

Pages Missing

The O. A. C. Review

Published monthly during the College Year by the Students
of the Ontario Agricultural College, Guelph.

THE DIGNITY OF A CALLING IS ITS UTILITY.

VOL. XV.

Ontario Agricultural College, March, 1903.

No. 6.

BOARD OF EDITORS :

D. T. ELDERKIN, '03, Editor-in-Chief. W. R. DEWAR, '04, Asst.-Editor.
A. P. KETCHEN, '03, Agricultural.
A. B. CUTTING, Horticultural. C. I. BRAY, '04, Local.
H. RIVE, '03, Personal and Exchange. R. R. CAMERON, '05, Athletic.
H. L. FULMER, '04, College Reporter.
H. S. STAYNER, '06, First Year Reporter.

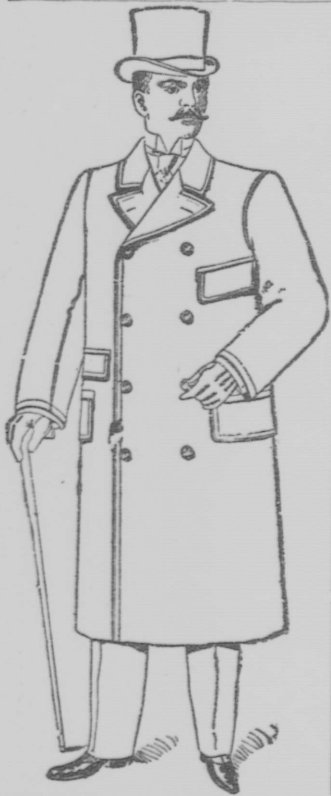
BUSINESS MANAGERS :

S. M. PEARCE, '05, Secretary. F. H. REED, '05, Treasurer.

TRAVELLING LIBRARY SYSTEM OF ONTARIO.

Walter James Brown, B. S. A., LL. B.

The need for a Travelling Library System in Ontario was first suggested by Dr. James Bain, Librarian of the Toronto Public Library, in his address, entitled "Public Libraries in Canada," delivered before the Canadian Institute on Dec. 11th, 1897. He said: "Outside of the larger cities, towns, and villages, lies a large proportion of the population of this Province as well as in the others, which are entirely without access to books. There are whole townships, and numbers of villages where the weekly newspaper is the only connecting link with modern science and literature. If we wish to create an attachment by the farmer for his farm, to give an interest in life to his children in their surroundings instead of in the city, and, in other words, to lay the basis for a successful and pleasant country life, we must try to make his intellectual surroundings more attractive and profitable. This is not a new problem; men who have had their country's good at heart have tried for years to meet the difficulty. The late Dr. Ryerson attempted to make every school house in the country a



Fit the Form Clothing.

This splendid brand of clothing, made up exclusively for our ready-to-wear clothing trade, evidences the perfection of **Good Honest Material and Workmanship.**

Overcoats at \$5.00, \$6.00, \$7.50, \$9.00, \$10.00, \$12.50, \$14.50 and \$16.00.

Good Tweed Suits at \$5.00, \$7.00, \$9.00, \$11, \$13, \$15.

Our Guarantee goes with every garment sold.

Men's Furnishings.

Wool and fleece lined shirts and drawers from 50c. to \$2.50 per suit. Are splendid value. White and Fancy Shirts in beautiful styles.

Neckwear, Collars, etc., in the nattiest styles.

HATS
And CAPS,
The Best and
Cheapest Goods
the
Trade Supplies.



WE SOLICIT YOUR
PATRONAGE.

E. R. BOLLERT & CO.

Late of
Toronto,
Successor to
Burgess & Son

R. B. KENNEDY,

Photographer,

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

**21
WYNDHAM
STREET**

Ladies and Gents

If you want perfect fitting
Clothes go to

Thompson & Kellington,

Ladies' and Gents'
Practical Tailors.

CALL AT

The City Shoe Store

For FINE AND HEAVY SHOES

Cor. Wyndham St. and Market Sq.

W. L. KEIL,


Come
to the

Kandy Kitchen

for Choice Taffies and Bonbons
Oysters, Raw or Stew, 15c. Dish

U S U S U S U

**The U. S. Separator has the advantage
of being able to get more cream**



out of the milk than the others. At the Pan-American Exposition, 1901, it averaged for 50 consecutive runs, .138 of 1% and established

THE WORLD'S RECORD

thus proving its right to its claim of

BEING THE CLEANEST SKIMMER MADE

This, together with its many other advantages described in our catalogues, should remove any doubts that dairymen may have as to which is the best separator to buy.

Write for descriptive catalogue.

VERMONT FARM MACHINE CO., Bellows Falls, Vt.
There is no duty on U. S. Separators shipped into Canada.

S U S U S U S

CANADA FOR
CANADIANS !

CANADA FOR
CANADIANS !

Canadian Correspondence College

"Private Tutoring by Mail" exactly
describes our method of teaching.

HOME STUDY COURSES—University, Matriculation and Leaving Courses ;
Library Science, Household Science, Commercial Courses, Canadian Civil Service,
Chartered Accountants', Institute of Actuaries, English, Classics, History, Mathe-
matics, Modern Languages, Natural Science, General Agriculture, Farm Crops,
Stock Raising, Dairying, Fruit Farming, Market Gardening, Floriculture, Poultry
Raising, Veterinary Science, etc., etc.

Students wanted to represent this college in their home districts during
summer vacation. Liberal terms. Full particulars on application. Address

Canadian Correspondence College, Limited.

CANADA LIFE BUILDING,

TORONTO, ONTARIO.

The Leading Shoe Store...

Is Headquarters for Gentlemen's Fine Shoes, Rubbers and Over Shoes. Our prices the lowest for

First Class Goods.

W. McLaren & Co.

W. C. GOETZ,

Reliable Footwear
AND REPAIRING.

Upper Wyndham St. Op. G. B. Ryan.

DO YOU

Want to make a present to your best girl? We can help you if you visit our

..CHINA PALACE

J. A. McCrea.

Students

N. B.—Patronize those only who patronize the

Review

Thornton & Douglas, LIMITED.

Makers and Importers of

Wearing Apparel for Men
and Boys.

Dairy Suits a Specialty.

STORES:

Stratford.

Guelph.

Chatham.

Remember

Law

THE
DRUGGIST

95 Upper Wyndham St.

Guelph.



Ready for the Field.

We are in the field. Hardware and Sporting Goods are our lines.

Our Prices are
Always Right.

J. M. Bond & Co.

..Fine Watch Repairing..

SAVAGE & CO.,

Lower Wyndham Street, Guelph.

We test the eyes free.

The Sterling Fountain Pen.

WORTH \$2.50,

Special to Students **\$1.50**

GUARANTEED.

Text Books and Supplies for Students O. A. C.

Day's Book Store.

Day Sells Cheap.

WONG SING, LAUNDRY

Carden Street and Market Square.

Work done up first class. Reasonable prices.
Discount allowed to Students.

Goods called for and Delivered.

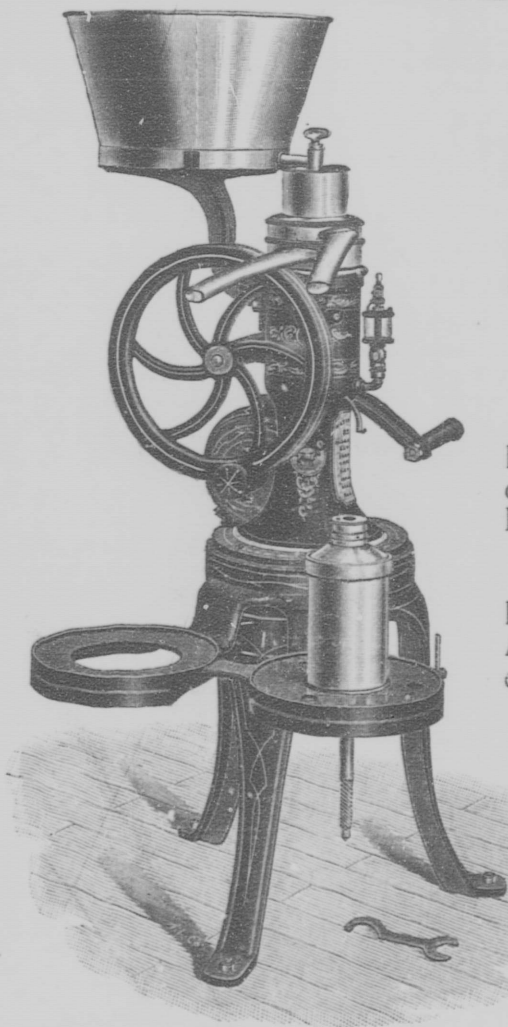
Boys at the O.A.C.

Should realize that Wood's Fair Sells the Best and Cheapest Stationery in Guelph. See us for

Baskets and Lamps

Try half pound of our CANDY at 5c.
We are opening daily your Christmas Wants.

Wood's Fair.



National Cream Separator

A COMBINATION OF STRENGTH,
SIMPLICITY and EFFICIENCY.

No cream separator on the market has shown such good results or gained such popularity as the National.

A PERFECT SKIMMER,

Easy to operate and easy to clean.
A thorough inspection invited and every machine

GUARANTEED.

In whatever locality the National has been introduced it has invariably

Taken the Lead.

You will be well repaid
by giving it a trial before

purchasing.

National Style, No. 1,

Capacity, 330 to 350 lbs per hour.

National Style, No. 1 A,

Capacity, 450 to 500 lbs. per hour.

SEND FOR CATALOGUE.

THE NATIONAL

Is a *Canadian Machine*, manufactured entirely at Guelph, Ontario, where we have the largest and most thoroughly equipped Cream Separator factory in the Dominion, which is being run to its full capacity.

MANUFACTURED BY

The Raymond Mfg. Co. Limited.

GUELPH, - ONTARIO.

centre of 'light and sweetness' by the school library, but failed because the effort was premature, and because no attempt was made to add to or exchange the books."

The travelling library system was started by the State Library of New York in 1892, and since then has been adopted by Michigan, Wisconsin, Iowa, and many other States in the Union. In every case the work has

been unexpectedly successful. The effectiveness of this educational agency will be appreciated from the following extracts:

"The travelling libraries have carried into hundreds of homes new thoughts and information, higher aspirations and ideals, new forces that are making for a better individual, family, and social life. Their books are warmly welcomed by fami-



Travelling Library Illinois Farmers' Institutes.

(U. S. Year Book, 1899).

lies whose doors are closed to the reformer or missionary. Hundreds of small communities have attempted to do such work for themselves, but have nearly always failed. They have raised money by entertainments or private subscriptions, and have started libraries with high hopes. In most cases their selection of books

has been unfortunate, and when the few entertaining books have been read by most of the patrons and no new volumes are added the popular interest dies, and the library is either put in an obscure place or its volumes are scattered.

"By the new system only wholesome and entertaining books are

bought
peeling
out by
Every
some p
ter of
terest
books
substa
They
and re
for wi
'stitch
making
wide b
upon a
omy ex

"Fin
selecti
bers o
hands
the cu
can dr
library

"Ou
public
teach
leaves
through
using t
tage, b

"The
unexp
ticable
cation
ficent
out fro
mon s
pursue
tion."

Such
for On
is beyo
in no p

bought, and they are constantly appealing to new readers until worn out by use, and not merely shelfworn. Every few months a library is new to some public and its arrival is a matter of comment, and draws new interest to the library station. The books are bought at the lowest, and substantial additions are selected. They can be occasionally examined and repaired, an important economy, for with books as with clothing a 'stitch in time saves nine.' In the making of rules and regulations a wide body of experience can be drawn upon and in the printing much economy exercised.

"Finally, it practically takes the selection of the reading of great numbers of untrained readers from the hands of blind chance and puts it in the custody of trained experts who can draw for assistance upon the library experience of the world.

"Our great and costly system of public schools works unceasingly to teach children how to read, and then leaves too many of them to go through their adult lives without using that power to the best advantage, because of lack of opportunity.

"The travelling libraries offer an unexpectedly cheap, efficient, and practicable method of broadening our educational system to include in its beneficent purposes everyone who goes out from the brief course of our common schools, and to enable them to pursue a life-long system of education."

Such a system seemed to me feasible for Ontario. No part of the Province is beyond reach by rail or steamer and in no part need there be lack of read-

ers. I believe that the one need greater than any other among the people of Ontario, at present, is an abundant supply of helpful literature, accompanied by such assistance as will enable the people to use it to the best advantage.

On January 25th, 1900, I presented to the Minister of Education the following proposition:—"Permit me to submit for your consideration a plan which will facilitate the intellectual and material progress of our people.

"My suggestion is to organize, as a part of the Provincial Educational Department, a Travelling Library Bureau, which would undertake to select the most popular and most helpful books on a wide range of subjects, and place them in cases (100 in each case), and so distribute them that every school section and neighborhood in Ontario might have the use of an up-to-date library. The Bureau should encourage, by adequate supervision, the formation of literary societies, debating clubs, and magazine reading circles; conduct essay competitions, oratorical contests, and debates, by counties, districts and for the Province. Subjects might be assigned, and awards made in the form of medals, college and university scholarships, etc. The Bureau might also co-operate with existing institutions and movements, that the people may have advantage of the largest number of lectures and talks possible.

"The success of a work of this kind will depend in a large measure upon the character of the books placed in the cases, the thoroughness of the supervision and the extent of the advertising. Each case should contain

books treating as many subjects as convenient, and, at the same time, meeting the individual needs of all classes, i. e., adults, young people, and children. Each case should be numbered and contain a different set of books. The Province might be divided into about sixty districts; if fifty different libraries were started in each district, it would require over twelve years to complete the circuit. As the books would remain the property of the Government they could be changed and improved upon from time to time.

"It would probably be most convenient to make rural Post Masters the librarians and custodians of the cases. Each rural Post Office or neighborhood should have one case at a time, and towns and villages where no public libraries or Mechanics' Institutes exist, two or more, according to the population and the interest manifested. Each case should remain in one place for three months; all should be changed on a named date quarterly. Individuals or families might purchase library tickets for three months at twenty-five cents, or annual tickets for one dollar. Individual ticket holders would draw one book at a time, family tickets where the names of the individual members of the family appear on the tickets,—age qualification being required,—would draw three or four books at a time. No book should be kept out for more than fourteen days without being renewed, and all books should be in the librarians' hands at least three days before the quarterly change date. This could be regulated by the imposing of fines. Each family according to this plan may have access to

twenty-four or more books every three months, or ninety-six or more books each year.

"The cost of putting this scheme into operation would not be very great. Aside from the cost of supervision, there would be an outlay for the books and cases, the remuneration to the librarians, the expense of freight and moving, together with a certain amount of advertising. The books would doubtless be obtained for 50 cents each, and the cases for about three dollars each. The income would range very close to twenty-five dollars a year from each neighborhood, or over \$75,000 annually from the Province.

"This scheme would supplement and strengthen the work of the public and high school systems, it would give the rural communities the library advantages of the cities, and would greatly stimulate intellectual activity in all directions. It would also bring the Provincial Government into the closest possible touch with the people."

A year later the Minister of Education decided to place the matter before the Legislature. He asked for \$1200 to provide books for the entire rural population of the Province. He was criticised by the members of the Opposition for making the appropriation so small. The libraries, instead of being sent to the farming districts as was intended, were placed in the lumber and mining camps of New Ontario. There is no question regarding the need of these communities, but why should the farmers of Ontario be everlastingly side-tracked?

In the Speech from the Throne delivered at the opening of the Legisla-

ture
cong
augu
syst
estir
only
velli
over
and
leries
to s
who
insti
tage
fami
wou
the a
affor
the
grea

It
mit t
Educ
wou
ing
tutes
al a
the M

To
able
comr
solvi
coun
the n
ary
readi
visio
try
stren
the c

In
that
to ac
disco

ture in 1902, the Government was congratulated upon the successful inauguration of the travelling library system. During the session, when the estimates were under consideration, only \$2,000 was voted for the travelling libraries, as compared with over \$60,000 for the Public Libraries and Mechanics' Institutes, art galleries, etc., of the Province. It is safe to say that the people in the towns who have access to these libraries and institutes do not need these advantages nearly as much as the isolated families of the rural districts. It would be only fair to at least divide the amount, if the Government cannot afford to appropriate more, and place the books where they will do the greatest good to the greatest number.

It was probably a mistake to submit this scheme to the Department of Education. The travelling library would do untold good in supplementing the work of the Farmers' Institutes, and the many other educational agencies under the supervision of the Minister of Agriculture.

To place one hundred fresh, readable books a year in each agricultural community, would go a long way in solving the social problems of the country. If this library were made the nucleus for the formation of literary societies, debating clubs, and reading circles, under adequate supervision, the intellectual life of the country would receive a stimulus and strength absolutely unattainable in the congested centres of population.

In these libraries would be books that would spur the perplexed youth to act the Columbus to his own undiscovered possibilities, that would

urge him not to brood over the past, or dream too largely of the future, but to get his lessons from the hour and make every occasion a great occasion; books that would be uplifting, energizing; the standard of which could not be measured in gold, but in growth; not in reputation but in subtle power; not in circulation or popularity, but in character; books of biography, literature, science, history, religion; books that young people will read and whose truths they are able to digest and assimilate. Modern farming is an intellectual pursuit and such facilities would remove the drudgery and increase its fascination.

Canadian Correspondence College,
Toronto, Ontario.

Never let stock go back for want of a temporary expenditure to meet special seasons or requirements.

Don't think that walking about on your farm with your eyes open and a paddle in your hand is time wasted.

Don't buy feeding mixtures which you can make yourself, at 50 per cent. more than the ingredients are worth.

Never buy large quantities of artificial manure, except to give a sharp fillip, if you can get plenty of farm manure cheap.

Never have a bad-bred animal on your farm; never let your stock drink cold water when the thermometer is at zero; and don't turn bullocks into machires for warming two bushels of icy cold roots, with 93 per cent. of water in them, up to the temperature of their own bodies.

SOME POULTRY FARMS IN THE EASTERN STATES.

Down in the central portion of New York State is the little town of Groton noted for its Leghorn Farms. This town is one of the great centres for collecting eggs for shipment to New York City. The development of this trade is mainly due to the success of a few men, who keep a thousand or more Leghorn hens for laying eggs. The farmers in general noticed that

hence this has become a great centre for white eggs. The poultry farmers use only a limited number to supply their customers, but there are dealers who do a regular business in buying, storing, and shipping eggs.

It was my privilege to visit the farm of J. H. Blanchard, of this town. Mr. Blanchard keeps about one thousand laying hens; and ships eggs to



White Leghorn Chickens at Blanchard's Farm, Seaton, N. Y.

these men were making money; and moreover these poultry farmers could not supply the wants of their customers. Some of the most reliable farmers were approached to sell their eggs to the poultry farmer at a price of a few cents in advance of the market price, and were asked to absolutely guarantee every egg and to deliver the same at least once every week. In this section, practically every farmer keeps Leghorn hens, and

customers in New York. He guarantees every egg, and gets a price quite in advance of the general market.

As might be expected, incubators and brooders are in general use, not only by Mr. Blanchard but by the farmers. One would think to hear these people talk that this was the only way to hatch eggs, judging from their words of praise for incubators. They were equally as well pleased

with brooders. The illustration shows a groups of brooders and young chickens on Mr. Blanchard's farm. You will notice a berry patch near the brooders. This supplies ideal shade, which is quite necessary.

I saw on this farm a very fine field of clover. Mr. Blanchard told me that he found hen-manure an excellent fertilizer for this crop, and even went so far as to say that the clover became a perennial plant when well treated with this manure.

sand chickens. He had previously marketed several hundreds at a price about equal to forty-five cents per pound undrawn. These birds would weigh in the neighborhood of one and one-half pounds each. The breeds kept at this farm were mostly Barred Plymouth Rocks.

A short distance from Mr. Nesmith's is the farm of Mr. Pringle. This farm consists of about forty acres, but has no great value as a general farm, owing to the sandy nature of the soil,



Poultry Farm in Rhode Island, Waggon for Collecting Eggs, etc.

From Groton I made my way over to Boston, Mass., and from there out to North Reading, a little town some twenty miles out. Here I visited the farm of Mr. Nesmith, who makes a specialty of growing broiler chickens; and, as a side line, partially hatches eggs for incubator manufacturers, and produces some brown eggs for the high class trade of Boston.

Mr. Nesmith's brooder house is constructed to use individual brooders. He has great faith in shorts and cornmeal slightly moistened as a food for young chicks. He had, when I was at his place (June 1st), about two thou-

and furthermore, the boulders cover nearly one-half of the surface. The general appearance of the farm would not tempt any one to buy it for mixed farming. Mr. Pringle keeps hens for laying eggs. He makes no pretence towards farming, only to grow enough hay to feed one horse and two cows. The grain grown would not be more than five acres of corn. Practically his whole income is from the egg product of about eight hundred hens. He keeps Plymouth Rocks, Wyandottes, and Rhode Island Reds. He also had a few Leghorns, which he told me very plainly were of no use as egg producers. This ap-

peared rather strange, but was perhaps a general verdict in his section. White eggs were not in favor.

Mr. Pringle keeps about one hundred and fifty hens in each house. The whole flock runs together, but there was ample floor-space for each bird, at least five square feet to each hen. The most interesting point here was that whole grain was kept con-

The chickens on this farm, some fourteen hundred in number, were all hatched and reared by hens.

It is well to note that these chickens are reared largely to supply pullets for the next season's laying. Mr. Pringle had no use whatever for incubators and brooders.

To my mind, this was a most interesting farm, showing clearly that suc-



Mr. Pringle's Farm, N. Reading, Mass.

stantly in front of the fowls, both winter and summer.

Corn and wheat are both used. Mr. Pringle was very emphatic in saying that he considered throwing grain in straw and then burying it was a waste of time and money, "Why," says he, "do you not think that these hens get enough exercise running over these boulders?" This system of feeding was very unlike that used by most poultrymen in this section, but certainly was giving success here.

cess may be obtained along lines that many of us think unprofitable. This is a case where the *man* counts, and I am not sure but the same man would have done better if he had modified his method of feeding slightly.

In the vicinity of Boston are several poultry farmers who grow chickens for fancy or show purposes only. I visited a number of these, but I presume your readers would not be particularly interested in these farms.

While in the vicinity of Boston, I could not pass by my old friend, James

Ra
Ran
duck
sand
all
No v
amo
deta
take

RH
ens.
goos
Com
farm
chick
way
dair
had
abou
whil
dred
chick
grew
three
was
that
Ever
red
hous
woul
a fo
built
one
acco
The
by te

He
fowl
are t
given
This
short
whic
anim

Rankin, of South Easton, Mass. Mr. Rankin is a very extensive grower of ducks. There were some thirty thousand ducks on the farm, which were all hatched and reared artificially. No water is given them except a small amount to drink at feeding time. A detailed account of the farm would take pages.

Rhode Island is noted for its chickens. I visited one of the chicken and goose sections in the vicinity of Little Compton. Here, practically every farmer is a chicken man. He grows chickens in the same business-like way that our farmers grow beef or dairy cattle. Some of the farmers had five hundred laying hens and about fifteen hundred young chicks, while others would have fifteen hundred laying hens and a few thousand chicks. A fair percentage of them grew a few hundred goslings, perhaps three hundred at the most. There was but one breed of fowls here, and that breed was Rhode Island Reds. Everywhere one saw red hens with red chickens. The fowls here are housed on the colony plan. There would be about three hundred hens in a four acre field. The houses are built in the cheapest way, being only one board in thickness. Each house accommodates forty hens and a male. The house is small, usually eight feet by ten feet.

Here the food is kept in front of the fowls continually. Corn and wheat are the staple grains. The birds are given a feed of soft food each day. This food consists principally of bran, shorts, corn-meal, and oat chop, to which is added about ten per cent. of animal meal.

A horse and waggon goes the rounds daily, taking up the eggs, feeding, watering, etc.

The chickens are largely reared by hens. The incubator was not popular. Many of the farmers had not given it a trial, and there appeared to be a feeling of "letting well enough alone."

It was my good fortune to see at one time seventy hens taken from the nests with seven hundred chicks.

W. R. G.

Keep your money moving; quick cropping and early maturity are especially valuable in the neighborhood of good markets.

When your light ground is in good condition, or has in it or on it a large quantity of manure, take great care that the nitrates are not washed out of it by the winter rains.

In these days of low prices, recollect that excessive crops produced by a large outlay of labor and manures do not pay, and that an increase in bulk is now often produced at a greater cost than it is worth.

Last of all—recollect Aesop's fable of the carter stuck in the mud and calling on Jupiter, instead of putting his own shoulder to the wheel. Don't depend on the Legislature—they can not cure your difficulties, even if they would.

Always keep your fattening stock in such condition that you can take advantage of a good market. Recollect that a good market is better than a good article.

Agricultural Department.

EDITED BY A. P. KETCHEN.

Second Letter from Richard Gibson.

The Editor O. A. C. Review.

In my last I gave an insight as to the education of a future tenant farmer. Now, a little of his after-life. If I speak of myself, it will not be with a spirit of egotism, but because I write that of which I know.

After leaving school, at 14, two years were spent in a grain merchant's office. My duties were to assist in keeping the books, but every morning, by six, to be at the warehouse to take samples of the grain delivered. Here let me point out the difference in the methods of placing grain on the markets of the two countries. In England it is usually sold by sample. There is in every town of importance what is called a corn exchange. Thither at eleven o'clock the buyers congregate, each having his little stand or box, for which he pays rent to the Exchange Co. The farmers or sellers toss him a sample containing say a quart of grain, with number of bushels or quarters (8 bush., 63 lbs. per bush.) on a tag attached. "I will give you so much." It is yea or nay, no whitling. If accepted the sample is retained, to compare with the bulk. It was my duty to place the sample in one bowl and some from the bulk in another, side by side, so that the merchant could accept delivery or not; and I may say that, in two years, handling hundreds of bushels daily, but once was a delivery refused. Such an occurrence would be market talk for some time, and the

poor fellow ostracized. The emulation there was not to beat the other fellow, but each strived to put the best sample on the market. Another custom which prevailed there, and one to be commended, which I invariably follow is that, whenever practicable, to give the last purchaser the first choice of your next offering. It is well to secure a clientage by fair treatment and honorable dealing.

The confinement of the office was not only uncongenial, but my health suffered, so to the farm I returned. The routine work and the early education of the future tenant farmer will be outlined by a brief resume of what was required of myself and brothers, (only eight of us.) On a large farm there is always a foreman, a head waggoner, (here teamster) a cowman, a shepherd, and a ditcher, thatcher, hedge splasher, generally combined in one, besides the ordinary laborers, and, where hunters are kept, a groom and gardener are to be found.

These heads of departments, as they may be called, are, or should be, thoroughly proficient in their respective lines. Note this difference between England and our country. Here we expect every man to be two-handed and able to do everything on a farm, from milking a cow to breaking a colt, be a good plowman, chop his cord of wood and run a binder.

On an English farm, work commences at 6 a. m. and ends at 6 p. m., with an interval of an hour at noon. The foreman receives his orders over

nig
wh
shir
thei
his
bein
at 6

I v
the
read
wor
han
day
ble f
my
as m
from
advi
It w
and
or it
skin
until
we h
in C
are a
other
of pu
Arth
prize
next
all E
the p
of th
we h
break
young
count
cattle
stack
shear
ing th
that v

(Th
person

night. Mr. Torr, (of whom later) who occupied 2,300 acres in Lincolnshire, had four foremen, who got their orders every morning at 5 from his bedroom window, to insure their being ready to set the men at work at 6.

I was seventeen when I returned to the farm, and was instructed to be ready every morning by seven to work a team. The foreman was on hand to help and instruct. The first day's work, plowing, was a lamentable failure, so much so that at dinner my father suggested that, inasmuch as my morning's work could be seen from the road, it would perhaps be advisable to harrow it that afternoon. It was an old-fashioned swing plow, and required very delicate handling or it was either up to the beam or skimming along the top. I persevered until I could beat all the plowmen we had, and also won prizes; some in Canada. "When you think you are a good plowman you will have other work," was my father's way of putting it. My brothers, John and Arthur, both won the Farmers' Sons prize at the Derbyshire Co. show, and next year the championship against all England's professionals. From the plow I passed through the hands of the herdsman and shepherd. Then we had the afternoons to ourselves, breaking in and giving manners to young hunters, visiting each field, counting and examining every head of cattle and sheep. We were taught to stack and thatch, to sow grain and shear sheep with both hands; nothing that had to be done on a farm but that we were taught.

(The next will not contain so many personal pronouns).

R. GIBSON.

Building the New Barn Foundation.

(CONTINUED.)

A good foundation, while not necessarily the most important part of a building, is at least essential to a good wall. While a good foundation does not insure a good wall, a defective foundation does ensure a cracked, unsightly, and short-lived building. Yet, strange to say, many, if not most, of the contractors building basement walls for farmers throughout the country, are culpably careless about their foundations. The writer has seen many expensive, and, otherwise skilfully constructed buildings, ruined because of a lack of proper care and foresight on the part of the builders in the laying of the foundations, or footings.

The foundation required will vary with the nature of the soil. On a sandy, or gravelly site, there is no danger of injury from frost; it is, therefore, necessary to remove only the loose surface soil; but the footings should be wider than is necessary on a clay subsoil, to prevent damage from settling. On a clay subsoil, owing to greater liability to heave with the frost, it is better to lay the footings not less than twenty-four inches below the surface. It is not necessary, however, to give them so wide a base as on a more yielding soil. The foundation should be somewhat wider at the bottom than at the ground line, as shown in Fig. 1. When this is done the soil at A, on expansion with the frost, lifts off the wall, and does no damage. But if, on the other hand, the sides of the trench have been allowed to slope in a little towards the bottom, as in Fig. 2, the soil at A, on freezing, lifts the wall with it, and a damaged wall

is the inevitable result. This mistake is a very common one.

When lining out the trenches for the foundations, care should be taken to place them so that the wall will come exactly over the middle of the footings, as shown in Fig. I. A very common and inexcusable blunder is illustrated in Fig. II. When the wall is placed on one side of the footing, as shown in this figure, the weight of the building tends to tilt the founda-

A very important, if not the most important, essential to a good foundation, is thorough drainage. A tile drain should be laid completely around the building about three feet from the wall, and, if possible, a little lower than the footings. This will keep the soil dry below and around the foundation, and will reduce to a minimum the probability of damage from either settling, or heaving by the frost. It is well to remember that, in

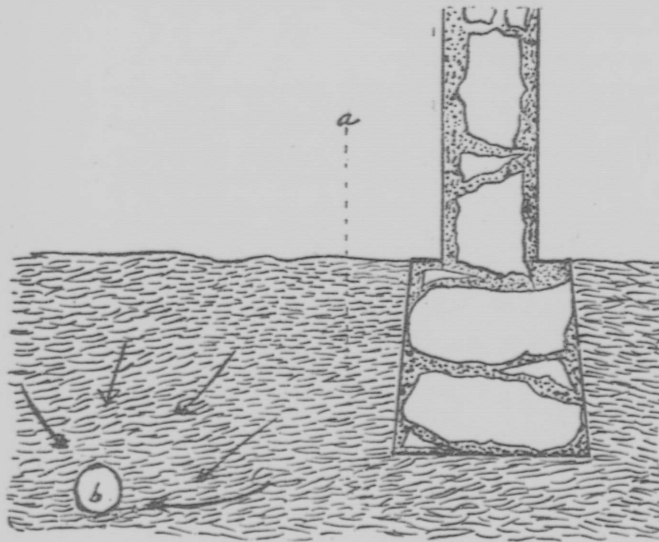


FIG. 1—End section of a good foundation and a well built concrete wall.

tion and crack the wall. A crack due to this cause is usually longitudinal, especially in a brick or concrete wall. In a stone wall, cracks due to any cause are generally more or less diagonal, and in any wall, if due to unequal settling of the foundation, they are diagonal.

All foundations should be laid in cement concrete. It adds but little to the expense, and, if intelligently done, it ensures stability.

spite of the most careful precaution, all foundations settle a little.

It has been a very common practice among country masons to dig a trench of almost any shape and size, fill it with cobblestones, and make this imitation serve the double purpose of foundation and drain. If all the other conditions are favorable, a good wall can sometimes be maintained on such a footing, but the odds are heavy against it. The practice

is a
inst
wal
it is
stra
diti
tling
thou

FIG. 2

cobb
furni
whic
neat
stabi
them
them

is all wrong in principle. The water, instead of being removed from the wall, is drawn to the very place where it is not wanted, softening the substratum, and bringing about the conditions most conducive to uneven settling and cracked walls. Another, though less serious, objection to this

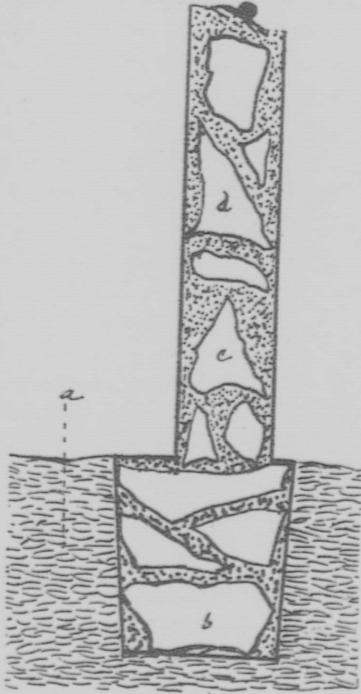


FIG. 2—End section of a bad foundation and a poorly constructed concrete wall. Note the foundation resting on the soil A, instead of the soil on the foundation, as in Fig. 1, the wall placed on one side of the foundation, and the wedge-shaped stones C and D, tending to split the wall.

cobblestone foundation, is that it furnishes a harbor for rats, from which they frequently burrow underneath the concrete floors of the stable, and sometimes undermine them to such an extent as to cause them to settle and crack.

BASEMENT WALLS.

The material used for the wall, whether it shall be concrete, brick, stone, or wood, will be determined largely by the local conditions, chiefly by the ease with which the several materials can be obtained.

The merit of a good wall consists in:—

1. Durability—The material and the workmanship must be of such a nature as will ensure permanency.

2. Strength,—The walls must be strong enough to support safely any weight that may be imposed upon them, and to resist any strain to which they may be subjected, as, for instance, violent wind storms. This strength should be obtained without undue thickness. A thick wall not only reduces the size of the stable, but also interferes with the lighting.

3. Insulation,—The wall must be a non-conductor of heat, to facilitate the control of the stable temperature in any weather, and also to prevent the condensation of moisture upon its surface.

4. Economy in cost of construction.

5. Beauty,—“A thing of beauty is a joy forever,” and a handsome building is not to be excepted. Beauty in a barn does not consist in expensive ornamentation, but in a trim, tidy, substantial, and consistent appearance.

In districts where clean gravel can be readily obtained, cement concrete fulfils all of these requirements admirably. It is, if intelligently used, the most durable material at our disposal. It is strong, dry, and warm; a twelve inch concrete wall will carry

as much weight, and turn as much frost as a twenty-four inch stone wall. It can be built for less money than either brick or stone, and, when properly finished, presents a very fine appearance.

Brick is also an excellent material for basement walls, perhaps equal to concrete in all other particulars than durability and cost. A good brick wall usually costs more than concrete, and it is less durable; but it is strong enough without excessive thickness; it is an excellent non-conductor; and it is quite attractive in appearance.

Stone, because of the relative ease with which it can be obtained in most districts, has, heretofore, been more largely used than any other material. In cost, a stone wall is intermediate between concrete and brick; it is more durable than brick, but, unless laid in cement mortar, less durable than

concrete. If really good stone is used, it makes, perhaps, the best looking wall of the three; although tastes differ widely in this particular. The chief objection to stone is its dampness. Being a rapid conductor of heat, a stone wall condenses upon its surface the moisture in the atmosphere of the stable, and, as a consequence, is generally damp in mild weather, and coated with hoar frost in severe weather.

It is not my purpose in this paper to give detailed instructions for the building of the walls. That is the business of the mason, and, since it is above ground and subject to criticism, is generally fairly well done. I have described the foundations at greater length because it is in them more often than in the walls that the farmer is imposed upon by the half-baked mason, too many of whom, I regret to say, are allowed to run at large.

Live Stock Department.

EDITED BY PROF. M. CUMMING.

Live Stock Topics.

Recent live stock sales have demonstrated very clearly the high value that is placed upon a really first-class animal as distinguished from a poor or even an ordinary one and those who are truly interested in the improvement of the live stock of our country will note this with satisfaction. There are still, it is true, a great many of our farmers who do not know a good animal when they see it, but there are numerous agencies at work which are gradually enlightening this number, and thus

reducing their ranks. As was stated, by Hon. John Dryden, in his opening speech at the recent pure-bred bull sale, held at Guelph, nothing is more important to the breeder of live stock than a sound independent judgment. The man who buys an animal merely because it has a pedigree, or who allows himself to be influenced in his estimation of the points of an animal by his nearest neighbours, is not in a position to contribute much to the development of our live stock industry. And, to our mind, the results of that sale evidenced the fact that the judgment of the average man who was

then
gati
any
sale
\$84
tha
the
anim
sho
We
uted
and
prio
wis
who
from
then
stat
inte
take
reco
adv
that
sell
only
to t
men
farm
stoc
this
cern
grea
ing
Now
to u
in th
of c
ones
that
know
tend
stoc
are
and
reas
who
fore
wher

there, and it was a representative gathering, was sounder than that of any group who attended the previous sales. The average price realized, \$84 a head, would make it appear that there was a small demand, but the spirited bidding upon the good animals as they came into the ring showed that this was not the case. We can understand men who contributed rather inferior bulls to this sale, and who consequently realized low prices, selfishly wishing it were otherwise, or that there were at least a few who, not knowing a good animal from a poor one, would have paid them higher prices. But as already stated, all who have the live stock interests of our country at heart will take a very different attitude and recognize in this a harbinger of future advancement. We have been told that there are men interested in the selling of purebred stock who, if they only dared, would like to crush right to the ground all the present movement towards the education of our farmers and their sons along live stock lines, because they know this education will bring a more discerning class of buyers, and will greatly lessen the area of their dumping ground for the culls of their herds. Now, it is not a very rash statement to make that the culls are not much in the minority in the average herds of our country, and that the good ones are hard to find anywhere, and that is just where the trouble lies. We know of a number of men who attended the recent short course in live stock judging held at the College, who are anxious to get good animals and who are willing to pay reasonable prices for them, but who cannot get them. It is therefore evident that the day has come when, in order to make the herd pay,

a man must breed and select very carefully, not being afraid to cull out vigorously and send to the block all the inferior specimens. There is more money in selling one good bull calf at \$200 to \$300 than three at the same price, and there is, moreover, a much keener demand for that class of animals, so that the man who produces them is always sure of his market. In the light of all these facts we feel sure we are not mistaking the signs of the times when we say that all the education and dissemination of information which is such a marked feature of our present agricultural development will be the means of greatly improving the status of our live stock industry during the next few decades.

In connection with the above paragraph, believing that it may be of considerable interest to our ex-students, we will briefly chronicle the improvements that have recently taken place in the College live stock.

The greatest improvement has been among the Shorthorns, and the improvement has begun in the right place, by putting at the head of this section of the herd one of the best bulls that could be bought in the country, Scotchman =40420=. He was bought from Mr. Thomas Russell & Son, of Exeter, Ont., and at exactly three years of age weighs about 2000 lbs., and is very smooth, deep fleshed, low set and thick. He was bred by John Taylor, Uras, Stonehaven, Scotland, and imported in the dam by Thomas Russell. His dam, Strawberry Blossom 2nd, was a noted show cow in Scotland, and comes of an extra good strain of show cows tracing back to an excellent foundation in the herd of Mr. Shepherd, of Shethin, who in early

days, before Mr. Cruickshank's time, had some of the best cattle in that district. His sire, Lord Hampton (70822), is a Marr bred bull from one of his Missie families, the dam being sired by the Cruickshank bull William of Orange, and the grand dam by Ventriloquist. Lord Hampton's sire was Bapton Czar, a Cruickshank Crocus, bred by J. Deane Willis. The other top crosses are equally good, so that it will be seen that Scotchman comes by his excellence honestly.

Two well bred females of good individuality have also been added to the herd during the past year. One Clarissa's Pride =45113=, a richly bred Campbell Claret, is a strongly topped, thick fleshed, well ribbed heifer, bred by John Guardhouse, of Highfield, Ont. Her dam is Clarissa's Fancy (imp), by Gravesend (46461) and her sire, the well-known Cruickshank Lovely bull, Prime Minister (imp.) =15280=, who won many firsts at Toronto, London, Hamilton, etc. His breeding is of the best, he being got by Chesterfield (57049), his dam, by Field Marshall, and his grand dam by Heir of Englishman. She has at foot a fine roan bull calf by Prince Louis (imp.), the very superior Cruickshank Lancaster bull at present in service in the Guardhouse herd. The other Dalmeny Fanny 6th, is the best female in the herd, and was bred by Lord Roseberry, and imported by W. D. Flatt. She is 22 months of age, of good scale, thick fleshing, fine quality, and very even throughout. Her dam is Dalmeny Fanny 5th, and her sire Romulus of Dalmeny (77677), of the Regina family.

We are certainly pleased to note

these marked improvements in the Shorthorns, but it will be some time yet before they are brought up to the ideal mark.

As for Aberdeen Angus, Herefords, and Galloways, no addition has been made for a year or more, although some are contemplated just as soon as the condition of the funds will justify it. However, some good young things are coming on and the average quality is improving.

We are not in a position to state the extent of improvement in the dairy herd, but the figures published by Prof. Dean show that he is bringing the milk yield of his herd up to a gradually increasing average.

In the sheep department additions have been made to the Shropshires in the shape of 4 lambs and 4-shearling ewes, together with a very fine 2-shear ram bred by Mr. Nock, of England, imported by D. G. Hamner & Son, and used extensively and shown very successfully in their well-known flock. All of these were purchased from the Hamners.

The swine herd, already in a very excellent condition, has been added to by three boars, a Tamworth from the herd of Reed & Co., Hintonburg; a Berkshire from the herd of Mr. T. A. Cox, Brantford, and a Yorkshire, to assist the present stock boar, from the herd of J. E. Brethour, of Burford.

In general, any one even in a cursory visit can notice a very considerable improvement in the live stock of the College Farm under the efficient management of Prof. Day, and we prophesy that an even more marked improvement will be evident in the course of the next few years. To

Hon. John Dryden, whose interest in live stock is so widely known, is due in no small measure the credit for some of the above mentioned selections, and the REVIEW takes this op-

portunity of publicly stating its appreciation of this good work of the Ontario Minister of Agriculture.

M. C—g.

Horticultural Department.

EDITED BY A. B. CUTTING.

The Origin of Species by Mutation.

Charles A. White, M.D., of the Smithsonian Institute, Wash., tells, in the October 16 issue of the *Independent*, of a rather startling experience with tomatoes, an experience which he thinks goes to show conclusively that varieties can originate by sudden change or mutation in the seed plants. He points out the botanical classification of the tomato, and divides the group into three forms known as *Lycopersicum esculentum*, *L. solanopsis*, and *L. latifoliatum* respectively. Each one of these includes some of the large number of varieties catalogued by our seedsmen; yet each form is readily distinguished by differences of flower and leaf, and of general habit and relative size of the plants. *L. latifoliatum* is represented in our Canadian catalogues by the variety Mikado or Turner's Hybrid, while a good example of *L. esculentum* is the Acme.

Now, Dr. White's experience was as follows: In 1898, he obtained some seed of the Acme, raised the plants and set out his small plot of about thirty plants. These grew and fruited and were typical of the variety in every way. Seed was saved from

some of the best fruits and plants raised therefrom in the spring of 1899 with the expectation of obtaining another crop of Acme tomatoes from them. Dr. White thus describes the result. "The seeds germinated promptly and the young plants grew healthfully, but from their first appearance above ground they showed a marked difference from the Acme plants from which they sprang. When they reached the fruiting stage, they had all developed into typical representatives of the *Lycopersicum solanopsis*. To put the matter in the strongest light, I repeat that the whole crop changed uniformly and completely from *L. esculentum* to *L. solanopsis*, the change having taken place in the germinating seeds which I planted in the spring of 1899. Not only was there complete plant mutation, but the fruit differed in flavor, consistence, and shade of color from that of the parent Acme plants, and it also ripened earlier than did the latter."

To fully comprehend the magnitude of this change, we must read Dr. White's description of these two forms. "The more conspicuous features of the plants of *L. esculentum* (of which Acme is a variety) are their

numerous long, straggling, decumbent haulms, and their large, loosely-divided leaves, which have comparatively small, plain, distant leaflets. The conspicuous features of the plants of the other species, *L. solanopsis*, are their sturdy and compact habit, and the density of their foliage. The leaves are only of moderate size, but the leaflets are comparatively large, close-set, strongly rugose, and often bear much resemblance to those of the potato. The plants are so sturdy that they often stand erect without support until the first fruits are grown; and their aspect is in such marked contrast with those of the *L. esculentum* that they quickly attract the attention of the observer, even at a distance."

Unfortunately, in 1899, Dr. White saved no seed from this new type, and thinking it lost, planted again with Acme in 1900, getting his seed from a firm a hundred miles from Washington. The plants came true to type, and seed was again taken as in 1898, special care being exercised to secure fruit from typical Acme plants throughout the patch. To the surprise and delight of the Doctor, exactly the same change occurred as in 1898, i. e., a complete reversal of type.

Now, what does this mean? Many said that the change was brought about by cross-fertilization, a frequent occurrence in nature. To refute this argument, Dr. White says "That the cases of mutation which I have described are not those of hybridization, is proved by the following facts: In neither of the two cases mentioned was any other variety of tomatoes grown with those which I planted, and no other grew in my neighbor-

hood. Wind or insect, cross-pollination was therefore at least improbable. Because I personally gathered, preserved and planted all my seeds and cultivated all my plants, I am sure that no substitutions of either seed or plants occurred. The fact that in both cases, every plant of the whole crop partook equally of the same mutation is itself proof that cross-pollination did not occur."

Dr. White tells this interesting story to support the theory of the origin of species by sudden mutation or change, advanced lately in Europe by Prof de Vries, one of the foremost botanists of to-day. De Vries, like White, can produce practical proof in support of the theory. As the result of years of observation of the Evening Primrose, *Oenothera Lamarckiana*, he finds that while the great proportion of its seedlings come true to the parent plant, from one to two per cent. regularly produce species entirely different therefrom. His work has been very carefully performed. "Normal and typical plants were chosen from which seeds were taken, and I pollinated them under isolated conditions, or artificially isolated the flowers in parchment bags of special texture." The greater number of pure seeds reproduced individuals of the type-species, but some departed from it and gave rise to new types, and all by an abrupt leap or mutation. "The new form appeared suddenly with all its characters in full perfection. It was perfect upon its first appearance and constant in its progeny." De Vries' conclusions, as the result of years of careful work, are, that species may originate by one or two other methods, yet some undoubtedly *did* arise

by m
stand
vatio
to st
forms
himse
which
know
cause
aspir
ing th
Dr.
De Vr
edly
verse
ory o
years
to the
ologis
earth
ceival
allow
specia
a pla
To m
origin
has, i
come
able.
not in
but fu
of the
one v
theory
ist wi
cedin
one ca
lar in
pendin

by *mutation or abrupt changes* in instances which came under his observation. He thinks that it is possible to study the production of such new forms as were obtained by White and himself, and to ascertain the laws which govern them. With a thorough knowledge of these laws and the cause of mutation, one might even aspire to attain a method of producing the new forms and others at will.

Dr. White, in commenting on Prof. De Vries' theory says that it undoubtedly will be the subject of much adverse criticism, just as Darwin's theory of evolution was assailed forty years ago. This new theory appeals to those who doubted the palaeontologists' statement that life on the earth has existed for an almost inconceivable number of years. So, too, it allows of those who still believe in the special creation of species, a right to a place among rational scientists. To many, Darwin's hypothesis of the origin of species by natural selection, has, in the hands of his followers, become purely theoretical and indefinable. De Vries' theory of mutation is not in any sense opposed to evolution, but furnishes a concrete explanation of the way evolution takes place. No one who examines the mutation theory in the spirit of a true naturalist will fail to see that it opens an exceedingly broad field of enquiry, and one cannot doubt that a lively, popular interest in this subject is now pending.

P. W. HODGETTS,
Department of Agriculture,
Toronto.

Notes on the Germination of Seeds, Practical and Otherwise.

Electricity is known to have a marked effect upon the germination of seeds. It stimulates the process of germination and causes certain seeds to germinate in one-half the ordinary time. Peas, beans, barley and sunflower, when placed between copper discs and electrified for two minutes from an induction coil, are very sensitive and respond to the effect of the current more quickly than most other seeds.

The use of chemicals to hasten the germination of seeds has given only negative results. Certain compounds may help to soften the integuments of certain seeds that are more or less impervious to water, but they are supposed to exert little or no power upon the actual process of germination.

Soaking seeds in concentrated solutions of nutritive materials has been recommended for the purpose of developing stronger plants. Actual practice, however, has proven such to be useless, if not really harmful.

Light has little or no effect upon germination. Although its influence may not be injurious, it is believed to be of no advantage. All kinds of seeds, however, do better in the darkness. Of course, when sown outside, the soil itself affords sufficient protection.

Free oxygen is necessary for germination, but not absolute oxygen. It is found that the proportion in which it exists in the atmosphere, di-

luted with nitrogen, is the best for all germinations. Although nitrogen is the only practically available diluent, it is interesting to note that other gases might be substituted. Some gases, however, are injurious to germination. Carbonic acid gas is particularly injurious. It is known that .03 part of this gas in one part of oxygen will stop germination. Oxygen and hydrogen mixed mechanically answer as well as ordinary air if furnished under ordinary atmospheric pressure.

Proper temperature is also a necessary requirement for the germination of seeds. The degree of heat necessary varies much with different species. There is, however, an optimum temperature for each kind of seed. By an optimum temperature, we mean one at which the greatest number of a given quantity of seed will germinate most rapidly; i. e., the condition of temperature that produces the best result. Seeds when germinating should be kept as far as practicable in a comparatively uniform temperature. As a rule, seeds germinate most rapidly when the temperature is a few degrees above that required for the best development of the plant itself. There are exceptions to this, however, as the seed of the Norway maple has been known to sprout in a perfectly dark ice cellar, the seeds lying upon ice. In outdoor practice, the determination of the proper temperature is affected by the depth of planting and the season of the year.

Moisture is the most essential requisite to germination. To insure the best results, it should be present in a particular quantity at a certain tem-

perature for each kind of seed. The action of the seed when subjected to moisture is considered in three stages,

1. *The mechanical stage*, in which the seed absorbs moisture and swells, accompanied by a rise in temperature.

2. *The chemical stage*, during which starch and other food materials are changed by means of ferments and other agents and made soluble.

3. *The physiological stage*, resulting in the increase and expansion of the embryo.

The time necessary to complete these three stages varies greatly with the nature of the seed. Seeds of pear, quince and apple have a testa, or seed coat, which absorbs moisture very rapidly and becomes mucilaginous in a few hours. Other seeds, such as canna, clover and many leguminous plants, may lie in the ground one or more years without germinating, owing to the impervious nature of their seed coats.

The amount of water required to completely saturate the seed also varies greatly. Most cereals are known to require about 50 per cent. of their weight, and leguminous seeds from 100 to 150 per cent. of their weight.

The imbibition power of seeds is enormous. It has been observed that some seeds in swelling can overcome a pressure of 275 pounds to the square inch.

A. B. C.

Investigations in Cold Storage.

During the past three years the pomological division of the United States Department of Agriculture has been investigating the underlying

principles which govern the keeping of fruits in cold storage. These investigations, together with others that are being carried on here at the O. A. C. and elsewhere in Canada, will tend to rapidly develop the fruit industry of the country, in equalizing the distribution of the fruit crop through a longer period of time, in lessening demoralizing gluts in the market, and in opening up new fruit producing areas.

Many problems are involved in these investigations—problems which affect the producer, the packer, the fruit merchant, and, to a less extent, the consumer. Some of these are the influence of cultural conditions upon the keeping qualities of the fruits, the effects of heavy versus light soils, of well kept versus neglected orchards, of young versus old trees, of the degree of color when the fruit is harvested, of its degree of maturity, and of immediate versus delayed storage. Besides these, the relative advantages of different kinds of packages and packing, such as ventilated versus closed, wrapped and unwrapped, the influence of different temperatures and humidities, and the various systems of refrigeration, are being closely studied.

Already many important commercial results have been developed. Among other conclusions reached by the United States Department, it is found that the Kieffer pear should be

stored as soon as picked, and that it keeps best in a temperature not above 32 degrees; delays in storing this variety will cause it to discolor at the core. The peach, a difficult fruit to store satisfactorily, and one which is usually stored at 36 to 38 degrees, behaves best, according to these conclusions, when stored at 32 to 33 degrees. It is also shown that the degree of maturity of the apple when picked affects its susceptibility to scald, a most serious trouble with some varieties in storage. Apples picked when highly colored and fully mature and stored immediately in a temperature of 31 to 32 degrees, are less liable to scald than those picked when less mature and placed in the same or higher temperatures.

The many experiments that are now being conducted along this line in different parts of the continent will give us the opportunity of obtaining definite information and data regarding this necessary adjunct to the development of our fruit interests. Since it is known that the geographical locality in which the fruit is grown influences to a certain extent its keeping qualities, it is well not to base our conclusions on the results of experiments in one locality alone, but on the sum of the results of investigations in different localities.

A. B. C.

The O. A. C. Review.

BUSINESS MANAGERS:

S. M. PEARCE, Secretary.

F. H. REED, Treasurer.

SUBSCRIPTION RATES:

Annual subscription—Students, 75 cents; Ex-students, 50 cents.

Single copies, 10 cents.

Advertising rates on application.

Ex-Students are requested to contribute to our columns.

If you do not receive your REVIEW within the first week of the month kindly notify the Business Manager.

MARCH, 1903.

Editorial.

The examinations are close at hand, when our year's work will be completed, as far as college is concerned. To many, these examinations are a disappointment, and it is widely claimed that they are not a fair test of a student's ability; but can anyone put forward a better test, and stake his ingenuity or inventiveness that the result will justify inception? We believe that the present system of examinations is as fair as can be desired, with one proviso; that the professor be in perfect sympathy with his students. Surely, at the end of a year the teacher knows his pupil and knows to a certain extent what the knowledge of that pupil should be. Then, it should be easy for him to set questions whose answers would be merely a written statement on the part of the student of what he has done throughout the term. The poorest student has sixty-six chances out of an hundred to give this certificate of his ability. If that is not enough let him fail; he will never get as many chances on the roughroad of the com-

petitive life of this century. Let him certify that he has but one-third of the knowledge that his professor thinks he should have and his statement is accepted. What he is able to show over and above that is his own business; and the value of the certificate which he receives is proportional to the final statement he is able to send in. But let no student infer from this that his success in life will be proportional to the value of the certificate he holds. He will find that it is too slim a crowbar to pry up success. Far better that he should tear it into shreds and meet the world, confident in the strength of his ability to prove himself through himself.

* * *

The Literary Society was unable to get on a debate with the Toronto colleges, because we were too late in sending in our request or challenge. Our proposed conversazione was given up because we were too late in taking hold of it and pushing it along. These two facts, together

with many others which are felt, show that we as students are rather slow, or that we have a very poor system of running our affairs. It has been arranged that the Junior year will after this be responsible for the conversazione. This is a right step, that affairs like this should be left in the hands of a certain body of students who tacitly become responsible for making all preliminary arrangements. If the Literary executive appointed next term understand that their immediate duty is to arrange a debate or debates with other colleges, we imagine that there would be little difficulty in doing so. Let every man who has aspirations for the presidency of the Literary Society for next term keep this before him, and make up his mind that he will have at least one intercollegiate debate during his tenure of office.

* * *

"I'd like to be an editor. They'se nawthin' so hard as mindin' ye'er own business, an' an editor never has to do that."—Mr. Dooley's Opinions.

We agree with Mr. Dooley, and won't try to mind our own business. So, in connection with the recent labor troubles at this college, we take this opportunity of saying a few words. Our late genial and obliging herdsman gave it as his unbiased opinion that the worthy position that he had the honor to fill was worth at least forty-five dollars a month. In this we entirely agree with him; for if the herdsman is expected to give instruction in managing cattle and in scientific feeding, then he should be worth at least forty-five dollars a month. But we

believe that this worthy person also insinuated that he was worth that sum. In this we entirely disagree with him; for, if a herdsman is worth forty-five dollars a month, then he should be able to give instruction in managing cattle and in scientific feeding. If the manual labor which a student is compelled to do here is intended to keep him in sympathy with farm work, then it behooves the authorities to get a herdsman who is in sympathy with his work and knows how to treat those in his charge—both cattle and students.

A Gibson Year in Sheep Contests.

(From the Montreal Family Herald and Weekly Star, January 14, 1903.)

The name of Gibson has been associated with high class farm stock for many years, and particularly in its relation to the show ring. Sheep raising has been the peculiar forte of the Gibson family, of which Richard, of Delaware, Ontario; John, of Denfield, Ontario; and W. H., of Beaconsfield, Quebec; are members. Another brother, also a stock man, is Arthur S. Gibson who is manager for Phil L. Mills, of Ruddington Hall, Notts, England, whose Shorthorns, Shires and Shropshires are well known. Each of these four brothers have won many notable prizes in great show yard contests, but in the season just past they made a record as a family by each winning championship honors in one or other of the two largest fat stock shows in the world. At the International Live Stock Exposition, held in Chicago in

December, which is acknowledged to be the largest show of its kind ever held in America, championships were won by Richard Gibson for Shropshire wether, by John Gibson for Lincoln wether, and by W. H. Gibson for Southdown wether, the last named being the property of Mr. George A. Drummond, Huntleywood Farm,

Beaconsfield, Quebec, for whom Mr. Gibson is manager. Mr. Arthur S. Gibson's victory was the championship honors for Shropshire wether at both the Birmingham and Smithfield Fat Stock Shows, which are pronounced the leading fat stock shows of the Old World.

Personals.



Prof. F. R. Marshall,

Assistant Professor of Animal Husbandry, Ames Agricultural College, Iowa.

Prof. F. R. Marshall, B. S. A., graduated from the O. A. C. in '99. The following year he attended the Iowa College, specializing in Animal Husbandry. He then became assistant to Prof. J. A. Craig, and more recently has been appointed Assistant Professor. As an expert judge of live stock, Prof. Marshall has earned an enviable reputation.



Prof. Atkinson,

De Moines, Iowa, formerly Assistant Professor of Agriculture at Ames, Iowa.

Prof. Atkinson entered the O. A. C. in '91, and in his second year won the gold medal for general proficiency. For some years after his college course he was assistant to Prof. Zavitz in experimental work. Leaving the O.A.C., he took charge of field experiment work at the Iowa Agricultural Station. He has now turned his attention to agricultural journalism.

T. L. King, '98, is farming at Strathallan, Oxford Co., Ont.

Joseph M. Vipond, '93, is in the employ of the Petrie-Taylor Co., Guelph, Ont.

G. Nancekivell, '04, we are informed, has the honor of being the first man of his class to join the benedicts.

Oscar Chase, '80, is an extensive apple grower and farmer. Church Street, Nova Scotia, is his P. O. address.

Syd. J. Goodliffe, '00, is a proud papa. A son and heir it is and there is joy at Maple Forest Farm, Sussex, N. B. Congratulations, old man.

John Donaldson, '81, farms at Port Williams, N. S. He was President of the Provincial Farmers' Association for the past year.

Among those present at the recently held Live Stock Sale at Guelph Messrs. N. F. Wilson, B. S. A., and Lloyd Jones were noticed.

G. B. McCalla, B. S. A., '95, late Fellow in Physics, has returned to his home. He will farm in the vicinity of St. Catharines.

Mr. V. Hooper, Instructor in the Home Dairy, has left the O. A. C. to take a position with the City Dairy Co., Toronto.

H. Arkell, B. A., succeeds G. B. McCalla, in the Department of Physics. Since leaving the College, Mr. Arkell has been at his home in Teeswater, Ont.

B. J. Waters, B. S. A., '98, is special representative in Ontario for the Canadian Correspondence College of Toronto. His address is 49 Cork Street, Guelph.

W. W. Grant, a graduate of the Dairy School of the O. A. C., and formerly an instructor for the Eastern Dairymen's Association, has been appointed to a position on the staff of the State Agricultural College, Manhattan, Kansas.

An Experimental Union similar to our own, is about to be organized at Cornell Agricultural Station. The authorities at Ithaca recognized the value of obtaining the best possible advice on this subject, and as a consequence our Experimentalist, C. A. Zavitz, B. S. A., addressed the faculty and students of Agriculture at Cornell on Friday last.

Never be afraid to pay a commission for work that is well done, better than you can do it yourself, and that leaves you free to attend to business that you can manage satisfactorily.

Before buying artificials, be careful to find out what is the ingredient in which your soil is deficient and which your crop requires. Money is often squandered in supplying manures which exist in the soil, whereas only one of several ingredients is perhaps wanted.

College Reporter.

On Saturday evening, February 28, a most successful literary meeting was held in Massey Hall. The event was the occasion of the annual debate which takes place between the Dairy Literary Society and the First Year of the College. As the evening was pleasant, the hall was packed nearly to its utmost, and with an audience, which, safe to say, did not go away disappointed. The programme was long and varied and did not at any time lag or become wearisome to the listeners.

Prof. Reynolds, in his usual interesting and pleasing manner, gave a very excellent address on Northwest Canada. The speaker dwelt largely on the prospects of this new country. He foretold a glowing future for it, and to back up this fact, made use of convincing facts and figures. Taking as a unit the tract of country lying between Montreal on the east and Port Huron on the west, and between Toronto on the south and Muskoka on the north, it was shown that the Northwest could be divided into twenty-four provinces of equal size, with a position of latitude the same as that of France, and with a mean annual temperature comparing favorably with that of Toronto. The resources of this vast territory are immense—the soil is fertile, the climate is dry and the summer is warm; while at the same time its mines, forests and streams are overrunning with riches. Transportation facilities are at the present time inadequate, but with the proposed G. T. R. Pacific this difficulty will be tided over; and

the establishment of steamship connections with Europe by means of Hudson Bay and strait is altogether a feasible possibility. Last year 1346 farms were located in the Temiscaming district, representing a total of 10,000 people. This year a number greatly exceeding this will take up homesteads here, and it is thought by the professor that it will not be many years in the future before this new country will be able to boast of a population of 50,000,000.

The debate was well contested. Each speaker presented clear and forcible arguments, and interspersed his or her remarks with a spiciness which kept the audience. So evenly were the contestants matched that the judges found great difficulty in coming to a decision, but it was finally decided that the Dairy had, perhaps, succeeded in winning the honors of the evening.

The farce presented by Messrs. Rothwell, Gunn, Hamilton and Dewar captured the house. Gunn, with his wig and corn-cob pipe, certainly made an ideal Irishman, while Rothwell, as irascible Dr. Sobersides, Hamilton, as the doctor's daughter, and Dewar, as her undaunted lover, made things exceptionally realistic.

Interspersing the programme were music and recitations. Each number was well received, being, without exception, encored. Following is the programme:

Duet, - - -	Misses Hoodless and Mills
Address, - - -	Prof. Reynolds
Instrumental, - - -	Dairy Quartette
Recitation, - - -	Mr. Thompson

Debate—Resolved that the Western Hemisphere is more richly endowed by nature for inhabitation than is the Eastern Hemisphere.

Affirmative—Miss Carter and Mr. Williams, Dairy.

Negative—Messrs. McMillan and McDonald, First Year.

Farce—"Dr. Sober-side's Diagnosis."

Instrumental, - Miss Springer and Mr. Weir
Judges Report.

Critic's Remarks - - Prof. Lochhead
GOD SAVE THE KING.

The influence of the Ontario Agricultural College is becoming far-reaching. Each year it gains in favor and usefulness, and each year does it add something which makes possible a still further addition to its popularity. Three years ago one year was added to the degree course; one year ago short courses in stock and grain judging, poultry craft and domestic science were initiated; only a short time ago, through the beneficence of Sir William MacDonald, a school of Domestic Science was established here, and the building is now being rapidly pushed forward; while now, not content with all this, another scheme has been started on foot. Beginning on the 17th of this month and lasting until the 28th, a course of instruction will be given here for the benefit of Farmers' Institute speakers and workers. The work will consist of cattle, horse and swine judging, also lectures on grain, and will be in the hands of such men as Hon. John Dryden, A. W. Smith, Dr. Reed and several others of equal authority. Everything will be under the supervision of Prof. Day, our agriculturist. It can be easily seen what an important step this is, and how fruitful will be the results. Important is it that institute men be

thoroughly acquainted with their work, for through them a wrong doctrine can soon be multiplied manifold and culminate in much harm. And then, how easily and quickly correct knowledge can be disseminated in this way. The few who will attend these classes, or many, as the case may be—for entrance is not restricted entirely to institute men—will go away and spread the "good news" far and wide. Surely this is the right move in the right direction.

At the suggestion of Prof. Lochhead a club known as "Panton Club," has been organized at the college. The object of the club is to delve into the deeper mysteries of science—deeper than it is possible to go in the ordinary class-room lectures. Meetings are held every two weeks, at which some topic is taken up and discussed. There are no regular officers, except a secretary, and at each meeting a chairman is appointed to preside over the following one. Thus things are carried on as informally as possible.

Mr. T. D. Jarvis is the acting secretary.

Two meetings have already been held. At the first one Mr. W. C. Good, B. A., gave an interesting and instructive talk on Huxley and his letters; at the second, Darwin and his book, "Origin of Species," was discussed by Prof. Lochhead. The next meeting will be in charge of Mr. Henderson.

On Friday evening, March 13th, the annual Oratorical contest was held. The Gym. was nicely decorated for the occasion with bunting of red and blue, the college colors, the stage being tastefully arranged with a back

ground of Union Jacks and a foreground of ferns and palms. The evening was all that could be desired to bring a crowd, and as a result the hall was taxed to its fullest capacity, there being perhaps over 600 present.

Prof. Day brought the house to order about 8.30, and without any preliminary remarks, introduced the programme. The first speaker, Mr. R. E. Gunn, delighted his audience with a fine oration on "The Autonomy of Canada." Although, perhaps, everyone did not altogether agree with the sentiments expressed, still no one could help but agree with the reasons which were given and systematically followed up by the speaker in order to enforce his argument.

Next came Mr. B. M. Eftyhithes. This speaker has a very commanding way on the platform, and a way of emphasizing his statements which carries conviction to his hearers. The subject dealt with was "The Fundamental Defects of Modern Society," and was handled in a masterly style.

Mr. E. G. de Coriolis, in an excellent and pleasing way, carried his audience along with him from beginning to end, in a vivid description of the "French Revolution."

Mr. C. W. Esmond had as his subject "The Age of Liberty." This is a broad subject, and the speaker dealt with it in a general way, as was necessary.

Mr. J. E. Bower, on "The Nineteenth Century," gave a good oration. By comparing past and present conditions, he showed how great and varied had been the advances made during the past 100 years.

Last, but not least, came Mr. F. M. Logan, who dealt with a subject interesting, charming and useful, "Nature Revealed." The speaker handled his theme well.

The order of merit in which the speakers were placed by the decision was: B. M. Eftyhithes, R. E. Gunn, E. G. de Corolis, C. W. Esmond, F. M. Logan and J. E. Bower. The judges were Revs. T. J. Parr, T. A. Eakin and Mr. H. McMillan. The first prize, won by Mr. Eftyhithes, consisted of a handsome set of books, donated by the first graduating class of the college.

The rest of the programme consisted of music and recitations, and each number was heartily appreciated. Accompanists were Mrs. Moore and Miss Nellie Moore. Programme:

PART I.

Opening Address, - - - Prof. Day
Music—Song, - - - Miss Nellie Moore
Oration—"The Autonomy of Canada,"
Mr. R. E. Gunn.

Music—Song, - - - Mr. A. M. Brown
Oration—"The Fundamental Defects of
Modern Society,"
Mr. B. M. Eftyhithes.

Music—Song - - - Miss Dunn
Oration—"The French Revolution,"
Mr. E. G. deCoriolis.

'PART II.

Recitation, - - - Mr. John Strachan
Oration—"The Age of Liberty,"
Mr. C. W. Esmond.

Music—Song, - - - Miss Nellie Moore
Oration—"The Nineteenth Century,"
Mr. J. E. Bower.

Recitation, - - - Mr. John Strachan
Oration—"Nature Revealed,"
Mr. F. M. Logan.

Music—Vocal Duet, { - - - Miss Dunn
- - - Mr. Brown

Judges' Decision and Presentation of Prizes.
GOD SAVE THE KING.

Athletics.

HOCKEY.

CITY LEAGUE SERIES.

O. A. C. VS. HARDWARE.

The O. A. C. team played their first game in the series with the Hardwaremen on February 16th. The O. A. C. won easily by a score of 11 to 1. The game from start to finish was very much one-sided. Within ten seconds after play was started, the puck was shot into the Hardware net, making the first score for the College. This was repeated several times, and by the end of the first half the score stood: O. A. C. 7, Hardware 0. In the second half the game was more even, the Hardwaremen playing on the defensive, and by this means succeeding in keeping down the score. The College boys were only able to score four goals in this half, while the Hardwaremen managed to get in one goal. The O. A. C. defense had very little to do, the forward line doing most of the work. Hutchison, especially, distinguished himself in some of his brilliant rushes up the ice.

O. A. C. VS. MOULDERS.

On February 23rd the College team defeated the Moulders by a score of 1 to 0. The Moulders were much heavier than the Collegians, and, owing to the soft condition of the ice, were able to use their weight to advantage. The softness of the ice made combination playing practically impossible. Neither side scored during the first half. The playing was about even, neither side having much of an advantage. Shortly after the puck was faced in the second half, one

of the Moulders was hurt and left the ice. O. A. C. dropped a man to even matters. After this the lighter forwards of the O. A. C. had more room to work in and they began to make a few rushes on goal. Hutchison got the puck, and after a rush up the ice, passed to Prittie, who scored. This was the only scoring done during the game.

O. A. C. VS. G. C. I.

The final game of the series was played on Monday evening, March 9th, between the O. A. C. and the G. C. I. Both teams had up to this time, won all their games in the league and much speculation was indulged in as to which team would win this game. The ice was in rather soft condition, being covered with water in spots. This prevented any fast work on the part of either team. The O. A. C.'s played a much steadier game than the G. C. I.'s, who overreached themselves several times in their eagerness to score. No scoring was done until nearly the end of the first half, when Prittie shot the puck into the net for the O. A. C. This was all the scoring done in the first half.

In the second half the playing was much faster. After about ten minutes play Tufford scored another goal for the O. A. C. Soon after the face-off again, Hutchison, following up quickly on a long lift, got the puck and shot it into the net. The G. C. I.'s were now working hard, trying to pull down the lead, and towards the end of the half they succeeded in scoring their only goal. This finished the

scoring, making the final score, O.A.C. 3, G. C. I. 1. This was the hardest game that the O. A. C. has had in the league. All the boys played a good game, Gunn especially, distinguishing himself by a number of brilliant stops in goal.

This game, the Bankers' team having defaulted, makes the O. A. C. team champions of the league. Each player will be presented with a medal. The medals will be presented by Mr. Hamilton at the College Indoor Sports.

MARSHALL-HARRIS CUP SERIES.

SOPHOMORES VS. JUNIORS.

The first game of the series was played in Victoria Rink on Wednesday afternoon, February 25th, between the Second year and Third year teams. The supporters of both teams were confident of victory. The Third year contingent of rooters, headed by their venerable Colonel, made up in noise what they lacked in numbers. The game from start to finish was fast and furious, every man putting forth his best efforts for the honor of his year. The Juniors, smarting under the memory of the defeats of the previous year, worked like Trojans to retrieve their reputation; but alas! fate was against them. During the first fifteen minutes play, the Juniors scored three goals, and the hopes of their supporters ran high. But after this, the superior stamina and skill of the Sophmores began to show itself. The puck was kept in Third year territory nearly all the time, and, shortly before half-time was called, the Sophmores scored their first goal. Score at half time was Juniors 3; Sophmores 1.

As soon as the puck was faced off in the second half, the Sophmores went into the game with a vim and determination that could not be withstood. The Juniors were kept playing almost entirely on the defensive, and the good work of the goal-keeper alone saved them from being beaten by a much larger score. When time was called the score was a tie, each team having 4 goals. After a few minutes rest, they played five minutes each way, to break the tie. The Sophmores scored once in each period, thus making the final score, Sophmores, 6; Juniors, 4.

The teams lined up as follows:

SOPHOMORES.		JUNIORS.	
Leitch	Goal	McCrae	
Murray	Point	Gunn	
Linklater	Cover	Thom	
McAulay	Rover	Baker	
Prittie	} Forwards {	Williams	
Yeo		Rothwell	
Barber		Fansher	
Referee—Mr. Milligan.			

SOPHOMORES VS. FRESHMEN.

The final game of the series was played in Victoria Rink, on March 2nd, between the Sophmore and Freshmen teams. The supporters of both teams turned out in force to cheer their respective favorites on to victory. The Sophs, with a confidence in their team which has never been disappointed, took victory for granted. The Freshies, however, by an ingenious calculation had worked out the result differently. They reckoned that no team could play the whole season without a single defeat, and this being the final game, they therefore decided that it was up to them to win.

Owing to the warm weather of the previous week, the ice was a little too soft and heavy for any brilliant play-

ing. The game throughout was clean and free from any unnecessary roughness. Neither side scored until after about ten minutes had gone, when Hutchison got the puck from a face off near the centre, and, making a neat rush up the ice, scored the first goal. Then the pent-up hopes of the Freshmen burst forth, and the rink resounded with their youthful yells. After this the Sophomores got down to business, and, before half time was called, Prittie had scored two goals. This finished the scoring for the first half. In the second half neither side scored, though both teams played hard. The Freshmen were a little slow in following up, and lost a number of good chances in this way. The Sophomore forwards followed the puck hard, and thus kept the Freshmen playing on the defensive the greater part of the time. The final score was, Sophomore, 2; Freshmen, 1. The teams lined up as follows:

SOPHOMORES.		FRESHMEN.	
Leitch.....	Goal	McMillan
Cameron.....	Point	Munroe
Murray.....	Cover	Bracken
McAulay.....	Rover	Wolverton
Prittie.....	} Forwards	Hutchison
Yeo.....		Tufford
Bartman.....		Scott
Referee—Mr. McDonald.			

By defeating the first year team the class of Naughty Five again wins the much coveted honor of having their name engraved on the Marshall-Harris Cup. Last year, as Freshmen, they won the cup after a series of hard fought victories, passing through the season without a single defeat. This year, as Sophomores, they have maintained the proud reputation which they made as Freshmen, and the puck chasers of the class of

Naughty Five have never yet suffered defeat.

The Cricket Club held a meeting on March 6th, for the election of officers. The following officers were elected:

- President—Mr. T. Hunt.
- Secretary-Treasurer—T. Rivett.
- Captain—A. J. Logsdail.
- Committee—Barber, Somerset, Rudolph.

President Hunt is one of the best cricket players in Canada, and under his coaching, the club should be able to put a good eleven on the field. Captain Logsdail is also an experienced player, he having played on the Senior eleven while attending school in England. Besides these there are several other new members who are experienced players, and the club should be considerably strengthened by them.

The Tennis Club has reorganized for the coming season. The following officers were elected:

- President—T. C. Barber.
- Secretary-Treasurer—G. H. Carpenter.
- Ground Committee—Williams, Taylor, Scott.

Owing to the larger number of students who will remain here during the summer months, the membership of the club will be much increased. It is the intention to have two courts this year, instead of having only one, as formerly. This will give everybody a chance to play, and it will also avoid crowding.

Locals.

A "touching" appeal—"Keep off my vaccinated arm."

The Dean—"What is the plural form of Mr.?"

Farmer—"Mrs."

Class in Horticulture.

Prof.—"Mention a good cover crop for orchards."

Hutcheson—"Cabbages."

Practical Chemistry.

Mason—"Could these doughnuts be called incombustible matter?"

Eddy—"Yes; that is, matter which cannot be busted."

"Doc" Reed Lecturing—"It is very often advisable to blister after firing."

Linklater (aside to McFayden)—"Say, did they blister you after they 'fired' you?"

Prof. L—h—d, in geology class, having drawn a line across diagram to indicate sea level.

"Now, Mr. Jones, what would you expect to find below this level?"

"Water," is the prompt reply of the Rev. Dan. J.

When the word "weather" was spelled "whethar" in the Maple Leaf's spelling match, it was certainly the worst spell of weather we have had for a while. The sky must have got moved around to the north.

Weir, as he sits down to the remains of the Sunday dinner at 1.27 p. m.—"I wonder, I wonder if I had only, if I had put away that horse and buggy would I have been here; or—?"

All-bright, at the phone—"Hello --! Sunday night for tea did you say? Can't hear, louder, please! No, I can't make it out; (aside) what in blazes is the matter with this — telephone." Voice over wire—"Oh! Mr. Albright!"

Oratorical Class (Spartacus up-to-date.)

Teuple, with great dramatic effect—"If we must fight, let us fight for ourselves. If we must slaughter, let us slaughter our professors."

Aided by Gladiators Bower and McKillican, who have since joined his revolutionary flag, we expect something doing.

Notes on Horticulture.

"What affects the healing of a wound in a tree?"

Monkman—"The temperature of the tree—I mean—the temperature of the sap."

"What may be used to hasten the healing of a graft in a fruit tree?"

Sumner—"Alcohol."

A. B. C.—"Taken internally, I suppose?"

(Cheer up, Artie.)

Notes on the Domestic Science Lecture, found in the Poultry notebooks of D—n and E—y:

Put everything through the meat grinder.

In appearance the sponge cake looks like a cross between a camel's hump and a San Jose scale.

Eggs are used for lightening and thickening, and not for thunder and lightning, as is sometimes supposed during bye-elections.

Once again; put everything through the meat grinder—anything you have any trouble with.

The soup stock solution had a rather rich, creamy, mild, lovely, out-of-sight, fetching, delicious, scrumptious and indescribable (?) flavor.

Then, came some advice with regard to a combination of chicken jelly, soup sauce, oyster fricassee and other vegetables. Mould according to taste

Dip your hand into pure cold water; it won't burn you.

Once again, my brethren, we beseech you, if your teeth are poor, if your digestion is impaired, if your time of eating is limited, if you have chilblains, or if your married life is unhappy, put everything through the meat grinder, whether it be beefsteak, doughnuts, prunes or impervious substratum of pie, put it through the meat grinder, and life will have an added charm for you.

At the close of the lecture these two worthy gentlemen moved a vote of thanks to the lecturer on behalf of the college students for the valuable hint last mentioned.

MacDonald and Whyte have a weird and ghastly tale of woe to relate to any sympathetic listeners. One sweet and sunny, but sad, Saturday afternoon they journeyed to the neighboring town and brought from thence a few delightful ones of the fair sex, who accompanied them into the main building, that they might view the beauties of the distant landscape through Mac's study window. Brod. and "Silly" were there, of course, and, with their well-known tact and grace, butted into the tete-a-tete while all things waxed poetic. At

this juncture certain ghastly phenomena were made manifest in an appalling manner. The door, which was wont to swing to and fro like a branch of honeysuckle in a summer's breeze, now became fixed and immovable, so that no force acting from within could open it, while a terrible apparition, with painted cheeks, hollow eyes and the nose of Cyrano de Bergerac, wearing a huge tam-o-shanter, appeared again and again at the fanlight, to gaze admiringly on the fair visitors or indulge in hollow laughter at the expense of the gallants, who responded with sickly smiles. "Grave" doubts existed in the minds of the imprisoned ones as to whether there was a solitary spirit haunting them, or whether there was a troop of wandering denizens of the middle air owing to the fact that the voice of the monster changed suspiciously during each period of disappearance. All this, out in the hall, while showers of *aqua pura* filtered through upon those inside in more generous quantities than "the gentle dew from heaven upon the earth beneath," till at last one of the exasperated Romeos dashed at the fanlight with a hockey stick, and the spectre vanished amid the crash of breaking glass, and a half minute later a crowd of amazed students gazed wonderingly upon a red-faced youth, who was hanging through the transom, striving to untie a tightly twisted rope which united the doorknob with the steam-pipe opposite, breathing airy, but unprintable, nothings meanwhile. All things come to an end, however, and the happy party was soon on its way down the drive, while behind them, from an upper window, the enchanting strains of the megaphone, rising and falling in mournful cadence, stole out upon the frosty air.

Class in Physics.—“Now, gentlemen, you will do a little work on maximum density.”

Eddy, meditating, as he rubs his head—“Yes. I have that all here.”

Definition of love, as given in a debate by a dairymaid who ought to know:—“Love is an indescribable itchiness around the heart, where you can't scratch it.”

Shades of Webster! What next?

Mr. Evens, in Manual Training Class — “Now, Mr. Wilson, you remind me of the man who was leaning against a fence, and who worked so hard that he pushed the fence over.”

Craig, in Practical Horticulture, pointing to aperture in bottom of flower pot,—“Is that the drainage?”

Link.—“No; you guinea, that's the hole.”

Prof. Henderson — “What is the color of a bluebird's egg?”

Baker, who has not heard the whole question—“It is blue, with a grey breast, and wings lined with black.” Remarkable, very.

The periodical weekly hair-cut indulged in by some of the students in the rear of the dining-hall is a matter of great importance to them, and is celebrated accordingly. We wonder what they would say if one of their number took a bath?

McMillan, recalling zoology, in the dining hall—“The cetacea are characterized by a few straggling hairs on the upper part of the mouth.” Then, as he glances around, “I wonder how that would distinguish them from some of the primates?”

The **BIG** BOOK STORE

CHAS. L. NELLES,

Upper Wyndham Street,
GUELPH.

O. A. C. Books and Requisites. Complete stock. Fountain Pens for Students, \$1.00.

In summer the continuous coil
takes up the slack.

In the winter season pays it back.

Page Woven Wire Fence

All fences slacken in warm weather and tighten in cold — except the Page Fence. Page spring coil takes up the slack in summer and lets it out in winter. No loose sagging in summer, no straining or breaking in winter. Common crimped wire is not spring tempered and if it slackens it stays slackened; if it tightens it loosens again worse than ever. Page wire is tempered to regulate its own tension summer and winter. 60,000 miles of Page wire fence in use now.

The Page Wire Fence Co., Limited, Walkerville, Ont. Montreal, P.Q. and St. John, N.B. 9

Alva Farm Guernseys.

Awarded First Prize at Montreal for
Breeders' Young Herd.

YOUNG ANIMALS OF MERIT FOR SALE.

Pedigrees and particulars to parties
wishing to purchase. Address

SYDNEY FISHER, Knowlton,
Quebec.

The Wellington

Guaranteed only first-class
Hotel in Guelph.

G. R. MARTIN,
Manager.

D. MARTIN,
Proprietor.