of the three. Macdonald led all the way, until the second part of the eighth, when O. A. C. went to bat with the score 12-10 in Macdonald's favor. Then the O. A. C. started to wield the willow in Ty Cobb form, starting a merry-go-round which ended up in bringing across six runs. Macdonald went to the bat in the first part of the ninth, and only succeeded in getting two runs, leaving the score 13-16 in favor of the O. A. C. Every man on the O. A. C. team played a star game. Jackson seemed to pick them right off the bat, and Porter's bunt kept the Macdonald short-stops guessing. O. A. C. were represented by:

Battery, Baker and Jackson; first base, Burrows; second base, Culverhouse; third base, Duff; short-stops, Porter, Toole (captain); fielders, Shibley and Palmer.

Seniors 14, Dairy 11.

The Fourth Year defeated the Dairy in a closely contested game of baseball by the close score of 11-14. The Dairy fielded well, but the Fourth Year had the better battery, and were harder hitters. At time of going to press the standing of the teams in the inter-year series are as follows:

	Won	Lost	To Play
Third Year.....	3	0	1
Second Year.....	2	0	2
First Year.....	1	2	1
Fourth Year....	1	1	2
Dairy	0	3	1

Aquatics

Swimming Meet with Varsity.

On Saturday, February 3rd the annual swimming meet between the College and Toronto University was held in the 'varsity pool at Toronto. 'Varsity have several very fast swimmers, and had it not been for the excellence of E. Davies the College would have fared worse than it actually did. The results.

Fifty yards—1st, Tilson (Varsity); time, 29 1-5 sec. 2nd, E. Davies, (O. A. C.); time, 29 2-5 sec.

One hundred yards—1st, E. Davies (O. A. C.); time, 64 1-5 sec. 2nd, Foote ('Varsity); time 67 1-5 sec.

Backswim — 1st, Whitesides, ('Varsity), 2nd, Urquhart, ('Varsity).

Plunge—1st, Rowat, ('Varsity); 2nd, Von Gunton, ('Varsity); 48 feet 1 inch.

Fancy diving—1st, Elliot, ('Varsity); 2nd, P. S. D. Harding, (O. A. C.).

Relay race—1st, 'Varsity; Urqu-

hart, Burns, Simpson, Foote; time, 1 min. 18 2-5 sec. O. A. C.—Hextall, Harding, Davies, Puleston.

The total number of points scored by Varsity was 16 to the O. A. C.'s seven.

For the first time in several years the College was defeated in the water polo game. Here again, however, Davies showed excellent form, and his shooting secured three of the four goals scored by the College. Thorpe did excellent work in goal, handling many hard shots from Varsity forwards. The final score was 7 goals to 4 in favor of the Varsity team.

At the return meet held at Guelph between O. A. C. and Varsity, some good sport was afforded, Varsity winning in points by the narrow margin of 18-16. The events were all keenly contested, and fairly good times were made. The results were:

Fifty-two yards—1st, Davies, (O. A. C.); 30 4-5 sec. 2nd, Tilson (Varsity); time 33 2-5 sec.

One hundred and four yards—1st, Davies, (O. A. C.); time, 1 min., 9 sec. 2nd, Foote, (Varsity).

Backswim, 35 yards—1st, Urquhart, (Varsity); time, 27 4-5 sec. 2nd, Spalteholz, (O. A. C.).

Long Plunge—1st, Urquhart, (Varsity); 45 feet 6 inches. 2nd, Townsley, (O. A. C.)

Relay race—1st, (Varsity); time, 1 min., 27 2-5 sec. 2nd, (O. A. C.)

Varsity team—Foote, Gilson, Urquhart, Foote, W. S.

O. A. C. team—Waterhouse, Wilson, Hextall, Davies.

The water polo game was a slapdash affair from start to finish, and both goal keepers were kept in a state of tension for the entire game. At the commencement Varsity playing to the deep end, had most of the game. The first goal scored (Varsity), was rather lucky, a stray shot hitting somebody's head and doing the "losing hazard" stunt into the net. Another point was scored shortly after, and the first quarter ended, Varsity, 2; O. A. C., 0.

In the second, O. A. C. turned the tables and made the score even. From then on it was ding-dong, with Varsity dinging. The last quarter College pressed hard and Varsity just managed to keep them out long enough to secure a one-point victory, the final score being 6-5.

Davies played brilliantly, and Jowsey's long shots were effective, but all the boys did well, and both teams are to be congratulated on a fine exhibition.

Teams — Varsity — Milne, Qua, Foote, Rutherford, Brandt, Gilson. O. A. C.—Thorpe, Ryan, Harding, Jowsey, Davison, Davies.

Track and Field

J. MILLER, Track Manager.

In a recent issue of this magazine I considered certain features of track management. In this article, which shall be my last one, I wish to point out why I believe certain changes should be made along executive lines, and in handling and training the men.

It is not a pleasant thing to give advice, and still less pleasant for another to read it, but I trust the field and track men will bear with me for a short space, and give my arguments some little attention. As this will be my last chance to speak to

you in my official capacity as track manager I wish to thank you all for the faithful manner in which you worked last season, and I surely wish the track all possible success, and shall always wish it success in the future.

The first feature I wish to consider is that of correspondence. At present all this work is handled by the secretary of the athletic executive. Now, why should this be so? The other managers control their own correspondence; they arrange for games, set dates, etc., and while these must be ratified by the athletic executive, they practically have the work completely in their own hands. Is the track of less importance than the other branches of sport, or is the manager incapable of performing these duties? I think what actually is wrong is that the college has not awakened to the fact that the strongest feature of athletics we possess is the track, and that by duly encouraging it more will be done to make the O. A. C. famous in athletic circles than can be done in any other way. So long as the present system exists the work will not be accomplished satisfactorily, because, in the first place, the secretary is not usually a track man, and in the second place, he has too many other duties to perform to give much of his attention to the track if he were one. It surely seems reasonable enough that all correspondence be left entirely in the hands of the track manager.

He should then try to develop an inter-college meet between O. A. C. and the Toronto colleges other than those competing in the University inter-faculty sports. There is not at present any track league meets in the fall that I have been able to discover, in which the men of these

various institutions can compete. Such a meet would be all the more desirable in view of the fact that it has now been definitely decided that we cannot send men to the inter-collegiate sports under university colors, and it is hardly fair that the track men should get but one trip while the other branches of sport usually have several.

The next point I wish to consider is that of funds. There are few departments of sport that call out so many men for so long a time, and yet very few get so little money. This—for purely track purposes—amounted to less than \$50 last season. This sum should at least be doubled, and it may be doubled at no increased outlay of athletic funds if the banquet be eliminated the evening of Sports Day. This affair, while accomplishing no good, does much evil. The athletes, after some weeks of training, do themselves a great deal of injury by this feast, particularly as they must compete at the Varsity field meet a few days afterward. Really the ones who desire the banquet the most are those not connected with the track at all, and for these, \$50 or \$60 are added to track expenses. Moreover, were it eliminated it would not be hard, perhaps, to secure the training table we have worked for so long.

Then again we should have a man or two men to give the fellows a thorough rub each night. Such work might be accomplished by student labor, if two or three good men were properly instructed at the beginning of the season, and the necessary appliances were bought. This would cost very little money and it would mean a difference of many seconds in the time of the races.

After the showing made at our

own races by our own sprinter, we expected great things of him in Toronto. As will be remembered he failed to make a point. Now why was this? Had he no ability, or was he outclassed? We think he had ability, and was not outclassed, certainly to the extent that he should not get a place. It was simply because he was inexperienced; the track was strange, the method of starting was new, and in consequence he wasn't in the money. This was true to some extent of all our men. Strangeness of surroundings

combined with the cinder track helped to defeat many.

The team should be sent to Toronto some days before the races to have a preliminary try out on the 'Varsity oval, if this could possibly be done.

And now I've finished these track articles, and the track work. I don't care whether any of the things I have advocated are adopted or not. But I want you to think them over and to do just as your judgment dictates, and always remember that we have a winning track team here at the college if it is given a chance to win.

Mac Specials vs. O. A. C. Fluffy Ruffles

The "Mac Specials" hockeyists came across the campus, and defeated the Third Year "Fluffy Ruffles" by the one-sided score of 7-2. The defeat was not so much due to the fact that the Fluffy Ruffles were playing with the wrong end of their sticks as their inability to negotiate the hobble in their skirts.

Notwithstanding the fact that the ice was in rather poor condition, the game was featured by fast skating and close checking, the specials seemed inclined to rough it up at times, using their bodies freely. Hunter was crossed checked so severely on one occasion that after describing three revolutions in mid air, he landed on his left optic, with disastrous results. For the Fluffy Ruffles, Henry in goal played a star game, blocking many hot ones that were ticketed for the nets. King and Jenkins, on the defence, played a good consistent game. Bramhill was perhaps the pick of the forward line although he seemed to be holding unnecessary conversation, with the op-

posing rover at frequent intervals. Winkle Hood, the Fluffy Ruffles manager, could not manage the hobbled team. Culham, on right wing, carried his hobble in the most approved fashion. For the Specials every girl played a man's game, Miss Black, in the nets, got everything that got past the speedy Special's defence, while the Specials forward line worked inside the Fluffy Ruffles' defence with ease, many of their wrist shots proving too hot for Henry in goal. T. O. Clark, the referee, is to be congratulated on handling the bell impartially. The teams:

Mac Specials—Goal, Miss Black; point, Miss Corrigan; cover point, Miss Rittenhouse; rover, Miss Robertson; centre, Miss Shaw; right wing, Miss Freeland; left wing, Miss Craig.

O. A. C. Fluffy Ruffles—Goal, Henry; point, King; cover point, Jenkins; rover, Bramhill; centre, Hood; right wing, Culham; left wing, Hunter.

Editorials

Toronto Globe—The Ontario Agricultural College have a star in Davies. He is compared to Hodgson, the McGill marvel, who was a sensation in New York the other day. Davies has beaten Hodgson's record in the University of Toronto tank, which, however, is not of regulation size. The O. A. C. man has also equalled the record made by the Montrealer in New York. While the C. A. C. is affiliated with U. of T., agriculture is not a faculty, and Davies is not eligible to compete with Varsity against McGill.

The American universities refused to compete with McGill in swimming. Were they afraid? It looks like it.

Who would have been winners of O. H. A. group 5 if Preston had been

in Senior Company where they belong? Answer—O. A. C.

Why can't the College have a covered rink of its own? It is impossible to turn out a winning team without practice, and you can't practice on poor ice, and good ice is impossible without a covered rink. The success that has attended the renting of the Royal City rink one night a week this year has proved beyond a doubt that a rink managed by the athletic association of the O. A. C. would be a success in every way, financially and otherwise. "Let us start something."

S. C. Lawrence, of Boston, made a new indoor mark for the high jump, going over 6 feet 4 ½ inches.

WHEN I AM GONE.

When I am dead, if men can say
 "He helped the world upon its way,
 With all his faults of word and deed
 Mankind did have some little need
 Of what he gave"—then in my grave
 No greater honor shall I crave.

If they can say—if they but can—
 "He did his best, he played the man
 His ways were straight; his soul was clean;
 His failings not unkind or mean,
 He loved his fellowmen, and tried
 To help them"—I'll be satisfied.

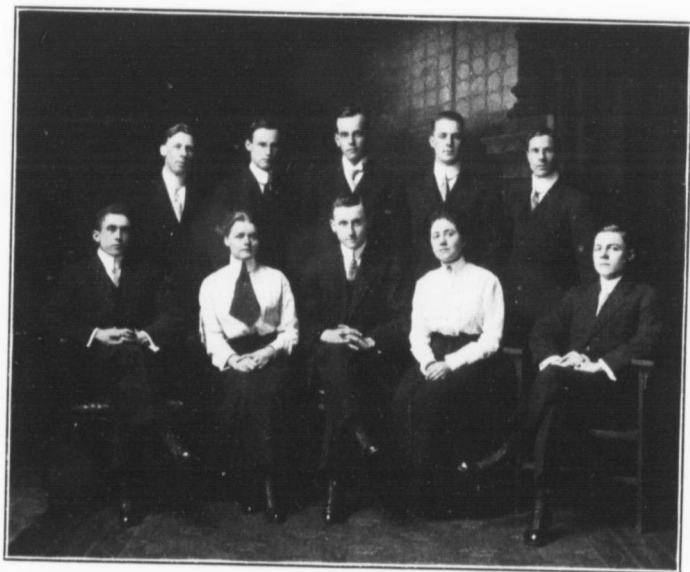
And when I'm gone, if even one
 Can weep because my life is done,
 And feel the world is something bare
 Because I am no longer there;
 Call me knave, my life misspent—
 No matter, I shall be content.

—E. C. W.

College Life

The Students' Council

THE quiet working of the Students' Council is yielding fruit continually. It succeeded in securing a better largely attended meeting adopted a carefully prepared by-law giving the rules to be observed in the organized elections of the Students'



CONVERSAZIONE COMMITTEE.

G. J. Jenkins, C. A. Tregillus, G. L. Woltz, H. M. King, P. S. D. Harding,
L. B. Henry, Miss E. Hamilton, W. H. J. Tisdale, Mrs. Oliver, G. G. Bramhill.

quality of paper for the Christmas and subsequent examinations, and in having the electric lights left on in our residence till 11 p.m.

Some time ago the students, at a

Publishing, the Young Men's Christian and the Athletic Associations, and the Literary and Philharmonic Societies.

A noteworthy clause in the regula-

tions is that no student may hold office in more than one of the previously mentioned societies. This clause is intended to, and no doubt will, prevent the shouldering of the responsibility of several offices on one person. To properly attend to the duties of any one office will fully occupy the attention of the average student during the time not devoted to studies, recreation and other "pastimes."

The object of holding general elections is to stimulate a keener interest in the selection of officers for the various societies, and to prevent that undesirable characteristic known as "railroading," which is occasionally noticed at some elections held in the college parlor.

The Fire.

Fire which broke out in the biological building shortly before noon on Tuesday, February 13, was the cause of nearly one thousand dollars damage before it was extinguished. The local brigade turned out quickly and did valiant work in keeping the flames in check until the city firemen arrived. A large hole was burned in the floor of one of the rooms on the third story, but considerable havoc was wrought by water.

The chief of the Guelph company fell on the icy steps outside the building and received a nasty cut on the head.

The fire is supposed to have started by defective electrical wiring. Fortunately the day was calm, or the loss would, in all probability, have been much more serious.

Sophomore Skating Party.

"Hence loathed melancholy" quoth the O. A. C. Sophomores and those of the other years, who were favored with an invitation to the skating party, as they put on their skates at the Royal City rink on Thursday

evening, February 22. Despite the fact that it took place on the evening of one of the stormiest days of the winter, the blustering elements were no criterion of the spirit of the assembled guests, once they arrived at the Royal City. The cars had long ceased from attempting to ascend the College Heights, but sleighs were called into requisition, and the ladies from the Hall were safely transported to the scene of festivity. Inside the rink the scene was one of beauty, if not of joy forever. Numerous Japanese lanterns hung in graceful lines above the heads of the skaters, while pennants and banners artistically decorated the walls.

The programme consisted of fourteen bands, including two leap year numbers and a grand march. The girls showed the boys quite clearly that when the necessity occurs, they are quite capable of securing their partners. The grand march was a picturesque spectacle, and was well carried out.

The band and refreshments were unusually good, and everybody enjoyed them. Altogether it was one of those social events which makes life at the college pleasant, and keeps it from becoming monotonous. Those in charge must have considered themselves well repaid for their troubles by the success of the evening.

Freshmen Oratorical.

The third annual Freshman Oratorical contest held in Massey Hall on Saturday evening, February 17, was a credit to the first year, but particularly to those who had charge of the meeting.

Mr. A. Cory won first place with a carefully prepared and well delivered oration on "Canada and Imperial Defence."

Mr. E. H. Currey was second, his subject being, "The Past, Present and Future of the British Empire." Mr. Curry gave an excellent speech, but, although he spoke fluently, his tone of voice was not the best.

Mr. W. A. Weir, with an interesting and educative discourse on "Public Opinion," was awarded third place.

The speakers all had carefully selected material, but some were rather deficient in preparation. Between the orations the audience was entertained by a piano solo by Miss McCallum, a vocal duet by Misses Allin and Manning, readings by Miss Sharpe, an instrumental duet by Messrs. Higman and Goodman, and solos by C. F. MacKenzie and W. A. S. Porter.

Mr. L. Caesar, B.A., proved an excellent chairman. S. H. Hopkins; J. E. Robinson, B.S.A.; and A. J. Galbraith, B.S.A., acted as judges.

St. Anne's Debate.

Our debating team, of Messrs. R. L. Vining and J. E. Lattimer, who represented the O. A. C. against Macdonald College in the recent inter-collegiate debate, lost the decision, but they were not vanquished without a game fight. The subject under discussion was: Resolved, "That the present Canadian tariff places the Canadian farmer at an economic disadvantage." The St. Anne's men had gone to all manner of trouble to get material, even going to Ottawa for several days to decipher government statistics. From what could be gathered from some of those who were asked to be judges, the Quebec men expected an easy victory, but such was not the case, and it was only by the narrowest margin that they were finally announced the victors.

Recorder Weir, of Montreal; Mr. J. B. Fairbairn, of Beamsville, and Judge Laurendeau, of Montreal acted as judges.

The Minstrel Show.

"Way Down Upon the Swanee River"

On the night of February 19th, the audience which attended the Cosmopolitan Club's minstrel show in the gym, were taken back to the "Dear Old South." Southern jokes and songs were rendered in first class style by six funny end men and a strong chorus of forty voices. Many well known characters were the "butt" of these jokes. Solos were rendered by Messrs Bosman, Clark, Burrows, Porter and Woods. A quartette consisting of Messrs. Gibson, Bosman, MacTaggart and MacDonald gave a very touching selection, "Yours Is Not the Only Aching Heart." Messrs. Bosman, Bland, S. Rogers, C. Rogers, Phillips, Cleeves and Peren gave several numbers on banjos and mandolins, which were greatly appreciated. A novelty was introduced by J. D. McArthur and Bro., in a duet entitled "Chicken Pie," which sent the audience into roars of laughter. The part of interlocutor was most efficiently taken by Mr. Will Simpson.

The second part of the programme was a southern sketch, "Befo' de War," showing the return of the Prodigal Son, with his can of molasses and a nickel. Catchy songs and clever dances were given to lighten the drama. The company consisted of Messrs. Madden, Bradshaw, Peren, S. and M. Porter, Wilson, Burrows and Wood.

The production of such an entertainment was well appreciated, and great credit is due the members for their untiring efforts in making the show a success.

S. C. J.

Professor Crow Leaving.

We are all sorry to learn of the intended departure of Professor J. W. Crow, who leaves early in April for Nova Scotia, where he will have charge of the experimental work at Truro.

Professor Crow claims Welland as his native county. He was a member of class '07, and after graduation, was appointed assistant in the pomology department. In 1909 he was promoted to the head of the department, which position he has very ably filled since that time.

During his connection with the College he has taken an active interest in the social and moral development of the students. He has always proven to be a first class lecturer, and an expert in both the theoretical and practical side of successful fruit growing.

The Review staff joins with Professor Crow's numerous other friends in wishing him continued success and rapid promotion.



PROF. CROW.

WHAT IS A GENTLEMAN?

A gentleman is the man who dissolves company with the snob who relates at the club his latest conquest of a woman.

A gentleman is one not having loud clothes and loud talk as part of his equipment.

A gentleman is one who does not forget that the washerwoman in the crowded street car belongs to his mother's sex.

A gentleman is the man "higher up" who is big enough to grasp the hand of the man "lower down."

A gentleman is one who believes you innocent until you are proven guilty.

And, above all,

A gentleman is one who does not try to prove it.—Hya Yaka.

MACDONALD

Character

Character—A Resume of An Address Given by Miss Long at a Recent Y. W. C. A. Meeting.

Character, what is it, and how is it made? It is not a garment that may be put on or off at will. It is not something for which we may "plug," that we may pass an examination or obtain a coveted position. It may not be acquired at short notice in order to accomplish even a worthy ambition. It is not reputation. Our reputation may be vastly better than our character, or vice versa. Character lies deeper. It is the real person, the source of all action and influence. The Psalmist in his meditation on the subject says "Thou desirest truth in the inward parts and in the hidden part thou wilt make me to know wisdom." Character and soul are often used synonymously; either stands for the inmost life, the reserve force that lies at the back of all our actions. Therefore it is the greatest thing in the world.

St. Paul with the Jew's adoration, for the temple, compares character to a "temple," a "spiritual house," built up of lively stones, Jesus Christ bring the chief corner stone. (Eph. 2: 20-22; 1 Pet. 4-5).

How is character made?

King David spent many years in gathering together precious metals and woods that a suitable abiding place might be made for Israel's God.

Many thousands of men, in obedience to King Solomon, toiled to the same end. That the holiness of Mt. Moriah should not be disturbed by sound of hammer and chisel the huge slabs of marble were fashioned in the quarries and there made ready to be placed in the sacred temple. Tradition says that for one block, mighty in size and wonderful in shape, no place could be found, so it was cast aside by the builders. Later the corner stone was lost and work delayed. Finally the rejected block, moss covered and forgotten, proved to be the key stone. Frequent reference to something of this kind is made in the New Testament. This temple was 46 years in building, and latter was razed to the ground. But character is never destroyed. It is never completed until perfected in the presence of the great Master builder.

In the quarry of every day struggle the material for character is shaped and rounded. Character is built by single actions, struggles and unselfishness. By the way we live the every day life; by the way we discharge our duties, by the way we control ourselves; the thoughts we encourage; the friends we take into our lives. By the way we judge our fellowmen; by the things we master; by becoming master of ourselves. By our thoroughness and our honor; and

our absolute trustworthiness. But it must have a sure foundation. Some will say morality makes a fine foundation. But morality will not stand the beat of the winds, 'tis as a house built upon the sands. "Wherefore also it is contained in the scripture. Behold I lay in Sion a chief corner stone, elect, precious, and he that believeth on Him shall not be confounded." (1 Pet. 2:6.)

Character is a wonderful thing, unseen, yet good and bad, alike, making itself felt. Build character, influence will take care of itself. We

"I am called opportunity."
"Why art thou standing on thy toes?"

"I stand but for a moment."
"Why hast thou wings on thy feet?"

"To show how quickly I pass by."
"Why is thy hair long on thy forehead?"

"That men may seize me when they meet me."

"Why is thy head so bald behind?"
"To show that when I have once passed I cannot be caught."

L. M. R.



OFF FOR A SNOWSHOE TRAMP.

may not choose whether we will make character or not, we may only choose the **kind**, the foundation. Influence is inevitable, it is what we are, put into action consciously or unconsciously—more often unconsciously.

The opportunity to make character is God's affair not ours—ours only to use it quickly.

In a Greek city there stood long ago a statue, every trace of which has long since vanished. But there is an epigram which gives this description of it.

"What is thy name oh, statue?

Our Winter.

Jack Frost has been making a long and intimate visit with us this year, and while we may rebel sometimes when the radiators don't work, and our noses are cold, still the jolly little fellow is so good in providing ice for us to skate on, snow for us to snowshoe on, and slides for us to toboggan on, that we should not complain. There have been several very jolly snowshoe tramps this year, and the skating, both at the College rink and on club nights and Saturday afternoons at the Royal City rink has been much

enjoyed by one and all. The hill has been covered thickly enough with snow for sliding this year, much to our delight, for sometimes we watch and hope throughout the winter, with never a slide. While some of us are canny Scots enough to shake our heads and groan when we see a care-free party starting off for this rather perilous sport, there have been no accidents on the sleds, barring a few scratches and bruises, as yet.

G. M. C.

The Junior Hop.

Evelyn Buck.

Time—The evening of February 9th, 1912.

Place—Macdonald Hall gymnasium.

In the background, on a platform banked with ferns, Nooman's Orchestra is playing the "Staircase Waltz." The main part of the stage is softly lighted by numerous Japanese lanterns, suspended from the ceiling. Waxed to glossy perfection, the floor is filled with gliding dancers.

Characters:—

The Patronesses—Mrs. G. C. Creelman, Mrs. S. F. Edwards, Mrs. E. W. Kendall, Miss Unwin, Mrs. K. T. Fuller, Mrs. M. Cunningham.

The Third Year men—(Beaming with the joy of playing host successfully).

The Mac. Hall girls—(In their prettiest evening dresses).

O. A. C. students—(At their best).

The girl with the aigrette and the girl in green have stopped, with their partners—the tall chap and the committeeman respectively—in the foreground.

The Tall Chap (clapping furiously in utter disregard of his new gloves)—They've simply got to give us an encore to that. It's the best dance of the evening.

The Girl in Green—You've said that after every number, you know, and the lovely part of it is that it's true each time.

The Girl with the Aigrette (looking towards the platform)—Horrors, the violinist is stopping. I'm going to clap too (suiting the action to the word). My sister is frowning at me over there, but it's leap year, and they must play some more.

The Committeeman—They will, too. Nooman's a good head. I'll go and speak to him if you'll excuse me. (Committeeman slips through the crowd, displaying his badge proudly).

Girl with Aigrette—Well, here I am without a partner, and that reminds me of what one of the short courses just said.

Tall Chap—Oh, the little girl in pink. What did she say?

Girl with Aigrette—Why, she thinks that with this lovely music and supper and floor, she could have a good time without any partners at all.

Girl in Green—Good gracious, I wouldn't like to try it though, would you? But you won't have to, dear, because here comes — and there's the music starting again. (The four take dance position and melt into the crowd).

With slight variations in character and dialogue, this little scene is enacted at least three dozen times throughout the evening. There is a dash and enthusiasm about the whole affair, which is characteristic of college functions alone, and a splendid effect is obtained by breaking the monotony of waltz and two-step by an occasional barn dance or rye waltz.

The closing chorus, "For They Are Jolly Good Fellows," is sung by candle light.

"God Save the King."

(This has to be played half a dozen times before the dancers will leave the floor.)

Easter.

He was the dearest little German boy ever seen, German from his yellow hair, sticking out straight every way, to his dear little freckled snub nose, and twinkling blue eyes. He was quite my favorite Sabbath School pupil, for though I made conscientious efforts to be impartial I never could resist his soft lisping English, thick with German, and the quick twinkle of humor in those baby eyes.

On Easter Sunday he was late for class. Just as I had commenced to wonder whether he had forgotten to come, in walked the laddie with a stride like a drum-major's, straight to me. "Pleathe, teacher," he spoke, "here itht an Easther egg. It itht a real one," and he handed me a beautiful, orange-colored, hard-boiled egg.

I thanked him and continued the lesson. On reaching home, I looked up the tradition of the Easter egg, observance of which had been brought to this country by the ancestors of my little German boy. The translation of the German legend was found in an o'd story book, a book such as they made when story books were few, and this is what it said:

Long ago a certain noble lady with her two children was forced by wars and persecutions to seek shelter during the absence of her husband among peasants in a valley remote from cities. While sojourning there, she discovered that hens were unknown in that part of the country, so she managed to secure a few pairs of chickens from her old home. Then, by precept and example, she taught

the peasants the many uses of that important article of diet, the egg.

When Easter came, her children wished to give a treat to the children of the peasantry who had been so good to them in their exile. Accordingly, the mother devised a plan. The party was assembled and told to build little nests around in the garden, each child to make one nest of moss, twigs or any handy material. Then, while the young guests were partaking of a simple repast of beaten egg and milk (the hens must have been busy all winter for this celebration), the nests were filled with eggs, boiled hard and dyed different colors, some having mottoes written on them. The children were delighted on discovering these, and thought the rabbits had brought them. Thus we have the Easter rabbit tradition associated with that of the Easter egg.

The story goes on to tell how the lady was restored to her husband and fortune by the indirect means of an egg she had given to a traveller, and how the egg-celebration at Easter became an annual event in the valley, and later throughout Germany.

G. M. C.

Our Public Spoke.

This year marks a new era in the conventional curriculum of the MacDonald student, a diversion that gives spice and inspiration to the routine and life of the Normal and the Housekeeper, and makes her a positive factor in her own education, for lo and behold, have they not followed that sound old pedagogical principle, the direction of natural desires and instincts into channels of education, and turned the time-honored trait, a woman's desire to talk, into the modern and heretofore masculine art of public speaking.

We experienced a strange thrill of responsibility and importance when this privilege was granted us, a feeling that perhaps the franchise was not so far away after all, but as the day of action approached all the sense of importnace left us, and only the responsibility remained. What would we talk about? Our professor had told us that we must not "talk shop,"—that while it would no doubt be very interesting to hear one of our neighbor students across the campus give a discourse on "Bread Making," such a subject would not give our new exercise any distinction from the ordinary demonstration lecture. How wise this premonition was we soon learned, for immediately we were wandering in the realms of biography, poetry and art, whereas heretofore we had come to feel that biography hinged upon *The Dangers of Dust*, poetry had been abandoned for the more practical but equally uncertain theories of proteoses and peptones, and even the light of the sun had come to concern us only so far as it served as a bleaching agent for laundry purposes.

For her maiden speech each student was given five minutes, but what girl can say all she wants to say in five minutes? The time was soon lengthened, and still we have some discourses extending over a period of six weeks.

Seriously, we feel that this phase of training is one of the long-felt wants in a woman's education. To the professional woman it is of imminent value, for without its help she has to confront along with her other new duties the painful ordeal of appearing for the first time before an audience, but to the homemaker it is not of less value. In whatever

locality her lot be cast, she can surely find some one whom she can help, someone who has not had the advantages of training or experience, and the discipline of the "public speaking" exercises will make it comparatively easy for her to express her views at Homemakers' Clubs, etc. Furthermore, the preparation of these addresses on subjects apart from domestic affairs is an education in itself, lifting her mind from the ordinary routine that is so likely to become monotonous, and giving her a broader interest in the world and the welfare of its people in general.

Ethel M. Chapman.

The Literary Society.

The Macdonald gymnasium welcomed many of the "Mac." girls to its cosy spot in front of the fireplace on the evening of Feb. 6th. The regular meeting of the literary society was held on this date, and as the president and first vice-president were otherwise occupied the second vice-president filled the chair. The minutes of the preceding meeting were read, and without further preliminaries the main feature of the meeting, the debate, was announced. The subject was, "Resolved, that the position of a Domestic Science teacher is more desirable than that of an Institutional Housekeeper."

The professional girls, particularly, displayed great enthusiasm and interest in the subject for debate, and stimulated and encouraged the speakers in every possible way. The speakers on the affirmative were supplied by their supporters with a sufficiency of the unadulterated ale of Father Adam. There was evidently an oversight on the part of the Housekeepers in regard to this, but

after a hasty exit, and a visit to their housekeeping supplies, a couple of the young ladies soon reappeared with an immense pitcher filled with the cooling draught.

Miss Davis, the first speaker, on the affirmative, displayed great ease of manner and dealt principally with the financial side of the question. Miss Boughner, the leader of the negative, replied most ably to Miss Davis' remarks, and brought forth many strong points in favor of the housekeeping profession. Miss Job's and Miss Mowbray's arguments were equally forcible, and the leader of the affirmative's reply was quite decisive.

At the close of the debate the judges retired, and Miss Crow favored the girls with a piano solo. Miss Lane's reading was much appreciated, also Miss Cox's mandolin solo. Miss Ross acted as critic, and in a few very appropriate remarks spoke of the proceedings of the evening. The judges, after considerable deliberation, returned with the decision in favor of the affirmative. "God Save the King" was then sung, and all dispersed as the call to duty had already sounded.

C. McL.

F. O.

Among Our Graduates.

Thinking it would interest our readers, both students and ex-students, to have some idea of what our graduates are doing in different parts of America, we are giving in this number the whereabouts and occupations of a few of those who have gone out from Macdonald during the recent years. The "Golden West" has lured many in that direction, and we find Miss Bligh, '08, teaching Domestic Science at Edmonton; Miss Carrick, '11, housekeeper at Mount Royal College, Calgary; Miss Mac-

Adams, lecturing and demonstrating for the Department of Agriculture in Alberta; Miss Hamilton, '06, supervisor of Household Science for the Public Schools of Regina. Nearer home we have Miss McCaig, '06, teacher of Domestic Science in the Normal School at North Bay; Miss Calhoun, '10, and Miss Boggs, '11, holding the respective positions of supervisor of School Sewing and Household Science teacher in the Public Schools of Ottawa; Miss Green, '10, Miss Carpenter, '11, and Miss F. Pringle, '10, filling similar offices at Kingston, Hamilton and Thorold; Miss Frank, graduate housekeeper of '11, holds the responsible position of housekeeper and dietitian at the Isolation Hospital, Toronto.

Not only in Canada, but beyond its borders are our students taking their place. Miss MacTavish, '11, being head buyer for a large catering establishment in Chicago, and Miss E. P. Wright having just been chosen to introduce the teaching of Household Science into the schools of St. John's, Nfld.

This is but a partial list of those who are making a success in the several departments of our work, and we shall from time to time add notices of others who are "making good." We also take this opportunity of announcing that we shall be glad at any time to receive from graduates brief accounts of their work, giving the conditions and advantages and disadvantages under which they labor. This would not only be a help and inspiration to the new students going out, but would also acquaint our readers with the value and extent of the work which is being carried on by the college.

Schools' and Teachers' Department

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

The January number of the Review outlined a new policy with especial reference to material bearing upon the home life of the farm. In this connection it is proposed to give articles on the various useful handicrafts, such as may be carried on in the home. These will be given in the form of lessons, describing each process in detail so that even the young boys and girls may follow them. The chief aim of this department will be to be helpful, and readers must feel free to write for information or to suggest further ways in which they can be helped.

Through a mistake in the mailing, the January number was not sent to Schools on our complimentary list. The remaining numbers for the year will be sent, however.

COURSE IN WOODWORK.

(Continued.)

The introductory lesson gave the instructions for some fundamental processes in woodwork and we are now ready to proceed with the making of a model. The first will be a tool rack that the boy may make for his tools at home. Drawings illustrating the model and some of the processes involved in its construction are given on another page.

Lesson I.

Material—Piece of Pine or Basswood finished to size in Introductory Lesson; piece of same material in the rough, $\frac{5}{8}$ in. x 5 ins. x 17 ins.; two flat-head, bright Steel Screws, No. 5, $1\frac{1}{4}$ ins. long.

New Tools—Smoothing Plane, Brace, 1 in. Centre Bit, Countersink, Hand Drill, or Bradawl, Screwdriver.

(The teacher is advised to write to Orr and Lockett, Randolph St., Chicago, for a copy of their "Red Book." This little catalogue is free and will furnish illustrations of the tools.)

The first thing to do when making a model from a drawing is to try and imagine what the finished article will look like, then to picture each part mentally. After this check over the small dimensions to see that they agree with the "over all" dimensions and lastly, to read carefully any notes that may be placed on the drawing.

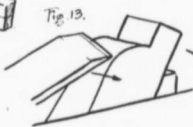
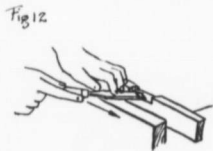
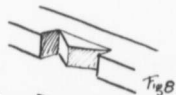
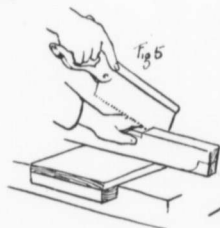
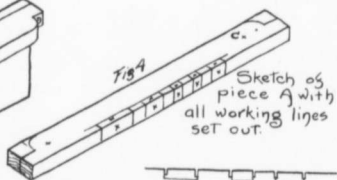
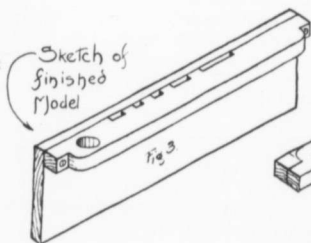
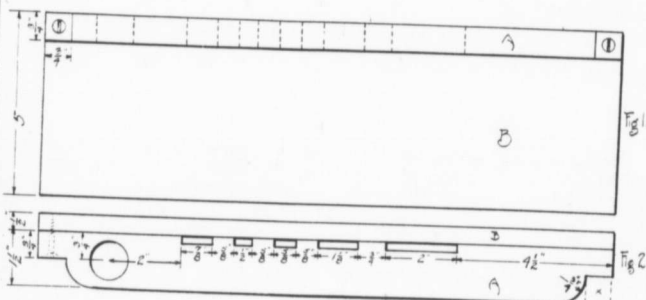
Where printed instructions are given they should be read over carefully to see that they are thoroughly understood.

To assist the beginner a sketch of the finished model is given in Fig. 3. Figs. 1 and 2 form the working drawings and show what the model looks like when viewed from the front (Fig. 1) and from above (Fig. 2). It will be seen that it consists of two parts, A and B, fastened together by screws. The piece A was "squared up to size" in the Introductory Lesson, so we are now ready to complete this part of the model.

Set the marking gauge to exactly $\frac{1}{4}$ inch and gauging from the face

Model 1.

Tool Rack



①

edge, mark, on both face side and back, a very fine line to indicate the depth of the openings for the tools. Then, measuring from one end, set out a row of points to indicate the width of these openings. Next take the knife and following instructions given in Introductory Lesson, square a knife line from gauge line on face-side, across face-edge and to gauge line on back. Then mark a cross on the parts to be cut out in Fig. 4. Now set out the lines for the corners that are to be removed from the front of the piece. The knife (across the grain) and the gauge (with the grain) may be used to set out the square piece shown by dotted lines in lower right corner of Fig. 2. The two quarter circles would be drawn with the compass set at $\frac{3}{4}$ inch radius.

The next step will be to saw down the sides or "cheeks" of the openings, but before doing this examine carefully Fig. 6. It will be seen that if you saw outside the lines as at E or just on the lines as at F, that the opening will be too wide. The rule is—saw in the waste wood close up to the line. To help keep the saw to this position in starting, a notch may be cut in the waste wood, straight down on the line, slanting towards the line in the waste. Fig. 5 shows how to hold wood on the bench hook and how to grasp the saw—note position of forefinger. Place the saw in the notch at angle shown, draw back quickly and the kerf will start in the proper place. As the kerf gets deeper bring the saw gradually to a horizontal position and saw to the gauge lines. In removing square piece from corners, the cut, across the grain, is made as above, but the piece must be held vertically in the vise in sawing the kerf with the grain. Keep piece low down in vise to lessen vibration. The surface produced by this last cut will have to be smoothed with the chisel.

We are now ready to remove the pieces marked X in Fig. 4. Place the work flat on the bench hook, hold chisel (1 in.) as in Fig. 7, and take the corners off, a little at a time, until each appears as in Fig. 8. (Note that the piece is held down firmly with the side of the left hand, while the forefinger guides the chisel.) The chisel is now slanted and, cutting a small amount at a time, remove the wood from one side down to the line as in Fig. 9. Turn the piece over and remove it in a similar manner from the other side, leaving a ridge in the centre (Fig. 10.) The chisel is now held vertically and, cutting from the side that gave the smoothest surface, take off the ridge, Fig. 11.

In making the 2 inch opening you may cut an extra saw kerf in the centre, not quite to the line. The surface in this opening may be smoothed up more by holding the chisel at an angle, as in Fig. 12, and pushing it in direction of the arrow. This is called a shearing cut.

The next step is to cut the curves. To do this the 1 inch chisel is held as in Fig. 7 (the wood placed flat on the cutting board) and at an angle of about 45 degrees tangent to the circle. Cut off the corner a little at a time until the circle is reached. Then take off the two corners thus made and so on until you have a curve made up of a number of narrow, flat planes.

To smooth the curve place stick in vise as in Fig. 13, hold chisel at an angle and force it straight across in direction of arrow with a shearing cut. Take off all corners on the curve in this manner.

The 1 inch hole for the marking gauge is now to be bored. Its centre is marked by a cross near the letter C in Fig. 4. The piece is placed upright in the vise, and using a 1-inch Centre Bit, we place the point of the "spur" on the centre of the circle, hold the bit perpendicularly to the wood and turn brace to the right. This bit has a "nib" which cuts the outer circle and a "lip" which raises the shavings. As the boring proceeds, the spur, which is rather long, appears on the back of the piece. Watch for it, and as soon as it shows through, turn the piece around in the vise

and complete hole from the back. Sometimes this last step is only carried far enough to score the circle and the hole then completed from the face side. This ensures the hole being straight.

The Centre Bit is used for shallow boring. For a deep hole use an Auger Bit as the twist serves to guide the bit and keep it going straight, while the "spur" which is threaded, draws the bit into the wood.

The holes for the screws are to be drilled and countersunk. Where no drill is available, a large brad awl may be used. The size of the hole is governed by the size of the screw, and should fit the shank snugly. In starting a large sized drill it will be kept to the mark easier if a depression is made first with the point of a large wire nail. Take care to keep the drill running straight and in finishing the hole use very little pressure, to avoid breaking the wood out at the back. In withdrawing the drill, keep turning it as it will then come out easier and lessen the chance of breakage.

The cone shaped recess for the head of the screw should now be made, using a Clark Double Cut Countersink. This tool is held in the brace. It makes a very smooth job in soft woods. For hard wood a Rose Countersink is generally used.

This completes the construction of piece "A" but in all probability it needs to be cleaned up. To do this we require a Smoothing Plane, sharp and set to cut very fine shavings. Go over the surfaces, (except the notched face edge), carefully removing the least possible amount of material.

We are now ready to make piece "B." Proceed in the following manner, after reading over the Introductory Lesson:

1. Plane, test and mark Face Side.
2. Plane, test and mark Face Edge.
3. Gauge and plane to thickness.
4. Gauge to width, but do not plane to width.
5. Using the chisel as in Fig. 7, chisel off a corner in the waste wood

as shown in sketch, Fig. 14. Place the piece low down in the end vise with the bevelled corner towards the bench and using a smoothing plane, set very fine, plane towards the bevelled corner. Neglect to chisel off this corner would result in a broken edge (if you plane right across). There are cases where it may not be possible to chisel in the waste wood. In such a case one might plane three quarters way across and turning the piece around, plane three-quarters way back again, lifting the plane at the end of each stroke.

6. Test the end from face side and face edge. When it is true, measure and mark the length $16\frac{1}{4}$ inches, square a line (see Introductory Lesson) around the piece, chisel corner in waste as in 5. Saw off waste. Plane to line.

7. Plane to width.

The two pieces are now ready to be fastened together with the screws. If you have the piece a little under size, you will have to change the screws and use 1 inch screws, in which case it will be better to countersink a little deeper than before. It might be suggested—use $1\frac{1}{4}$ inch screws. The length of screws above one inch varies by quarters and not by eighths.

The size No. 5 indicates the size of the screw on the smooth part of the shank and tells you that it was made from No. 5 wire. These numbers vary from No. 0 to No. 30, but No. 3 to No. 18 are the most commonly used numbers. The smaller the number the smaller the diameter.

In selecting a screwdriver see that the end is not wedge-shaped as that will cause it to work out of the cut in the top of the screw and disfigure both screw and wood. If it is wedge-shaped, fix it in the vise and

file the sides back about 1-16 inch until they are parallel. In hard woods or with large screws, we sometimes bore a hole in the under piece, making it about the diameter of the screw at the root of the threads. If we are using screws in hard woods and especially if it is a brass screw, a little hard soap is rubbed on the thread as a lubricant.

In order that the pieces may fit accurately when finished, you may hold them together in the vise while putting in the screws.

This little rack may now be fastened above your bench at home and will serve to hold the tools that you use the most and that require care in order to keep them sharp and true.



A BIG BOY'S LULLABY

Fairies and shadows all have had their day,
The tender glamor, of "good-night" is past,
You shut the door—as men do—when you pray,
In grief or joy you turn your eyes away
The world has got you, little son, at last.

When yet you were a dream I wrapped you, dear,
In all the fearful wonderment of Spring,
But when you came I almost ceased to fear,
Lest this great moulding, this my purpose here
Should suffer from a moment's faltering.

And now my moulding's done; a ruder hand
Shall shape my dream to some design unknown,
And I, a stranger in a sweet, strange land,
Shall watch the fair fields of your soul expand,
And reap what fruits of all that I have sown?

Yet that which was remains, and though the world
Holds you to-day, my arms once held you fast,
And when at night time you are lying curled
Child-wise in dreaming—when your heart's unfurled
To hear God's tender evening psalms at last—

Listen, my little son, for I, too, sing;
Hush, love is over all and love's divine,
The world that parts us is a shadow-thing
(Laugh at the world and it shall crown you king),
And you are mine still, Boy, and only mine.

—Mildred Huxley, in the Spectator.

Letters to the Editor

This space is to be devoted to the correspondence of our readers. The staff are to be considered in no way responsible for any opinions herein expressed. All are invited to contribute to these columns, but all letters intended for publication must have signatures attached.—Editor.

THE EDITOR'S OPINIONS ARE WRONG.

Dear Editor:

In the article entitled "Have We Time?" appearing in the editorial columns of the February O. A. C. Review, the author has presented our college social life in no very flattering light, which is neither just nor shows the due regard for the feelings of others that an expression of personal opinion on such a subject should show. It would have been better if the author had confined himself entirely to the obvious reason of his article—namely that he considered that too much time and trouble were taken in arranging our social affairs—and had not launched into would-be sarcastic criticism of the dress and conduct of those who do attend the dances at Macdonald Hall. Firstly, as to dress. The writer of the editorial perhaps is not fully aware what a vexed question this has been at the meetings of at any rate two dance committees, and I would like to remind him that, in order that no one should feel in the slightest degree embarrassed or even constrained to stay away through the lack of evening dress, the Cosmopolitan Club dance was made entirely informal, and in so doing the commit-

tee had to face even more opposition than had it allowed men to suit themselves individually as to what they should wear. Secondly, as to conduct. If the writer had attended any dance given at the college, and thus had secured first hand information, I am quite sure he would have seen nothing to offend the most decorous or fastidious society.

Then, again, why was not the author content to only use simple straight forward language instead of employing a number of hackneyed, high standing platitudes, such as "glaring artificiality," "the shallow and the false in society," "narrowing influences and fast atmosphere"—of which he appears to have only a rather vague idea of the meaning, and which have been often uttered from pulpits and in speeches dealing with some extensive moral reform movement. Had he more clearly understood the conditions to which such expressions are applicable—conditions only found in the biggest cities of the world—he would never have desired to even hint that our simple college entertainments were in any way deserving of the insinuations—the insult even—implied by the use of such phrases. The Review, the editorial states, will always encour-

age refinement and progress, but the article seems to me to suggest a step backwards rather than forwards, as the last thing that can be urged against dancing is that it exerts a narrowing influence.

In conclusion I would like to say that in my humble opinion no boy, whether he be town-bred or country-bred, whether after his college course he makes his home in a city or on the farm, can fail to be benefited by frequent acquaintance with all the refining influences of Macdonald Hall, whatever form the entertainment may take.

H. L. Phillips, '12.

THE EDITOR'S OPINIONS ARE NOT WRONG.

Dear Editor:

It is the function of a college paper to discuss college problems. It is the editor's privilege to set forth his ideas on college problems in the editorial columns of that paper. No man will deny the truth of this.

A certain editorial, "Have We Time," published in the February Review, is now famous—or notorious. It has stirred a certain element of our student body to a frenzy of indignation. Threats have been made endangering your physical well being. Reflections have been cast upon your intelligence. You must surely appreciate Kipling's meaning when he wrote:

"To hear the truth you've spoken,
Twisted by knaves and made a trap
for fools."

The article in question is a timely protest against the extremities to which a certain clique would push our social functions. When two weeks are spent in preparation for a "masquerade" and when a committee

works for two months to prepare for a *conversazione*, it is high time that some one has the courage to say in our college paper that we are getting in beyond our depth.

You have pictured some of the situations that arise at these formal social functions in terms that are a little fantastic. Your ideas do not wear dress suits. You have offended the refined taste of some of your readers, and one of these cultured gentlemen has seen fit to attack you in an oration, and to refer to you in terms that do not flatter. Of course this Chesterfieldism disciple looks down upon his fellow students from such a mountain of knowledge and experience and culture that to him they must indeed seem insignificant. His attack, however, was unjust and entirely uncalled for. Like some other "attacks" in that oratorical contest, it deserves the condemnation of our students. It is not the part of a gentleman to insult his fellow students, when they have no opportunity to defend themselves.

We may not all share your views on the influence of "the card table and the ballroom with their fast atmosphere, unkind gossip, and the general starched discomfort of it all. You may be right. Possibly you are wrong. This, we must each of us decide for ourselves. But we agree with you when you protest against the tendency to make our college functions more formal. This is a tendency that we must guard against. It means the exclusion of many of our men from our social life in which we believe every student should have a part.

Very sincerely yours,

Roy L. Vining, '13.

LOCALS

The Fire.

(An authentic account in verse.)

The sun shed down his golden ray,
On College Heights one frosty day,
The students in the class-rooms met,
The lectures trying to forget,
Talked low and dozed, or jesting
smiled,

And time half-wearily beguiled.
But sudden o'er the lecturer's drone
The College siren is suddenly blown,
And echoes in a ghostly way,
Round buildings, fields, and far away.
Commotion then in class and room!
'T would seem the last trump's note
and doom,

For slumberers from their ease arise,
And with the waking mingle cries.
Then off they rush in tumult blind,
The cause of the alarm to find;
For signs of conflagration seek,
For 'tis the FIRE ALARM, ye meek!

At last 'tis seen; a smoky wisp
Floats forth upon the air so crisp;
The Biological's afire!
Destruction threatens, ruin dire!
Quick, ye College Fire Brigade,
Show the stuff of which you're made!
Soon the Sophomore's reels adjust;
Freshmen through the building
burst,

Cart away both bugs and seeds
Books and microscopes and weeds;
Then, their valiant efforts o'er,
Block up passage way and door.

Meanwhile, no less their worth to
show,

Professors round the building go;
Orders give and means display,
To check the fire's destructive sway;
Lo! Ajax there with mighty axe,
Hews through plaster as 'twere wax!
Said I Ajax? Nay, this way,
Acted brave Professor D—,
Till by chance a watery stream,
Destined for a smoky beam,
(By Gurth directed from a hose),
Stays his wild, tempestuous blows.

There behold, wise R-dn-y stands,
Hands in pockets, he commands,
What to save and what to leave;
Ah, my friends, indeed to grieve,
If ye missed th' inspiring scene;
Such courage cool sure ne'er was
seen,
Such fortitude displayed before.

And now my song is nearly o'er,
But patience please; as faithful
scribe,

One more scene I must describe,
Witnessed ye so high in air,
Upon a ladder balanced there,
Courageous Craig? With many a
blow,

'Mid missiles hurled from far below,
He seeks a window-pane to break;
The ladders shake, the structures
quake,

At last a crash and there it goes,
No glass could long resist his blows,
Dealt with Herculean strength.

And now, my friends, I've reached at
length

My story's end. The fire's put out;
The City Fire Brigade's in rout,
From off the campus they are chased
And to their quarters back they
haste,

While many a shout and student yell
The triumph of the College tell.

E. A. P.

◇ ◇
"Whatsoever a man soweth, that
shall he also rip."

◇ ◇
Prof. Day (in climatology)—"If
the earth's axis had been tipped the
other way when would we have had
our summer?"

McMillan—"In winter."

Questions for Our Dairy Students.

Is milk a stable compound?

If milk contains 87.5 per cent. wa-
ter, how often should you water the
cows?

If one man can milk a cow in ten
minutes, how many men will milk
her in half an hour?

How many "solids not vat" are
there in cheese?

If milk has case-in it, what has oc-
curred, and in what whey?

◇ ◇
Mollison—"I don't know enough
about hydraulics to set a paper I
could pass on."

◇ ◇
S. H. Hopkins (in English Com-
position Class)—"I do not approve of
squeezing in a conclusion."

We wonder if this opinion holds
good with a darkened hallway.

The Jays.

Prof. Reynolds—"Where is your
seat, Mr. Jowsey?"

Jowsey—"Somewhere among the
J's, Professor."

Prof.—"Better sit between Jack-
son and Kedey then."

Our Holiday Time.

The hall clock strikes the knell of
parting day,

And mother goes, astute and
thoughtful, she,

Then father upstairs plods his weary
way,

And leaves the girl to darkness and
to me.

Overheard on the Mac. Campus.

◇ ◇
"There is Mr. Swinnerton without
a hat. Isn't it funny his ears never
freeze."

"Oh, not at all. They can't be
frozen without moisture, and you
know Prof. Crow says the sap stopped
running up in wood about the last of
August."

◇ ◇
Mr. Fulmer (lecturing to Fresh-
men)—"Are any of you acquainted
with CO₂?"

Morse—"Yes, he's my room-mate."

◇ ◇
Chirpy Weld—"Hello wife! Were
you at the fire?"

English—"Yes, you bet. Our reel
was first there, and we were ahead of
the town brigade, too."

Well Intended.

Bertie and Agnes were sitting to-
gether in the moonlight uttering ten-
der nonsense.

"And," said the girl bravely, "if
poverty comes, we will face it to-
gether."

"Ah! dearest," he replied, "the
mere sight of your face would scare
the wolf away."

Ever since he has been wondering
why she returned the ring.

◇ ◇
Mr. Webster, (lecturing on Poultry
to Second Year)—"The Java fowls
originated in Java or some other part
of Europe."

300 Patterns

Lyons Tailoring Co.


Tailors to Men Who Know

47 WYNDHAM STREET

The cream of the World's choicest, handsomest Spring Suitings to choose from here—an assortment four or five times greater than other shops carry. Bigger Values here, too. Our Special

\$20 SUITS

made-to-order are eye-openers to men who usually pay \$25 to \$28. All the new shades and weaves. See them. Others at \$15 to \$30.



THE BEST OF THE PATCH
RENNIE'S SEEDS
 ARE SUPPLIED TO YOUR DEALER
 DIRECT FROM US - AFTER EACH
 HARVEST - AND ARE ALWAYS
 FRESH AND RELIABLE - TESTED
 BY GOVERNMENT - BUY THEM IN
 SEALED PACKAGES - CATALOGS FREE

WM. RENNIE CO. LIMITED
 TORONTO. MONTREAL.
 WINNIPEG. VANCOUVER.

YOU can build cheaper—your buildings will look better and last a lifetime if you build with



METALLIC

Proof Against Fire, Weather, Lightning and Vermin

**“Eastlake”
Steel Shingles.**

The best steel shingle made and the cheapest to lay. Has been on roofs for over 25 years and is good as new now.

**Metallic Stone
and Brick,
Steel Siding.**

Looks exactly like stone or brick yet can be laid easily and quickly by any man. The best building material possible for homes, stores, stables, etc.

**Metallic Ceilings
and Walls.**

Makes the most sanitary interior finish possible. Proof against rats, mice and vermin—they last for ever. There is no plaster to fall, therefore no dust—nor paper to put on or take off, therefore no trouble.

**Corrugated Iron
Siding and
Roofing.**

For barns, sheds, granaries, out-buildings, etc., can be covered at a low cost. No wood sheeting necessary.

Eaves-troughs, Conductor Pipes, Cornices, Ventilators, Finials and all Building Accessories.

It will pay you to send a postal card to us and let us know your requirements. We shall be pleased to offer you plans and suggestions that will help you.

THE **METALLIC** ROOFING
CO., Limited
MANUFACTURERS

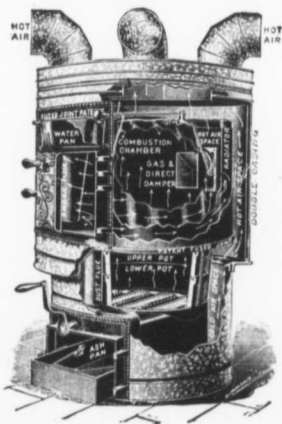
1185 King Street West, TORONTO

BRANCH FACTORY: WINNIPEG

AGENTS IN PRINCIPAL CITIES

: Mecla : Warm Air Furnace

FOR COAL AND WOOD



In this furnace we have embodied our latest inventions and improvements in regard to hot air heating apparatuses, such as

Individual Shaking Bars, Steel Ribbed Fire Pots, Cast Iron Combustion Chambers, etc.

We shall be pleased to give further particulars together with prices on application.

Clare Bros. & Co., Limited

Preston,

Winnipeg,

Vancouver.

Getting Personal.

Prof. Day (to Rettie) — "When you look at the moon, don't you always see the same face in it?"

Miss D—"Won't you sit out this dance with me?"

Tisdale—"But I thought you were fond of dancing."

Miss D—"I am."

Neale — "What did you have for dinner today, Pat?"

Pat—"A little bit of everything,—hash."

Dean, (meeting Bradt hurrying down the hall, dressed in his Sunday clothes)—"Where is your excuse?"

Bradt—"Oh, she's over at the Hall."

The People's Store

Is headquarters for Men's High Class Ready-to-wear Clothing; also made to measure

CLOTHING.


Have also a big assortment of gent's furnishings in all the up-to-the-minute styles.

We specially solicit the patronage of the O. A. C. boys and faculty.

Prices Moderate.

COLE BROS. & SCOTT

29-31 Lower Wyndham St.,
GUELPH, ONTARIO.

BOND'S		
<hr/> GUELPH'S BIG BRIGHT HARDWARE STORE HAS WHAT YOU WANT. <hr/>		FOOTBALLS MITTS TOBOGGANS SNOW SHOES SKATES HOCKEY GOODS BOB SLEIGHS AND SUMMER GOODS IN SEASON DAILY DELIVERY TO COLLEGE
THE BOND HARDWARE CO., LIMITED		

Fertilizer Requirements of Corn

Extract from "Fertilizing Fodder Crops," by T. Walter Shipley.

"Corn is a gross feeder and must have an abundant supply of readily available 'plant food' material. Where corn is grown on any but a clover sod or meadow, a dressing of twelve to fifteen tons of barnyard manure should be applied and thoroughly worked into the soil. While this dressing of manure would supply the necessary humus and part of the nitrogen required, it must be supplemented by the addition of phosphoric acid and potash if a maximum crop is to be grown. The addition of, say, 400 lbs. Acid Phosphate and 150 lbs. Muriate of Potash per acre would supply these necessary ingredients and, except where the land is in a very high state of cultivation, 120 to 150 lbs. Nitrate of Soda, applied as a top dressing, would be required to supply the amount of nitrogen to produce a maximum crop.

FREE copies of this and other bulletins dealing with the important subject of fertilizing may be obtained from

THE GERMAN POTASH SYNDICATE

1102-5 I. O. F. Temple Building,

TORONTO, ONT.

We invite every O. A. C. and Macdonald student to the

SPA CANDY WORKS

To make it your Headquarters when down town.

We manufacture all our candy, and are continually getting up new things for our customers.

Our Saturday Candy Specials 10c a pound are winners.

In the Lunch Room we serve Hot Chocolate and Bovril at 5c a cup. We give the best Oyster Stew in the city for 15c. A trial solicited.

SPA CANDY WORKS

CORNER WYNDHAM AND McDONELL STREETS.

Remember the place

"T. & D. CLOTHES"
THE SIGN OF GOOD CLOTHES.

Clothes that are built to give comfort. Correct and distinctive in style. Our garments will do the right thing by your appearance—every time—all the time.

"T. & D." Suits, \$10 to \$25.

"T. & D." Overcoats, \$8.50 to \$25.

Our Hat and Furnishing Departments are complete with the newest things in men's wear.

THORNTON & DOUGLAS
THE "COLLEGE MAN'S" STORE
Lower Wyndham.

ERNEST A. HALES,
68 St. George's Square.

Sells the Best Meats
and Poultry.

Phone 191

Open all Day.



FREDERICK SMITH,
PLUMBER, STEAM
AND GAS FITTER,

Sanitary Appliances. Estimates Furnished.
GUELPH.

SAM LEE HING,
The Expert Laundryman,
ST. GEORGE'S SQUARE.

**SNOWDRIFT, PEOPLES'
MAPLE LEAF**



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

The James Goldie Co.
LIMITED

GUELPH, ONTARIO.

Telephone 99.

WE MANUFACTURE

Peep Sights

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

H. Occomore & Co.
GUELPH, ONT.

O. A. C. 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 Col-
lege and Macdonald Institute.

C. L. Nelles

PHONE 45

ABOVE POST OFFICE



ABSORBINE

will reduce inflamed, swollen joints, Bruises, Soft Bunches, Cure Boils, Pock Evil, Gout, Fistula or any unhealthy sore quickly; pleasant to use; does not blister under bandage or remove the hair, and you can work the horse, if possible, delivered. **Book 7 E free.** ABSORBINE-E-JEL, liniment for mankind, Reduces Painful, Swollen Veins, Gout, Weng, Strains, Bruises, stops Pain and Inflammation. Price \$1.00 per bottle at dealers or delivered. Will tell you more if you write. Manufactured only by **W. F. YOUNG, F.D.F., 177 Lyman Bldg., Montreal, Ca.**

Wolseley, Sask., March 28, 1907.

Dear Sir:—

Have been using ABSORBINE for three months and I have great faith in it, I first tried it on a colt that had got his leg cut in a barbed-wire fence. It healed up and began to swell. I applied Absorbine and it removed swelling in twelve days.

Yours Truly,

F. O'NEILL.

CANADIAN PACIFIC

Unexcelled Train Service

Fast Time and Attention

TO

WINNIPEG	SASKATOON
EDMONTON	REGINA
BRANDON	CALGARY
BANFF	LAGGAN
NELSON	ROSSLAND
SPOKANE	VANCOUVER
VICTORIA	SEATTLE
TACOMA	PORTLAND

Standard and Tourist Sleeping Cars

Via Canada's Greatest Highway

J. HEFFERNAN, CITY AGENT.

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

DENTIST,

Cor. Wyndham and MacDonnell Streets.

Telephone 14. Over Dominion Bank.

MIDNIGHT SUPPERS.

Bacon, Oysters, Fancy Biscuits, Olives, Pickles, Chocolates, etc.

J. A. McCrea & Son.

R. H. McPHERSON,

BARBER,

Hair Cut, 20c; Shave, 15c. Close 8 p.m.

145 Upper Wyndham St., GUELPH

THE GUELPH OIL CLOTHING COMPANY, Limited,

Manufacturers Oiled Clothing, Tarpaulins, Tents, Awnings, Stack and Binder Covers.

SUEY WAH.

Hoop la! Come to the Big Laundry. Expert workmen. Hand work only. College calls made Monday, Wednesday and Friday.

16 Wilson St., GUELPH.

JAMES H. SMITH

Opposite Traders' Bank.

Molasses Taffy, Walnut Cream and Maple Cream. Best in the City. Fresh Every Day.

LUNCHES SERVED

COLLEGE STORE

CANDIES, CIGARETTES, TOBACCO, Etc., Etc., Etc.

CORNER OF CAMPUS.

McHugh Bros.

Wholesale and Retail TOBACCONISTS

28 Lower Wyndham St., GUELPH.



**AGRICULTURAL COLLEGES
REFERENCES**

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

THE BURGESS STUDIO

High-Class Portraits.

SPECIAL RATES TO STUDENTS

NOTICE

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

H. H. WORDEN, ST. GEORGE'S SQUARE
Street Cars every 15 minutes. Three chairs.
No waiting.

ERNEST M. SHILDRICK,

Teacher of Singing,
Pupil of Van der Linde of New York,
Studio, Opera House Block.
Phone, Studio 625.
Phone, Residence 697.

NOTICE TO STUDENTS

You are invited to make our store your
meeting place when down town.

SHERIDAN & O'CONNOR,
Tobacconists,
45 Wyndham Street.

Regal Shoes For Men. Sorosis Shoes For Women.

W. J. THURSTON,
Sole Agent,
THE NEW SHOE STORE,
39 Wyndham Street.

KING EDWARD BARBER SHOP

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

CHAS. BOLLEN, - Proprietor.



Lee Wing,

CHINESE LAUNDRY

The Best Work in the City.
57 Quebec Street, Opposite Chalmers Church,
GUELPH, ONT.
Wash every Monday, Wednesday and Friday.
Iron every Tuesday, Thursday and Saturday.

We guarantee best work in the City, having
latest improved machinery for ironing collars,
and cuffs, which will not crack or break the
wing.

Shirt collars ironed straight, so as not to
hurt the neck. Stand-up collars ironed without
being broken in the wing. Ties done to look
like new.

Please call and try. Parcels called for and
delivered to any part of the City.

Goods not called for in 60 days will be sold
to pay charges. Goods at owner's risk in case
of fire.

**Our Business is
MEN'S WEAR**

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

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

Cummings' Oak Hall Store

Rob Roy Restaurant

12 GARDEN ST., MARKET SQUARE
Regular Meals and Lunches, Dinners 25c.
Meal tickets arranged for.
Fish and Chops.
Open from 5:30 a.m. until 12 Midnight.

Royal City Mineral Water Works
Manufacturers of
HIGH-CLASS CARBONATED BEVERAGES
247 Brock Road.

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

WATERS BROTHERS

Students' Supplies

Phone 350

41 Wyndham St.,
GUELPH.

BOTANICAL, ENTOMOLOGICAL, NATURE STUDY, EXPERIMENTAL and MANUAL TRAINING, DRAWING MATERIALS and OUTFITS, NOTE BOOKS, FILLERS, INKS, PENCILS, FOUNTAIN PENS.

Special Prices for Quantities.

Cut Flowers Chocolates

Violets, Valljy, Roses, Carnations, Mums,
Received Daily.

Complete Assortment of Neilson's Chocolates

"The Rosery"

ST. GEORGE'S SQUARE. PHONE 378.

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

A. AMODEO

We sell all kinds good
FRESH FANCY FRUIT
at wholesale and retail prices.
PURE OLIVE OIL

59 Quebec Street. Open till 10 p.m.

FLOWERS

We carry the best selection of Cut Flowers in the city. When you want something choice call on us or phone 866. Prompt delivery and careful attention to all orders.

McPHEE, FLORIST
Wellington Block.

HEADQUARTERS FOR HARDWARE

AND SPORTING GOODS
AT LOWEST PRICES.

G. A. RICHARDSON

Upper Wyndham St., GUELPH.

Pringle

THE JEWELER

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

Horse Owners! Use

GOMBAULT'S



Caustic Balsam

A Safe Speedy and Positive Cure

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

THE LAWRENCE-WILLIAMS CO., Toronto, Ont.

Hockey Boots

Students' headquarters for Hockey Boots. The largest assortment in the city to choose from.

Gents' - - -	\$1.75 to \$2.75
Ladies' - - -	\$1.50 to \$2.25
Ladies' and Gents' Skates, 50c, 85c, \$1.00, \$1.50 to \$5.00.	

SKATES ATTACHED FREE.

Ask to see our Kosy Xmas Slippers, Evening Pumps, Club Bag and Suit Cases.

NEILL, the Shoe Man

Say boys, Patronize the Young Music Dealer,

Wick's

Next door to G. B. Ryan's, Guelph.

Pianos, Organs, All Kinds of Phonograph Records, etc., Musical Goods, Sheet Music, etc., etc.

We appreciate your business. We need your money.

Phone 431.

FOR PARTICULAR MEN

We like to make clothes for the particular man. Anyone can suit the fellow who is easily satisfied, but it takes good workmanship, honest materials and the best of tailoring experience and ability to suit the really careful dresser. Ask the particular man what he thinks of the last suit or overcoat we made for him. It is likely he will tell you they are the best he ever had, even for double the price. Suits and overcoats \$18.00 to \$30.00.

R. J. STEWART,

Opp. Knox Church, 19 and 21 Quebec Street.
Phone 456.

Look !! Look !!

Suits Pressed - - -	50c
Suits Cleaned and Pressed - - -	75c
Pants Pressed - - -	15c
Velvet Collars - - -	75c to \$1.25
Dry Cleaning - - -	\$1.25

Work done by practical tailors.

C. E. Hewer & Co.

49 QUEBEC ST.

PHONE 808

BROADFOOT'S

RED CROSS PHARMACY

— FOR —

DRUGS AND SUNDRIES

Fountain Pens
Toilet Articles
Nyal's Family Remedies
Paterson's Chocolates

St. George's Sq., Corner Quebec.

PHONE 381.

College Cut Clothes for College Fellows

who like to keep a few steps in advance of the band wagon.

Our suits at \$15, \$18, or \$21 and our overcoats at \$12, \$15, or \$18 will dress the young fellow as he would like to be dressed.

NOT A BIT OF TROUBLE TO SHOW.

R. S. CULL & CO.,

The Outfitters.

We Have Them

Shoes for street wear.

Shoes for evening wear

and shoes for all occasions. See our

Wauk-On Shoe at \$3.75

J. D. McARTHUR, 16 Wyndham St.

SUCCESSOR TO C. E. ROWEN

LEE LEE & COMPANY

Opera House Block

Hand Laundry

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

Why Burnett Came Out.

"Going to send your boy on an ocean trip, are you?" said a friend to his father.

"Yes," replied Burnett Sr. "You see, if there is anything in him, I think a long sea voyage will bring it out."

Bramhill, at the close of the Union Lit. at which he had been one of the debaters, came up to Harris and shook his hand.—"I want to thank you," he said, "for the close attention you gave me. Your up-turned face was an inspiration to me. I am sure you never changed your earnest attitude during my speech."

"No," said Harris, "I couldn't, I have a boil on the back of my neck."

The question is, if MacElroy has been to Macdonald's, where has Horobin?

Guelph and Ontario Investment and Savings Society

(Incorporated A.D., 1876.)

Four and One-Half per cent. paid for money placed on Debenture.

Three per cent. paid on Deposits.

Interest paid half-yearly.

Executors, Trustees, etc., are authorized by special Order-in-Council to deposit Trust Funds in our Savings Department, and to invest Trust Funds in our Debentures.

Office hours: 10 a.m. to 4 p.m.

J. E. McELDERRY,
Managing Director.

Office: Society's Building,
Corner Wyndham and Cork Streets,
GUELPH.

ASPINWALL *Potato Machinery*

Efficient Spraying
Outfits for Every Purpose

*Accuracy, Simplicity, and
Durability Characterize
the Aspinwall Line*

ASPINWALL MFG. CO.
JACKSON, MICHIGAN, U.S.A.

Canadian Factory, Guelph, Ontario.

*World's Oldest and Largest
Makers of Potato Machinery*

Art Materials

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

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

Complete Catalogue mailed on request.



The Geo. M. Hendry Co.
Limited,

215-219 Victoria St., TORONTO, Ont.



Throbbing Head

AND TIRED EYES

Are not the right equipment for a successful College Student!

Take time to come here for a searching examination that will reveal the cause of your tired eyes and when we prescribe and furnish glasses to correct the trouble you'll find the world looks brighter again.

A. D. SAVAGE,

Guelph's Only Exclusive Optician,
Cor. Wyndham and Douglas Sts.
Phone 627. GUELPH.

R. B. KENNEDY

Photographer



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



PHONE 498

G. B. RYAN & CO.

GUELPH, ONTARIO

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 Gentle-
manly ideas of good
form

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

ONTARIO VETERINARY COLLEGE

Affiliated with the University of Toronto, and under the control of the Department of Agriculture of Ontario.



Infirmary for Sick Animals at the College.



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

N. B.—Calendar on application.

Prof. Squirrel—"Give me an example of deep rooting crops."

W. C. Hinman—"Pigs!"

Sidelights on Economics.

Question on Exam.—"Outline the main stages in the development of Political Economy. One answer received was as follows:

"The first stage was Adam and Eve's book, which propounded the Aristocratic theory and the Value of Capacity."

"Now," said an Irishman after a serious accident to a fellow miner, "We'll have to send some man to break the news to Murphy's wife." "Send Hannigan," suggested one of the gang. "He's just the man to break the news gradual. Look how he stutters."

Rexall

TRADE MARK

Shaving Lotion

25c and 50c.

Delightful to use. Allays all irritation caused by shaving. Also, a full line of needs for gentlemen who shave Razors, Stropps, Brushes, Mugs, Soap, etc.

QUALITY IS ECONOMY.

John D. McKee, Phm.B.

The Rexall Store

18 WYNDHAM ST., - GUELPH.
PHONE 66.

BUY YOUR

Shaving Outfit

HERE !!

Gillette Safety Razor, each - \$5.00
Auto Strap Safety Razor, each \$5.00
Fountain Safety Razor, each - \$5.00
Ever Ready Safety Razor, each - \$1.00
King Cutter Razor, each - \$1.50

Razor Stropps

Shaving Soap

Pocket Cutlery.

Guelph Hardware Co.

20 WYNDHAM STREET.

R. E. NELSON

93 Wyndham Street

For your up-to-date Hats and
Furnishings.

I make a specialty of men ordered clothing, and guarantee perfect satisfaction to all.

Prices Reasonable

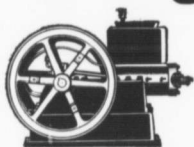
All my goods marked in plain figures, and only one price.

R. E. NELSON,

Men's Furnisher, Hatter and Merchant
Tailor.

A Feeling of Security

Of absolute Reliability and Power is
Enjoyed by Every Owner of a

Gilson Engine

"GOES LIKE SIXTY."

A mechanical masterpiece of the highest type, with our improved simple methods of cooling, governing and sparking. Positively guaranteed, biggest value. All sizes. Save money. Ask for catalogue and prices.

GILSON MANUFACTURING CO.,
610 York St., Guelph, Canada.

A HIGH GRADE
ESTABLISHMENT FOR THE

PRINTING

OF CATALOGS, BOOKS and
COMMERCIAL JOB WORK



Society and College
Work a Specialty.

R. G. McLEAN

26-34 LOMBARD STREET,

TORONTO, - - ONTARIO

Telephone, Main 637 638.

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

**The Royal City
SHOE STORE**

Opposite Winter Fair Building.
52 Market Square. Phone 589

Dealer in
**HIGH GRADE BOOTS, SHOES,
RUBBERS, Etc.**

Our display of Footwear is now at its best. Shoe Goodness at moderate prices, and Shoe Elegance and Luxury are both in evidence.

The High Knob Toe, Short Vamp, High Heels and Arches, the New Tips and Perforations, and other New Features are here for the College Students.

This is the store for the young people.

See our Window Display.

W. J. HENRY,
Manager.

J. E. SCHMIDT,
Proprietor.

**OURS IS A
Sanitary Laundry**

Disease germs find no resting place here.

Cleanliness in every detail is a rule rigidly enforced.

Every precaution is taken to insure our patrons the very best service in our power.

Our drivers are at the O. A. C. Monday, Wednesday and Friday mornings.

**Guelph
Steam Laundry**

Phone 95. G. P. McARTHUR, Mgr.

Windmills!



Towers girded every five feet apart and double braced.

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

Write for Catalogues.

Goold, Shapely & Muir Co.
Limited
BRANTFORD, CANADA.

Central Book Store

53 WYNDHAM ST.,

Opposite where the Street Cars cross.

The Place to Buy
TEXT BOOKS, BLANK BOOKS,
STATIONERY, PENS, INKS,
PENCILS, Etc., Etc.

See our Special O. A. C. and Macdonald Hall Note Paper and Envelopes

C. Anderson & Co.

Phone 256.

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

Is There Something
Here You Would
Like?

Roqueford or Cream
Cheese,
Olives, Biscuits, Bovril,
Oysters, Fruit, Cocoa.

Quality the Best
Everything to Eat

Benson Bros.
GROCERIES



UNDERWOOD

The Underwood is used more extensively in Canada than all other makes of typewriters combined.

550 Underwoods are sold every day. The Underwood is the "aristocrat" of the typewriter world.

United Typewriter Co. Ltd.

EVERYWHERE IN CANADA.

Head Office, Toronto.

Prof. Wade (to stock-judging class)—“Now, boys, I would just like to warn you that a red color is apt to excite a bull, so please be careful.”

Downie (to Hirst, who is carefully judging the heads of the animals)—“For heaven’s sake, Jerry, put on your hat.”

Logical, but Incorrect.

An uncouth villager, who, however, had a mania for using words which he did not understand, was arraigned in court by a neighbor on a charge of assault.

“Well, Jim?” said the judge, “do you acknowledge or deny the allegation?”

“I deny the allegation, judge,” said Jim, “and I am ready to lick the allegator.”

You don't have to be an engine expert to run a

STICKNEY

Gasoline Engine



It is so simple that it almost runs itself, and any bright child can keep it running. This is the engine THOUSANDS OF USERS SAY IS

Simplest - Strongest - Safest

the engine that gives the least trouble and does the most work. Free book of facts and experience, if you write

Ontario Wind Engine & Pump Company, Limited

Winnipeg, TORONTO, Calgary.

**Huyler's
Chocolates ::**

Known the World Over

Sole Agents in Guelph

Alex Stewart

CHEMIST

NEXT TO POSTOFFICE

**SWEATER COATS and
SWEATERS**

In all Styles and Colors

JERSEY HOSE AND ATHLETIC
SUITS

Made in Club Colors to order, with
special club insignia.

Designs submitted.

Get our Catalogue and Prices.

Scott Knitting Company

352 QUEEN ST. W., TORONTO.

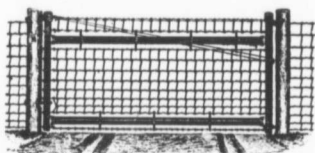
PHONE MAIN 4440.

Who Left The Gate Open ?

The hired man, stranger, your own boy, your wife, or perhaps yourself.

WHY ?

Because it was so hard to open and shut. Use the CLAY GATE and a small boy can handle it with ease.



Write for particulars of our Sixty-Day Free Trial Offer to

CANADIAN GATE COMPANY, Ltd.
GUELPH, - - ONT.

Special Styles for Young Men

In "20th Century Brand" Clothes

Young men, by their critical and exacting tastes in dress are doing a good deal to maintain high standards of style in clothes.

The models designed by "20th Century" tailors especially for young men—college men, young business men—are produced to meet the demands of such wearers; not freakish or extreme, but made for the youthful, athletic figure.

You may rest assured that every garment purchased from us is faultlessly bench-tailored by experts, and that it will keep its shape until worn out. These qualities have made our Men's Clothing Department successful.

SPECIAL ORDER CLOTHES

If we cannot fit and satisfy you with a 20th Century Brand suit or overcoat from stock we can show you 400 samples of new and handsome tweeds, serges, worsteds, overcoatings, etc., and have your garments made specially for you from careful measurements. Fit guaranteed.

Everything for Men.

Men's Outfitters.

D. E. MACDONALD & BROS.
Guelph's Big Store.

HAVE YOU TRIED

Schumacher Feed

Probably not. If not, however, you are among the very few who have as yet to give this remarkable feed a trial. Once tried always used is the manner our customers look towards this feed. It is composed of the best feeding parts of

Corn, Oats and Barley

perfectly blended with cotton-seed meal, white middlings and feed flour. Results are quite easily obtained by giving this feed a thorough test and we know you will be satisfied. Every sack is sold under a Government Analysis guarantee which is tagged right on the sack. If your dealer has not any of this feed in stock kindly drop us a line.

The Quaker Oats Company
PETERBOROUGH □ ONTARIO

DON'T PUT MONEY IN A LETTER!

Letters are frequently lost or mislaid. The proper way to remit money is by

DOMINION EXPRESS

MONEY ORDERS
AND FOREIGN
DRAFTS

They are issued in the currency of the country on which drawn, and are payable in all parts of the world. If lost or delayed in the mails, a prompt refund is arranged or new order issued without further charge. Travellers' Cheques, issued in denominations of \$10, \$20, \$50, \$100 and \$200, the handiest way of carrying funds. Foreign Money Bought and Sold. Money transferred to all parts of the world by Telegraph and Cable.

AGENCIES THROUGHOUT CANADA.

Dominion Express Company.

General Offices: Toronto, Ontario.

Economy
Convenience
Safety



Farmers' Service Department

It will be of great interest to all of the students of the O. A. C. all the graduates and builders and farmers in general that we have established what we call our Framers' Service Department. Our object is to help the farmers and builders erect better buildings at a lower cost. We want to help every farmer who intends building this year with his plans, suggesting the materials, layout and construction, etc.

We are now preparing a set of ten barn plans which we will have ready in a short time, and these will be sent free to all those intending to build this year. In this book of plans we will have information invaluable to the farmer and builder.

We shall be very glad to co-operate with anyone who writes to us for information mentioning that this notice was seen in the O. A. C.

The Metal Shingle & Siding Co., Limited

Preston, Ontario.

Montreal, Quebec.

There's a pair of

SHOES

here that will please you. We are quite positive that we can please you, because our stock is so large and assortments so varied that there is scarcely a style or a leather not here represented

**For Ladies and
Gents**

W. C. GOETZ

132 Wyndham St., Phone 612

The Pages of This Journal Are
Printed on

Reliance Coated Book

Manufactured under a Special
Formula Exclusively for

THE BUNTIN, REID Co.

of Toronto, Ont.

by

The Canada Coating Mills Co

of Georgetown, Ont.

SIGNIFICANT ADVANCES

A few striking comparisons made by Mr. E. P. Clement, K.C., President of the

**Mutual Life
of Canada**

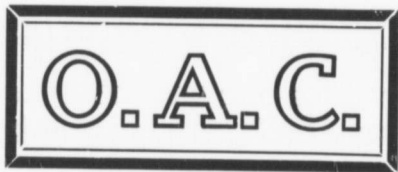
in his address to Policyholders at the 42nd Annual Meeting of the Company on Thursday last:

	1886	1911	Increased
Income	\$ 272,000.00	\$2,450,000.00	Nearly 10-fold
Interest	43,000.00	875,000.00	Over 20-fold
Assets	905,000.00	18,131,000.00	Over 20-fold
Insurance in Force.....	9,774,000.00	71,000,000.00	Over 7-fold
Surplus	61,500.00	3,312,000.00	Over 50-fold

HEAD OFFICE: - - - - - WATERLOO, ONT.

George Chapman, District Manager.

Office, 8 Douglas Street, - - - - - Guelph, Ont.



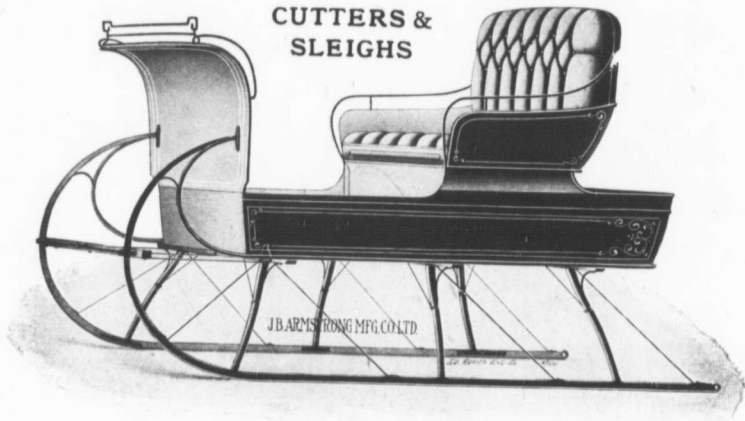
Students will make no mistake if they make the Golden Fleece headquarters for Men's Furnishing. Fine tailoring our specialty. The very newest things in Golf and Hockey Coats. Best qualities of underwear, including Dr. Diemel, Dr. Jager, Stanfield's, Woolsley's and other makes. A beautiful line ready to wear Ulsters, real waterproof coats. All are invited to look through at

KELEHER & HENDLEY

Macdonald Hall ladies will find our furs stock up to the minute; also Golf Coats.

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

CUTTERS &
SLEIGHS



A variety of styles in paneling and decoration. Catalogue and prices on application.

THE J. B. ARMSTRONG MFG. CO., LTD.
GUELPH, ONTARIO.

Kandy Kitchen and Quality

Stand for one and the same
thing--The Purest and Best in

Chocolates, Bon-Bons, Etc.

WHILE WAITING FOR A CAR DROP IN AND ENJOY A

Hot Chocolate or Soda

YOU WILL COME AGAIN.

The Kandy Kitchen

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

International Stock Food

☞ "3 FEEDS FOR ONE CENT" ☞

Will save you money over the ordinary way of feeding. Will keep your stock in better condition, is equally good for horses, colts, cows, calves, hogs, pigs, sheep, lambs, etc.

Is absolutely harmless even if taken into the human system, is sold on a cash guarantee by over 125,000 dealers.

COLORED SPEED PICTURE OF

DAN PATCH, 1:55.

CRESCUS, 2:02¼

MAILED ABSOLUTELY FREE.

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

1st.—Name this paper.

2nd.—How many head of live stock do you own?

Picture will not be mailed unless you answer these questions.

INTERNATIONAL STOCK FOOD CO., - TORONTO, CANADA.

College Days

Will be made happy if you own a Camera. Remember the folks at home will enjoy the pictures you take, as well as you will in after years, when you will never tire of using them to recall the friends and scenes of your O. A. C. days.

Remember that our stock of Cameras and Supplies is the largest in Western Ontario, also that the Photographic Department of this store is second to none in Developing, Printing, Mounting and Enlarging Work. Get your Drugs, Stationery and Toilet Articles at

Petrie's Drug Store

NIAGARA

LIME-SULPHUR ARSENATE OF LEAD SPRAY PUMPS—HAND AND POWER

NIAGARA stands for the highest in quality, whether in spraying material or equipment. The results obtained from spraying in Ontario during the past four years have been with Niagara. This is the one tried and proved spray. It has always given results. All others are experiments. Can you afford to take the risk? In spray pumps, we have a most complete line. From the barrel pump for the small orchard to the largest 3-cylinder power pump. They have many exclusive features. We would like to demonstrate them to you. Our new catalogue No. 27, will be mailed on request. You should also have our book on "Sprays and How to Use Them." Let us quote you on: Lime-Sulphur, Arsenate of Lead, Raw Sulphur, Gasoline engines, Hand and Power pumps, Trucks, Hydrometers, High Pressure Hose, Spray Rods, Nozzles, and Accessories.

Remember Wherever Fruit Excels Niagara Spray is Used

NIAGARA BRAND SPRAY CO., Limited
BURLINGTON, ONTARIO

OUR OTHER FACTORIES:

Hood River Spray Mfg. Co., Hood River, Ore.	Niagara Spray Co., of N. S., Kentville, N. S.	Oregon Spray Co., Portland, Ore.
Bean Spray Pump Co., Berea, Ohio.	Niagara Sprayer Co., Middleport, N. Y.	Medford Spray Co., Medford, Ore.
	Niagara Brand Spray Co., Ltd., Trenton, Ont.	

Official Calendar of the Department of Education for the Year 1912

APRIL:

1. Returns by Clerks of counties, cities, etc., of population, to Department, due (On or before 1st April).
3. Normal Schools close before Easter Holidays.
4. High Schools, second term, and Public and Separate Schools close. (Thursday before Easter Sunday).
5. Good Friday.
8. Easter Monday.
9. Annual Meeting of the Ontario Educational Association at Toronto. (During Easter Vacation).
15. Reports on Night Schools due (Session 1911-1912). (Not later than the 15th April).
15. High Schools, third term, and Public and Separate Schools open after Easter Holidays. (Second Monday after Easter Sunday).
16. Normal Schools open after Easter Holidays.
19. Notice by candidate for Junior High School Entrance and Junior Public School Graduation Diploma Examinations, to Inspectors, due (Before 20th April).
24. Inspectors' report number of candidates for Junior High School Entrance and Junior Public School Graduation Diploma examinations (not later than 24th April).
30. Notice by candidates to Inspectors due for Senior High School Entrance, Senior Public School Graduation Diploma and the Model School Entrance examinations and the Lower School examination for Entrance into the Normal Schools and Faculties of Education (before 1st May).

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

The Royal Military College of Canada



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

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

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

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

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

The strict discipline maintained at the College is one of the most valuable features of the course, and, in addition, the constant practice of gymnastics, drills and outdoor

exercises 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 exemptions as a B. A. degree.

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

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

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

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

H.Q. 94-5.

9-09.

Are You Responsible

for the ample protection of those depending upon you for support in case of your death.

You must commence now to save for your maintenance in your own old age.

The easiest and most convenient way to attain both objects is to purchase a Life Insurance Policy. Get our advice at once.

W. E. BROLEY, General Agent, ELORA.

The Manufacturers Life Insurance Company

HEAD OFFICE,

TORONTO, CANADA.

FROST & WOOD CHAMPION CULTIVATOR



It Does the Work!!

EVERY farm paper tells you to "cultivate." It is good advice. The great question with you is, "What machine?" We say right here that this is one of the very best Spring Tooth Cultivators on the market.

Why? Because the "Champion" has a frame of best heavy steel, braced with strong steel braces securely riveted part to part—making a substantial, long-wearing Cultivator. A solid steel axle carries the frame and sections. And these sections on Frost & Wood "Champion" Cultivators are properly designed. Each section can work independent of the others, when uneven ground is encountered. They adapt themselves to all inequalities of the land. That means every bit of your field cultivated—nothing missed—no green spots left—all weeds cut or torn out by the roots.

Next the pressure. This is applied by that convenient lever in front and put on all teeth at once. See the heavy springs above each section—they keep the "Champion" down to its work. Teeth are made of best quality Spring Steel. Each has a Helper Spring to lend additional strength when working hard land.

The 2-inch narrow points on "Champion" Cultivators are reversible—which means double wear. For weed or thistle cutting wide points are supplied—change can be quickly made. You should get this "Champion" Cultivator. It will prove a valuable asset to any farm.

Ask us for Booklet on Seeding and Cultivating Implements. A post card will do.

THE FROST & WOOD COMPANY, Limited
SMITH'S FALLS, ONTARIO 97

For Sale in Western Ontario and Western Canada by
COCKSHUTT PLOW CO. Limited, BRANTFORD, WINNIPEG

The House of Quality

Why is it that the "House of Quality" is so popular with the O. A. C. Students? Because it is at the "House of Quality" where "quality" is paramount—where "Variety" and "Choice" stand unparalleled in this city—and where an eagerness to meet the requirements of the customers and an earnest desire to give satisfaction is the desire of its staff. Our shelves are filled with goods drawn from the best factories and warehouses covering practically the whole world from the British Isles, France, Norway, Germany, Switzerland, Austria-Hungary, Russia, China, Japan, Denmark, Spain, Italy, United States, and last, but of no means least, from our own fair Dominion of Canada. Our Wedding Cakes are the delight of all who have partaken, and, justly, can it be said that our Cakes and Confections are appreciated over the whole Continent. We are direct importers of

HOME AND FOREIGN GROCERIES, CHOCOLATES, BON-BONS AND CONFECTIONS

Our Cafe is the rendezvous of hundreds of partakers of Bovril and other Hot Drinks, Oysters, etc., while our Ice Cream is the delight of old and young alike.

We are Caterers to the largest social functions and yet there is no order so small but that it receives our careful attention.

Six delivery wagons cover the whole of the city and vicinity, daily calling upon and delivering to our hundreds of customers.

Remember

"THE HOUSE OF QUALITY"

GEO. WILLIAMS

Phone 109

GUELPH

Upper Wyndham St.

SEEDS

For the Garden
and the Farm

Send a postal for our illustrated
CATALOGUE

Geo. Keith & Sons

124 KING STREET EAST

Toronto, Ont.

LOOK • LOOK

Suits Pressed	- -	50c
Suits Cleaned and Pressed		75c
Pants Pressed	- -	15c
Velvet Collars	- 75c to	\$1.25
Dry Cleaning	- -	\$1.25

Work done by practical tailors.

CHAS. A. KUTT, - 49 Quebec St.

"Eclipsed by None."

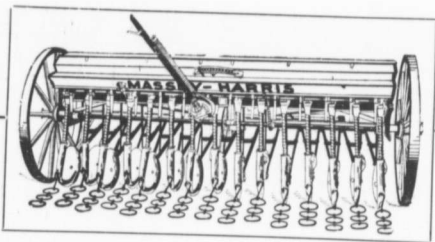
Walker's Electric Boiler Compound

It removes the scale or incrustation from boiler without injury to the irons, packings or connections, and prevents foaming.

The only reliable boiler compound on the market today. We also handle cylinder, engine and machine oils. Lie sodium phosphate, engine supplies, etc. Specialty departments, Crystal Separator Oil, Waxine Floor Oil. Correspondence invited.

The Electric Boiler Compound Co., Limited

Guelph, - - - Ontario



Massey-Harris Drills can be depended on

"A good start is half the battle." Sowing your grain with a MASSEY-HARRIS DRILL is a big factor in securing a good start of grain and a bountiful harvest. Uniformity of sowing is a characteristic of all Massey-Harris Drills. They sow the desired quantity at the desired depth and always covers satisfactorily.

The work of a Drill can only be accurately judged at harvest time—for its results that count. It's worth while, therefore, to select a Drill that has a reputation for reliability as proved by actual results, and you will save yourself a lot of worry and uncertainty.

MASSEY-HARRIS DRILLS have been in use for many years in all parts of the grain-growing world and have won a very enviable reputation for their satisfactory work under varying conditions. Perhaps the best proof of their superiority is the steadily increasing demand for these Drills. Where most used they are most appreciated.

They are made in a great variety of styles and sizes to meet all sorts of conditions:—Hoe Drills, Shoe Drills, Single and Double Disc Drills, Fertilizer Drills, etc., so that no matter what your requirements there is a Massey-Harris Drill to suit.

Massey-Harris Company, Limited

HEAD OFFICES, TORONTO

Branches at MONTREAL, MONCTON, WINNIPEG, REGINA, SASKATOON, CALGARY, EDMONTON.

Young Men Stay in Canada

Advise Your Friends to Come to
C A N A D A

Nowhere in the world are to be found so many and such good openings for a career in

Agriculture

FRUIT-GROWING, DAIRYING—WHAT YOU WILL!

The cry now-a-days is "BACK TO THE LAND," and CANADA has got the LAND.

The day of CANADA'S PROSPERITY is the day of

Your Opportunity

Do not neglect it. Think this over.
You can never do as well anywhere else.

Tell your friends to apply for further information

to
W. D. SCOTT,
Superintendent of Immigration,
Ottawa.

or to
J. OBED SMITH,
11-12 Charing Cross,
London, S.W., England.

DE LAVAL CREAM SEPARATOR

New Automatic Oiling

**The most important Cream Separator improvement
since the introduction of the present type
of De Laval machines**

The new automatically oiled De Laval Cream Separators are now being supplied in all sizes, and this improvement constitutes another great step forward in cream separator construction—the one thing possible in betterment of the previous De Laval machines of the present type.

The new system of De Laval automatic oiling is distinctively different from any other splash or spray system in that there is a constant regulated feed of fresh oil and discharge of used oil. Other splash systems use the same oil over and over, until it soon does more harm than good.

In the new automatically oiled De Laval machines all gears, shafts and bearings practically float in a mist-like spray of oil and literally never touch each other during their operation.

De Laval agents will be glad to exhibit the new machines and demonstrate the working of the new automatic oiling system, which more than ever enhances De Laval superiority in every feature of cream separator practicability.

The De Laval Separator Co.

New York,

Chicago,

San Francisco,

Seattle.