

Volume XXVII.

Number 7




O.A.C REVIEW

April
1915



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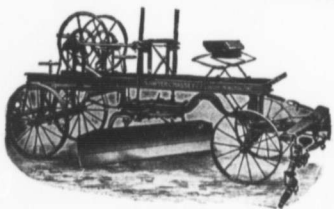
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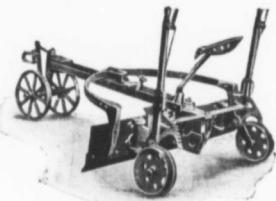
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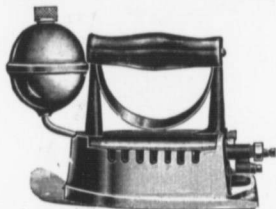
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The Handle never gets hot.

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Contains over
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Women's Smart Tailored Suits Especially Priced at from \$25 to \$35



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Gentlemen.— Please send your Spring
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(made in Canada)



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BAG HOLDER

You want one that is
Cheap, Light, Strong
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Write for particulars.
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(IMPROVED CONCRETE MACHINERY)

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IT was Lord Roberts who said: "Teach every schoolboy to shoot." Sound logic that. Not only will it equip our coming men for emergencies, but it is a pleasant and beneficial pastime for men, women and boys—develops steady nerves, keen sight and healthy bodies.

Dominion

Entirely made in Canada
for every kind of shooting—target, trap,
wild fowl, small
game, big
game



Ammunition

Makes possible the greatest shooting satisfaction. This is due to its positive operation in every make of rifle and is the result of the extreme care exercised in every detail of manufacture. Insist on having Dominion .22 Cartridges—they mean more "bull's-eyes."

SEND TEN CENTS FOR SIXTEEN COLORED GAME PICTURES

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BIG "OVERHEAD" EXPENSE
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THE MARK OF GOOD PRINTING**

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Boulders
Blow up
the stumps**



Put your unproductive land on a paying basis

Reap the added profits that CXL stumping powder will clear the way for you to make.

The whole process is so simple, so little labor is needed, so short a time required, and the cost is so small compared with the additional amount your land will earn, that there should be no further delay in clearing your land of stumps and boulders. Let us explain how.

CXL stumping powder is no more dangerous than gun powder. There's a CXL explosive for every blasting purpose.

Send for free booklet, "Farming with Dynamite."

Canadian Explosives Limited, Montreal - Victoria



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Three in Spring**

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Is the best known means to attain this end. It supplies the necessary protein, and is a substitute for the insect life consumed by the fowl in Summer.

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Always kept in stock.

Gunns Limited, West Toronto

Write for our Poultry book.

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By Prof. H. H. Dean

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Price, \$1.00 net, postpaid.

WILLIAM BRIGGS, Publisher

29-37 Richmond Street West

Toronto, Ont.

OFFICIAL CALENDAR

OF THE

DEPARTMENT OF EDUCATION, FOR THE YEAR 1915

April—

1. Returns by Clerks of Counties, Cities, etc., of population to Department due. (On or before 1st April.)
Normal, English-French Model, High, Continuation, Public and Separate Schools close for Easter. (Thursday before Easter Sunday.)
2. Good Friday.
5. Easter Monday.
6. Annual Meeting of the Ontario Educational Association at Toronto. (During Easter Vacation.)
12. High and Continuation Schools, third term, and Public and Separate Schools open after Easter holidays. (Second Monday after Easter Sunday.)
13. Normal and English-French Model Schools open after Easter Holidays.
14. Notice by candidates to Inspectors due for Senior High School Entrance and Junior Public School Graduation Diploma examinations. (Before April 15th.)
15. Reports on Night Public Schools due (Session 1914-1915). (Not later than the 15th April.)
20. Inspectors report number of candidates for Junior High School Entrance and Junior Public School Graduation Diploma examinations. (Not later than April 20th.)
30. Notice by candidates to Inspectors due for Senior High School Entrance, Senior Public School Graduation Diploma and the Model School Entrance examinations and the Lower School examination for Entrance into the Normal Schools and Faculties of Education. (Before May 1st.)

MAY.

1. University of Toronto examinations in Arts, Law, Pharmacy, Music and Agriculture begin. Inspectors report number of candidates for Senior High School Entrance, Senior Public School Graduation Diploma and the Model School Entrance examinations and the Lower School examination for Entrance into the Normal Schools and Faculties of Education.
7. ARBOR DAY. (1st Friday in May).
14. Notice by candidates to Inspectors due for the following examinations—The Middle School examination for Entrance into the Normal Schools; the Upper School examination for entrance into the Faculties of Education; the Pass and Honour Matriculation examinations. (Before May 15th.)
16. Inspectors report number of Candidates for above examinations. (Not later than May 16th.)
21. EMPIRE DAY. (1st school day before the 24th of May.)
24. VICTORIA DAY (Monday).

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Uniform Separator Speed

Any Cream Separator is built to run at a certain definite speed in order to get the best results, and there is sure to be a big loss if not run at the correct speed.

Not one person in a hundred can maintain uniform speed without something to guide him, and nothing is so reliable and satisfactory for the purpose as a

Massey-Harris Simple Speed Indicator

Easily and quickly attached to any make of Cream Separator.

Can be set for any speed and is absolutely accurate.

Simple and substantial—nothing to get out of order.

No dial or pointer to watch—the Bell rings if the Separator drops below the proper speed.

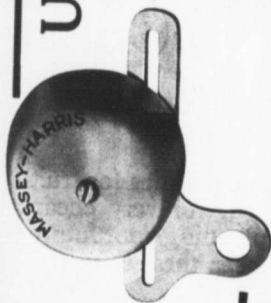
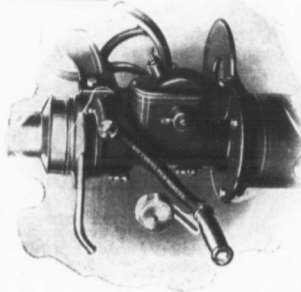
Free Circular tells all about it.

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— Agencies Everywhere —





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

Annual subscriptions—Students, \$1.00; ex-students, in Canada, 50c; others, \$1.00; single copies, 15c; Advertising rates on application.

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YELLOW RUSSIAN

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"YELLOW RUSSIAN"—A grand new oat, standing up well in storms. In 1913 and 1914 this oat received first prize, both at Toronto and Ottawa. Price, \$1.25 per bushel. Ten-bushel lots \$1.20. Bags, 30c.

We have an excellent stock of Wheat, White Russian; Wheat, Red Fife; Wheat, Marquis Genuine; Oats, Improved American Banner; and Spring Rye.

Write us for Prices.

These are reliable seeds, thoroughly tested for purity and germination.



MANGELS—The heaviest yielding and most profitable varieties to grow.

STEEL BRIGGS' "Royal Giant" Sugar Beet.

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TORONTO
HAMILTON WINNIPEG

THE O. A. C. REVIEW

"THE PROFESSION WHICH I HAVE EMBRACED REQUIRES A KNOWLEDGE OF EVERYTHING."

VOL. XXVII.

APRIL, 1915.

NO. 7

The Canadian Officers Training Corps

A YEAR ago an article on this subject would not have been called for in the College paper. To most of us the existence even of such a Corps was unknown. Now a Contingent of the Corps forms an important organization in the undergraduate life of the O. A. C.

The Canadian Officers Training Corps is a part of the active Militia of Canada. It is composed of a number of "contingents" formed at various universities and colleges throughout the nine Provinces. In Ontario, for example, contingents have been organized at the University of Toronto, Queen's University, Western University and the Ontario Agricultural College.

"The primary object of the Canadian Officers Training Corps is to provide students at universities and colleges with a standardized measure of elementary training, with a view to their eventually applying for commissions in the other branches of Active Militia. Therefore, the aim of every university which provides a contingent for the Canadian Officers Training Corps, should be to provide as many officers for the Active Militia as possible."

It will thus be seen that the C. O. T. C. was not organized specially for the exigencies of the present European War. An Officers Training Corps has existed in the motherland for years, and the organization of a Canadian

Officers Training Corps was provided for in section 22 of the Militia Act of 1904.

The affairs of a contingent at any college or university are managed by a Military Committee, the president of which must be a prominent official of the institution. The other members of the Committee are "two or more university members, a representative of the General Staff and a Secretary, who is adjutant of the Unit." The duties of the Military Committee are:

- (a) To co-ordinate the work of the contingent with that of the University generally.
- (b) To administer and control the expenditure of funds of the contingent (from whatever source derived).
- (c) To arrange for the theoretical instruction of officers and members of the contingent, by a course of lectures on military subjects.

Membership is not confined to students. Others may be admitted on approval of the Military Committee.

The course of instruction includes squad, section, platoon and company drill; both with and without arms, tactical exercises, and musketry practice. Attendance at camp is optional.

Examinations are held twice a year, usually in March and November, and are open to members who have completed a year's efficient training in the

Corps, i.e., twenty-five drills exclusive of lectures. They are for two grades of qualification, "Certificate" A or Lieutenant's certificate, and "Certificate B" or Captain's certificate. Men holding these are eligible for commissions as Lieutenants or Captains in other branches of the Active Militia, or in any Canadian Expeditionary Force for over-seas service. Until appointed to commissions in either they are free to enlist as privates.

Members who do not wish to qualify may nevertheless attend all drills and lectures, and on the completion of forty drills in a year, for a recruit, or twenty-five for a member with some previous training, are termed "efficients."

Each member who obtains Certificate A will receive a grant of \$5.00, and on receiving Certificate B, a grant of \$10.00, and on being appointed to a commission in the Militia, and completing his first year's annual training a further grant of \$20.00. These are in addition to any pay to which he might be entitled in any particular capacity. When members attend camp they are entitled to twelve days pay, also to transport, rations and other allowances provided by the Militia Act.

A contingent cannot be conducted without some expense. To offset this the Military Committee receives \$5.00 for each member qualified as efficient in any year.

In order that the members may have an opportunity of becoming expert with the rifle, provision is made for paying their transportation to and from rifle ranges, three times per annum. The contingent is entitled to receive 100 rounds of gallery ammunition per member per year, and 100 rounds of .303 ball service.

Uniforms, consisting of breeches,

cap, jacket, greatcoat and puttees are issued to each officer and member of the corps. The officers and non-commissioned officers are supplied with the badges and chevrons of their respective offices. Every cap bears a bronze colored metal badge. All shoulder badges bear the letters C. O. T. C., of the same metal as on cap. Each member classified as a first-class shot receives a musketry badge, those qualifying for Certificate A, a red worsted star, and for Certificate B, a star of gold embroidery. The equipment for each man contains, among other things a Ross rifle, bayonet, scabbard, belt, ammunition pouch, etc. A university or college contingent in this uniform and with full equipment presents a particularly fine appearance.

The C. O. T. C., as already stated, does not owe its origin to the present war. It was organized ten years ago with a view to providing a supply of competent officers upon which the Militia Department might draw in time of need. The present war has shown two things unmistakably; first, that in time of stress and national danger College men are not slow to respond to the demand for services in which brains and training count, and secondly, the millenium is not yet, "the parliament of man, the federation of the world" is not yet, and probably will never be, and hence that no country which values its national existence dare neglect a liberal measure of preparation to defend itself when attacked by designing and unscrupulous nations. It has been demonstrated that each and every colony of the British Empire measures up to the full stature of nationhood, feels the responsibilities thereof, and is prepared to bear its full share of the burden of mutual protection. Under these circumstances preparation will receive more attention

than in the past, and in that preparation the Officers Training Corps will play an ever increasing part from year

to year by qualifying as efficient officers some of the very best College men throughout the Dominions of Empire.

Preparation for the Course at the Ontario Agricultural College

By S. H. Gandier.

IN MY experience as Secretary of the College for the last four years, it is natural that many "Student Problems" should come to my attention and should result in definite impressions and conclusions. One of these which appeals to me as being more important than is generally admitted, is "better preparation with a view to entering college," and this applies to different types of students in different ways.

Unlike most American Agricultural Colleges which require High School Matriculation standing before a boy is allowed to enter for a diploma or degree course, the Ontario Agricultural College merely demands that candidates for admission shall possess ordinary rural public school education. But the Ontario institution insists upon another qualification which her sister colleges in the States overlook to a large degree—the acquisition of at least one year's practical farm experience. The United States colleges begin with academical restrictions and apparently lose sight of the importance of farm practice. From a study of their calendars and curricula, I find that this policy appears to be carried out throughout the courses for Agricultural degrees with the result that a high percentage of their graduates can be nothing more nor less than "book agriculturists" and would

make a sorry showing in agricultural discussion with practical farmers. The average freshman at the O.A.C. sets out with a practical knowledge of farming to which he begins to add scientific information in the class room and practical lessons on the farm, in the orchard and on the stables. When he emerges from his University examinations with the degree of B. S. A., he is ready to accept with confidence a position which requires him to face the "problems of practical agriculture." To my mind this one point is largely responsible for the present good reputation as an institution of learning which our college enjoys—it produces practical men. However, this is somewhat aside from the subject in hand.

I am convinced that many students would undoubtedly obtain more from their experience at the college, a greater number of Associate diplomas would be granted, less men would be turned back home after a term or a year at college, a higher standard of proficiency would be attained, more first class graduates would be sent out and the good name of the college would be more firmly established, if more attention were paid by prospective students to preparation before entering college, and if educational facilities in our rural communities were more perfectly fitted to the demands of the farmer's family.

Seventy-five per cent of our students come from the farms of the province. From sixty to seventy per cent of these have never gone beyond the High School Entrance examination or have not completed the public school work. From inquiry I find that most of these boys decided one or two years before entering, that they would take a course at the agricultural college. It would have paid these boys well to have begun from the moment of their decision, to "brush up" in their spare time in the commonest necessities of academic education—to do as much reading as possible of any sort, to practice penmanship and easy essay writing and to bring back the old skill which they possibly possessed at school in arithmetic and spelling. These boys need not worry over agricultural texts and theory until they get to college; their great need is a working knowledge of the three R's in order that they may not be handicapped too greatly when they enter upon their college studies. Just because the educational standard for admission is very low, this is no indication that students possessing the minimum of education will find the course of study easy. The standard for admission is of necessity as low as possible in order that the farm boys of Ontario with only rural educations may come to college for the additional education which is intended for them and for their business as farmers. Dozens of rural students every term express to me in a confidential way and usually as an excuse for miserable showing at examinations, their regret for failing to obtain more education before entering college. These boys have experienced farming from A to Z, are usually very industrious and earnest, but so many of them fall down simply because their reading and expressive powers are limited.

The other twenty five per cent of every freshman year is largely composed of the "town boy," who through some influence or natural aptitude has joined the "back to the farm" movement. He has a good elementary education, possibly has his Junior Matriculation, and is coming to college to "learn to farm." He and his father think it strange and unnecessary that the college should require a year's hard work on a farm before entrance. Why what is an agricultural college for but to teach the students how to do all the necessary farm operations such as plowing, seeding, feeding, etc? They fail to realize that the college was instituted for the country boy who already is familiar with these operations and that it is a waste of time for the college to expend its energies in this direction when boys can learn "the heavy work" on any Ontario farm. At any rate the town boy obtains his year's experience possibly by living on the farm of a friend for a summer or two; but very often he does not experience any of the real hard knocks to which the country boy across the road is accustomed—plowing from dawn till dark and feeding the stock all winter. Perhaps the town boy fools around in the orchard and potato patch with a hoe but never under any consideration will his employer allow him to handle the cultivator or drive the horses on the binder. He is not long at college before he feels that he has gone at things backwards. He experiences a lack of preparation for the college course even more alarming than that of the country boy who is short on education. He has difficulty in realizing feeding values, breeds and types of animals, varieties of grains and proper sowing conditions and the general "shop talk" of farming. "If only I had got right down to farm

work and had stayed at it until I knew all these things," is his continual regret. The further he goes with his course the greater his difficulty becomes.

On the other hand the country boy whose ability for study is improving as he goes on, is showing improvement. He may improve in his infirmity but there is little chance for the town boy to add to his practical farm training and nine times out of ten he is compelled to graduate as a second rate agriculturist in so far as entering into practical agricultural activities is concerned.

Town and city boys who intend to enter agricultural life can make their preparation for college quite complete if they realize that several years of actual farm work is quite necessary before they can hope to be students satisfactory to the college and first class agricultural graduates. It will require pluck, energy and perseverance to acquire this training and the only place where it can be learned is in the school of experience—all the hard work which the average farmer is compelled to face.

Turning to the country boy with his limited education, the problem is a more difficult one. Through his own initiative he can make some progress toward improvising his abilities but this must vary with individuals and in many cases will amount to very little. No general higher standard of rural education can very well be expected until some radical changes are made in the present system of rural education. The boy leaves school just as

soon as he can because nothing in the school work has interested him particularly. The lifeless pages of the reader, the speller and the geography cannot hold him and he drifts out of school life for five or six years before he realizes that he wants to go to the agricultural college to learn more about his business of farming and now he has not sufficient education to make the most of his opportunity. Apparently what is required is a rural educational system which will stir up the boy's interest and keep him at school until he masters an elementary education, and acquires a taste for inquiry and investigation on his own account. This problem has perplexed educationists for many a day. Professor McCready of the Ontario Department of Education has been giving his entire attention to the matter for some years now and has introduced into many of the rural schools experimental ideas which appear to be assisting the situation. But the process of evolution is always slow and it may be many years before a thoroughly satisfactory curriculum is arrived at. The District Representatives are going after the farm boy to arouse his interest in their short courses, young men's clubs, etc., but they can do little to assist his meagre education for entrance to college. It would appear that many a farmer's boy of the present generation at least will be inadequately prepared for his college work and will not get out of it all that he could if only he had been more interested in his school work of earlier days.

Some Farm Management Problems

By A. Leitch.

WHEN war talk palls, the most important subject for discussion among city dwellers is the enviable position of the Canadian farmer. The sharp advance in the price of food stuffs seemingly accrues to the advantage solely of the producer, while to the urban eye there appears no corresponding cloud to mar the clear blue sky of the farmer's prosperity. The ranks of the unemployed in the cities have been greatly augmented by the closing down of commercial and manufacturing establishments. The lack of opportunity of employment in the cities will apparently tend to keep the farmers' sons and present farm help on the land. These two factors alone would appear to partly solve what has been the hardest problem confronting the farmer for the past decade, the shortage of efficient farm labor.

Let us see how the problem works out. The great majority of the unemployed are the least efficient in their own trade or occupation, for the employer of labor in scaling his operations to fit his output or finances has naturally retained his most efficient help. It is well recognized that to be worth even moderate wages to a general farmer that a farm hand have some aptitude for performing the varied farm operations and this can be acquired only by considerable practise. To reach the required degree of efficiency requires time and patience and consequent loss to the farmer and by the time the average new hand is trained to be of value, the present conditions causing the high prices of foodstuffs will probably have disappeared and new conditions will have arisen. It may be said with consider-

able truth that the present flooding of the labor market will help out that class of farmers requiring at times a large amount of more or less unskilled labor, the truck gardener and small fruit grower. Many of those now out of work would be suitable for work of this kind, but it is doubtful if there will be any great demand from this source. The truck farmer depends for his market on the nearby town or city and as the buying power of the average city home is much curtailed under present conditions, there will be little call for increased production on the part of farmers of this class. Therefore there appears to be no outlet in this direction for many of the out of work. For the problem of average farm labor, therefore, where efficiency is of as much importance as numbers, the solution by means of augmenting the number of laborers involves such a length of time in training that the benefits arising will not be felt for some time.

There will no doubt be fewer farmers' sons and laborer's leave the farms on account of business conditions in the cities, which will to some extent help to keep up the efficiency of farm labor. This condition will be largely offset, however, by the inevitable decrease in European immigration which in the past has supplied us with considerable good farm labor, and by the enlistment of a certain proportion of country boys and men.

The high price of cereal products has in itself created a serious problem for the farmer. He realizes that these high prices are not permanent, that his success over a term of years depends on the number and quality of live

stock kept on the farm and that to retain a fair proportion of live stock entails at present a very high cost of maintenance, when the war created demand and waste of cereals is past and the great number of soldiers in the war-swept countries again have their acres producing we may look for a rather sharp decline in prices of farm crops and a sharp rise in prices of farm stock due to the present heavy marketing added to the shortage in numbers so evident even before the outbreak of the war. The farmer is sorely perplexed. If he sells down his stock and takes the increased price for his grain and hay, he fears that when prices for such drop he will have to spend more in replenishing his live stock which he inevitably will have to do. The man who builds for the future, provided it is not a too far distant future is usually the wise man and it appears to the writer that this is not the time to reduce breeding stock even if prices of feed are high. A price advance in live stock comparable even with the advance in feed is likely to occur soon and when it does happen, will be permanent, for the conditions which cause such were operating for some years before the temporary condition which advanced the price of farm crops and whose results are sure to be temporary also.

The Assistant Secretary of Agriculture is quoted as saying, "If the American farmer would put into practice the scientific methods of agriculture that have already been worked out at the expense of Government funds and, if prices held, he could increase his yield of corn and wheat alone by more than ten million dollars worth for every growing day of the year."

You will notice two "ifs" in this statement. Let us consider the first one. The scientist experimentalist and

live stock investigator have done an enormous amount of valuable work in adding to the farmers' knowledge of increased crops and better feeding methods. The facts discovered by these men have returned to the farmer many dollars for every dollar invested by the tax-payer, but to get the most out of the principles discovered it is necessary to translate them into simple and concrete directions of actual farm practice. In other words to teach the business of raising and marketing profitable crops rather than the science of growing large crops, to demonstrate the increase of net income rather than the increase of yields. To this end agricultural institutions are giving more attention to the business end of farming, the co-ordination of principles in large production already gleaned, with the actual working out of these principles in actual farm practice. In this are involved such questions as cost and efficiency of labor, both horse and man, the proper distribution of capital among the different farm operations for the different types of farming, the proper arrangement of building, fences, etc., and cost accounting of various farm operations.

Now should the Canadian Farmer as a body so increase his production as outlined in the above quotation would prices hold? Not with the present methods of marketing. As our selling scheme is now organized, there is a highly efficient, finely organized class of financiers and middlemen between the producer and the consumer. As a result the farmer is getting no more than a fair price and the consumer is not getting as much for his money as the price paid the farmer would warrant. The only solution to this is the working out of an efficient and equitable plan of financing and marketing farm products, to which our institu-

tions are now giving considerable attention. Then when the consumer can get more for his money without caus-

ing the farmer to take less for his produce there will be no danger from over production from better farming methods.

Salesmanship

By J. W. Crow.

HELLO, Bill, how's the apple business?"

"Good."

"That's the way to talk. How does it come, though, you're so cheerful when most of the apple men have the blues so badly?"

"Why, I did all right in my apples last fall. I've got no kick coming."

"Tell us about it. What did you do with your apples? You don't think the apple game is all gone to the bad, eh?"

"The apple business is alright yet. What did I do with my apples? Sold 'em. Sure. Why not? Came out all right anyway, although I was a little scared before I started. When picking time came along I hadn't sold an apple, but we started in and then one day I packed a few samples in my grip and beat it out West.

Went into a grocery store in the first town I dropped off at and asked the fellow if I couldn't sell him a carload of apples. He said, 'What's your price?'

"Three dollars f. o. b."

"Pooh! I can buy all I want for fifty cents."

"Good number ones?"

"Sure; good enough anyway. My trade won't pay for fancy stuff. Six pounds for a quarter is what I get, and there's pretty fair profit on a barrel at that rate."

"I've got better apples in my cull pile than you've got in those barrels out in front. Do you mean to tell

me the people in this town are satisfied with apples like those?'

"There's no money in barrels. You see, my trade is all by the pound, and I couldn't get any more for better ones."

"Well," I said, "I'm glad I came to your town, and I'm going to sell apples here. If I can't sell 'em to you, I'll sell 'em to your customers."

He stormed and swore, and said I wasn't an apple grower and had no right to butt into his trade. I said, "Now, see here, you just keep still. Those apples you've got out in front are marked 'No. 1' and you're swindling the people when you call them number ones. I can put an inspector on to your game, and in twenty-four hours you'll land in hot water." We argued for a while, and finally he beat it back to his office and slammed the door. While we were jawing I had noticed a couple of men who listened for a while and then left the store. As I came out on the street, one of them stepped out from an implement shop next door and called me inside. He turned out to be a lawyer. Said to me, "Will you take my order for six barrels of Spys?" I said, "I don't know. I will if I can sell enough to make a carload." His companion, a doctor, said he would take five barrels, and before I knew where I was at, they had called up some of their friends and I had orders in my book for twenty-eight barrels. That was a pretty good start. They told me to go ahead, and said I could

easily sell a car going from house to house. I had an order book with me, and started out. That was in the morning. In two days I had sold a hundred and ninety-eight barrels, enough for a good big car. Had to go some to do it, though. I found out that the best time to sell was evening, when the men were home. Lots of the women were out in the afternoon, and anyway, they didn't want to place orders with me until the men were in.

Along in the afternoon the chief of police hunted me up.

"Are you the young man selling apples?"

"Yes."

"Better get out of town on the first train. The grocers had a meeting this afternoon, and they say you're not an apple grower and haven't got a license. Anyway, I've got instructions to arrest you, so you'd better take my advice and get out."

"Now, see here, Chief, I'm an apple grower and I don't have to have a license."

"What have you got to prove it?"

Well, I'd had an idea before I left home that something of the kind might happen, and I'd had my lawyer write out a certificate, stating I was a fruit grower. I produced it and showed it to him. He growled, said the other fellows were in business in the town, paid taxes, had their living to make, and so on. I told him the grocers were swindling the people with cull apples, and he replied that I'd better be careful what I said. I told him I could prove my statement and that I would guarantee my apples. He asked, "What are your apples like?" I got out my samples.

"But they wouldn't be like that when they came," he said.

"Say, Chief; just give me an order for one barrel, and if they're not as

good as these samples you can put me over the jumps," and I'll be darned if I didn't get his order for a barrel, right on the spot.

That night at the boarding house where I was staying, one of the men said to me, "You're running quite a risk, selling apples in this town."

I said, "What do you mean? Would you advise me to carry a gun?"

He turned out to be the Police Magistrate, and when he wrote out a permit for me to carry a gun I wondered what was coming next. However, I went and bought one.

The next morning I started out bright and early, and there on the street corner was the chief, waiting for me.

"Better quit and get out."

"What's doing now?"

"The grocers had another meeting last night and they're going to do you bodily harm."

"Chief, you can't scare me a little bit. I've got a little pocket handkerchief here that will take care of them alright if they start any funny work."

"Who gave you permission to carry that?" he growled.

I showed him the permit, signed by the Police Magistrate and he left me. After that I had no more trouble, although the papers were full of the grocers' dope, saying I was a swindler and warning the people that I would likely soak them on delivery charges.

I got hold of a carter and made a contract with him to deliver at four dollars a day. I figured the cost of delivery at six cents a barrel, and put a little ad. in the paper stating the freight charge per barrel, and guaranteeing to deliver for six cents.

That night after I had sold my hundred and ninety-eight barrels I wired home to father, telling him to ship the car and to follow it in a few days with a second one. I went on to the

next town and started in again the same way. When the car came I went back to look after the delivery and *never had a single complaint.*

In the second town I sold two cars of culls and windfalls. Had them shipped loose, in bulk. Advertised in papers, "Barrels filled at the car for \$1.50; bags 75 cents. After I had finished selling out the second car the mayor of the town said to me, "Young man, this has been a godsend to the people of this town."

And that isn't all. My father-in-law was discouraged about his apples, said he didn't think he'd bother with them. I told him if he would pick them I'd sell them; and I made more money for him on his four hundred barrels than he had ever made out of his orchard before."

Now, gentle reader, what are you going to about it? First, let me say to you that the story written here is true—all true. I have given it to you substantially as it was given to me by a live young apple grower and farmer, whose home is within fifty miles of Guelph. If you are interested in marketing problems, perhaps you will permit me to draw out for your benefit some of the important points in this young man's experience.

1. Note the condition of the apple trade in this particular town, and don't jump on the grocer. He's human, like the rest of us, and is scarcely to be blamed, for looking after his own interests. The point is that there is a good market in this town, which is not being reached by the present system. Furthermore, the probability is that it would not have paid this grocer to canvass the town in order to find it; and in any case it would have been much more of an experiment with him than it was with our fruit grower friend.

Perhaps conditions of this kind are

more general than we suppose; but don't let us run away with the idea that the middleman is a rubber and a nuisance all round. We can't do without him and perhaps it's *our* fault if we let him sell us cull apples for number ones. Perhaps, too, the fruit grower is to blame for the grocer's failure to reach this additional volume of trade. At any rate, the history of market development in fruits shows that the man *with fruit to sell* does most of the work in finding new markets.

2. What is the difference between over-production and under-distribution?

This young man is one of the many Ontario apple growers who, last fall, was confronted by so-called over-production. Prices were low, sales were difficult; but in the face of a semi-panic our young friend sold his entire apple crop, even down to the culls and windfalls.

I venture the statement that there is a market in Canada for all the apples we are producing at present or are likely to produce. Also the further statement that there is no over-production of *good* apples and *never will be*. There *is* under-distribution and the difference between the two is "Salesmanship."

3. Did you ever hear of a man selling apples on sample, guaranteeing them to be as represented and *making good on his guarantee*? His apples would have to be bang-up good, wouldn't they? And now we have arrived back at the real heart of the problem. "The simple fact is that *good apples can be sold*. There is a big, hungry public looking for them and waiting for somebody to come along with them. But the fruit must be good—good enough to guarantee—otherwise your "Salesmanship" is wasted.

The Life Cycle of the "200 Egg Hen"

By K. Welton, '16.

HAVING had the privilege of spending a most interesting and educational summer at the Ontario Agricultural Poultry Department, I gained a close acquaintance with the famous "O.A.C. Bred-to-lay Barred Rocks." Hitherto my ideas of good poultry had been those of a fancier, rather than those of a utility poultryman, and at first I was rather contemptuous of those lean, scraggy, but vigorous hens. However, the longer I worked with them the more I learned about them, and finally I found myself pointing out with pride to all visitors, the virtues of this profitable strain.

I think it best to start the cycle with the young chicks as they leave the incubator. They are first put in up to date lamp and stove brooders, these brooders are kept in the brooder house until the chicks are old enough to scratch and eat vigorously. Then chicks, brooder and all, are moved to colony houses and placed in suitable positions in the orchard and fields.

Up to this time the feeding of the chicks has been very systematic, and at the same time simple. They are not fed for two days after they are hatched; only a little grit and water being supplied them. Then they are started gradually on some good commercial chick food, and finally brought up to five meals a day consisting of alternate meals of chick food and soft succulent food, such as hard boiled infertile eggs, and bread crumbs soaked in milk, care being taken not to have this mixture stale or sloppy. When the chicks are put on the land the feeding varies, inasmuch as the chick food is kept before them in hoppers, all the

time. They are also fed two meals a day of a mash consisting of equal amounts of bread crumbs, infertile eggs, corn meal, oat flour and wheat bran. The land is now dry as most of the chicks are hatched in April, and they may roam at will over the orchard or meadow land, and obtain plenty of animal food in the form of bugs and beetles, as well as the essential green food.

When the chicks are from six to eight weeks old, they are able to do without a brooder, and roosts are put in the colony houses. At this time the chicks have their chick bands changed to full sized leg bands. This operation takes place by lantern light. At the same time the chicks are scored as to quick feathering, the idea being to pick out the best feathered birds as they are the early layers and the hardest workers.

In September the cockerels are separated from the pullets and those not wanted are fattened and marketed. Before the first of November all pullets are put in their winter laying quarters in suitable sized flocks, and in time to get used to the quarters before the start of the laying year namely, November the first. Trap nests are put in the houses and as soon as a pullet lays an egg her number is placed on the record sheet kept in the houses, and the number of eggs and the day each was laid is entered weekly in the office books. If a pullet lays well during November, December, January and February, the four months most adverse to the natural laying season, she may be depended upon to lay well in the remaining months. Many

pullets are used for breeding in the Spring, but are still trap nested. However, most of the breeders are yearling hens.

The breeders are housed in suitable sized flocks, i. e., at least five square feet floor space per bird of American type, and four square feet per bird of Mediterranean type. They are hopper fed crushed oats, and have wheat and corn mixed in suitable proportions to the season, buried in their litter for a morning feed, and enough of the same grains supplied them at night to allow them to go to roost with a full crop. Green food in the form of sprouted oats, turnips, and cabbages is supplied them at noon each day. Skimmed milk or buttermilk is kept before them in troughs. Oyster shell and grit are supplied.

The secret of high production lies in the breeding of these birds, as it will be noticed that so far the care of them has been only that demanded by nature in the rearing and maintaining of a healthy bird. It is known that high egg production is transmitted from the male to the female, and from female to male. Therefore, as the male is half the flock it is necessary to have a male bird from a high producing female. The pullets or hens in the breeding pen are chosen for their high egg production, and besides this the hens must have high fecundity. Females are also chosen for the color and shape of their eggs, it being desirable from a market standpoint to have eggs as uniform as possible. Apart from above, the general rules of mating are strictly adhered to. Line breeding is practised, healthy and vigorous birds are chosen, also birds which are true to type, with breed characteristics.

All during the hatching season eggs from pens mated as above are sold to public, and are also sent in large quan-

ties to District Representatives throughout Ontario. These are distributed amongst the rural school children, who hatch them and then show the chickens at the county fairs, where they are judged from a utility standpoint by men sent out by the O. A. C. Poultry Department. The Department sets as many eggs as the incubator capacity calls for and many more eggs are set under hens for the first couple of weeks, and then moved to incubators, thus taking the place of the infertile and dead-germ eggs. Eggs are tested at end of first week, and again at end of second week, so that infertile and dead-germ eggs may be removed. Before the 21st day the eggs which have the numbers of the hens which produced them marked on the large end, are separated from each other by having each hen's eggs placed in small wire cages. Then when the hatch is out the chicks are leg banded and the number of the egg which they came out of is marked opposite their own number. Hence every chick hatched for breeding purposes at O. A. C. is pedigreed. Birds are usually sold at end of second year, but exceptional birds are kept longer.

This ends the life cycle of the 200 egg hen, but too much can not be said about the good this work which involves so much time and patience, is doing throughout the province. The average production of farm hens in Ontario is somewhere between 80 and 90 eggs per year per hen, and even then, the majority of this small number of eggs are laid in a season when any old hen will lay. In order to reach the high number of 200 eggs per year, the hen must lay all winter. We must endeavor to give the hen as nearly natural conditions as possible during winter, by proper housing and

feeding, but the most important factor in high production in the breeding. Farmers should not overlook the opportunity at hand, and should buy a

pedigreed cockerel, or setting eggs, from this bred-to-lay strain, and thereby increase the production of their flock from 50 to 100 per cent.

Summer Care of Orchards

By H. S. Fry.

THE SUMMER care of orchards includes such matters as tillage, fertilization, cover crops, summer pruning and thinning. An article of this length is not sufficient to develop any one of these factors fully, and consequently those of least practical importance will be accorded only brief mention. The last two will be omitted entirely.

Probably tillage is most important of these factors. By far the greater number of successful fruit growers practise clean cultivation, but this does not necessarily mean that clean cultivation is the one and only method to be followed in all cases. The other extreme in cultural methods for orchards is the sod mulch system and various modifications of these two systems exist, all of them successful with a certain number of growers and under certain conditions.

Where clean cultivation is most successful and profitable, the orchard is plowed as early in the spring as the soil is fit to work; frequent and regular stirring of the soil beginning immediately after.

In some cases, spring plowing is not necessary every year, and a thorough discing would be quite sufficient. Discing, however, would only serve the purpose where the land is in excellent physical condition with plenty of humus and where the type of land is not too heavy. An extension orchard disc is the best implement for working close

to the trees. Regarding this implement more will be said later.

The frequency of cultivation is a matter for which no definite rules may be laid down. The main object is to cultivate as seldom as possible and still maintain an abundance of moisture in the soil. Not only must moisture be retained in sufficient quantities, but a good condition of tilth must be secured, and still further, the effect of cultivation on the liberation of plant food in the soil must not be lost sight of. Labor is expensive but nevertheless, it costs less than fertilizers. Ordinarily, cultivation every ten days or two weeks and after every rain, will fulfil these conditions. It may not be out of place here to point out again the fact which nearly everyone is aware of, that during periods of dry weather when soil evaporation is accelerated to high speed, frequent stirring of the soil is doubly important, even though an excellent mulch may have been formed on the surface of the soil at the beginning of the dry period.

Not many years ago it was still the practice among fruit growers to continue cultivation throughout the whole summer; but the present practice is to stop cultivation when the trees have nearly completed a normal year's growth. In northern districts any stirring of the soil is avoided after the first of June, while in the more southern parts of Ontario, cultivation is sometimes continued until the last of Au-

gust without cessation, in the case of peaches and young apple orchards. Bearing apple orchards in any part of Ontario should not be cultivated later than the middle of July. These are the extremes, and at Guelph the limit of safe culture in normal seasons may be placed at July first. In very dry seasons cultivation may be continued longer than usual, since a cover crop even if sown at the proper time would rarely germinate under conditions of severe drought.

Quite often too the fibrous feeding roots act as an incentive to the rooting of pigs. This misuse of sod in an orchard is one of the greatest drawbacks to this system. It is, however, cheaper, and will produce alone better colored fruit than will clean cultivation alone. This is true because sod orchards, mature earlier than those given clean cultivation, and this favors coloring. Cultivated orchards have denser foliage than sod orchards, which likewise prevents rapid coloring



An Eleven-Year-Old Apple Orchard Sown to Clover Crop.

The sod mulch system of orchard culture has many advocates and it means that the orchard is grown in sod continually, year after year, the grass as it grows being cut down several times during the season and left lying on the ground to form an ever-thickening mulch and mat. Unfortunately, not every man whose orchard is in sod can be said to be following the sod mulch system. Too often the grass instead of forming a mulch forms hay for winter stock feed or pasture for the cattle and horses.

due to the exclusion of sunlight. The fruit from trees in sod is likewise smaller than from cultivated trees, but one advantage lies in the fact that on hillsides there is less washing by rains where sod is found than where trees are given clean cultivation. The main arguments in favor of clean cultivation are as follows: (a) It conserves soil moisture better than sod culture. This is probably the chief argument, and upon it is based the fact that the apples in cultivated orchards are larger, of better quality, but are of poorer

color and poorer keeping quality.

The matter of quality in fruit is one deserving more attention than it usually receives, and it seems to be bound up with cultivation. Quality in a fruit means very largely the condition of the fruit with regard to texture and juiciness. A good ripe apple is produced after much the same principle as a good five year old horse. If you allow the horse as a colt to be insufficiently fed or set back in any way, we are told by stockmen that it is next to impossi-

action of the stirring of the soil but because of the freer circulation of air in cultivated soils and increased facilities for water transport, thereby creating more favorable conditions for the chemical and bacteriological activities which are so essential to a rapid liberation of plant food.

(c) Clean cultivation allows of the use of leguminous cover crops which are important from the standpoint of soil fertility and are excluded under the sod mulch system.



One Type of the Reversible Extension Orchard Disc.

ble to make the horse of him which he would naturally have made under uniform good conditions throughout his period of growth. And so with an apple. To secure a crisp, juicy apple at picking time (and such a one will represent the best quality for the variety) the moisture supply during the season must be regular and abundant, or the result will be a small apple, lacking in crispness, juiciness and flavor.

(b) Cultivation tends to make plant food more easily available in the soil. This is important not from any direct

A few successful Ontario orchardists practise a modification of the sod mulch system. In such cases, a strip of sod, approximately six feet wide is left on either side of the tree row, the remaining space between the rows being given clean cultivation. The advocates of this system claim that the feeding roots are not near the trunk of a tree, and therefore it is not necessary to cultivate close to the tree row. Second, that labor is saved, and third, that the grass forms a sort of mat for what fruit may fall, and thus saves the owner from

what may prove a considerable waste. The chief disadvantage of this system seems to be that the sod under the tree forms an excellent harbor for insects and diseases; but the advocates of this system seem to think that they have to spray in any event and they might as well spray for a lot of insects as a few, especially since spraying has become so effective.

A seemingly strong argument against clean cultivation is the statement that trees can be headed lower in sod than under clean cultivation. It is well known, however, that low headed trees do not grow their branches as horizontally as do high headed trees, and an even stronger reason for doubting this statement may be found in the range of modern orchard discs and cultivators. The extension disc has been mentioned previously in this article, and one type of this implement can be seen in the accompanying cut. It will be noticed that the discs work immediately under the trees, while the horses are well out between the rows. Orchard cultivators built on the same plan may also be secured.

The need for cover crops in orchards is very well known in these days, so much so that with the best growers a cover crop of some description seems to be an essential part of successful orcharding. The crop made use of may be only weeds, or it may be a special crop to meet special conditions; but it serves the purpose with a certain amount of accuracy.

Why is a cover crop needed? One of the most common causes of the death of fruit trees is some form of winter injury. In nine cases out of ten I think we are safe in saying that winter injury is caused by excessive late growth of wood and foliage. This late growth reaches the winter or dormant stage in an immature and tender condition.

A cover crop aids in prevention of this injury in two ways, first by competing with the trees for plant food during a part of the growing season, and consequently checking the growth of the trees. Second, by holding the snow in winter and preventing deep freezing of the soil. It would not of course be logical or wise to remove the cover crop for hay or fodder after it had served these purposes, especially since by turning it under two further and distinct beneficial results are secured. These are, first, that the humus of the cover crop will improve the physical condition of the soil, and second, that the cover crop, if a leguminous one, will add considerable quantities of nitrogen to the soil, and thus lower the cost of orchard fertilizers.

What crops are best to use? In the first place, the grower must decide between a leguminous and non-leguminous crop. The orchard itself will give the decision. If it is making sufficient or excessive growth, it is evident that a leguminous cover crop will do more harm than good by accumulating too great a supply of nitrogen in the soil, and a non-leguminous crop should be used such as rye, buckwheat or rape. More frequently orchards do not make sufficient growth, and in such a case peas, clovers or vetches should be used.

The following considerations cover fairly well the use of cover crops:—

“Does the soil need humus?” Canada field peas, buckwheat and rye are good.

“Does growth need to be stopped very quickly in summer after sowing the cover crop?” Rape is probably best.

“Is the soil likely to wash in spring or fall?” Hairy vetch or rye form a good mat.

“Is it especially desirable to hold the

snow in winter?" Buckwheat stands up well.

"Is expense an important consideration?" Vetches are probably most expensive and Rape the cheapest.

"Must the plowing be done in spring?" If so, Rye is a risky crop unless plowed at the right time, before it has a chance to dry out the soil. Any crop which lives through the winter will dry out the soil unless plowed down early.

These considerations serve to illustrate the fact that no one cover crop is best, and the grower must use the one best suited to his conditions.

These crops are sown immediately after cultivation ceases, and are plowed under either in fall or spring, depending upon the service required of them as illustrated above.

The problem of orchard fertilization is not yet as well worked out as some other orchard problems, especially with regard to the quantities necessary of the essential elements, for the best health and greatest productiveness of the orchard. One thing seems certain, namely, that artificial fertilizers are often used at a dead loss to the grower because there is no need for them. There may be a need for the plant food they contain, but this can frequently be more cheaply obtained by the judicious use of cover crops and thorough cultivation. It seems equally true that many orchards are deprived of commercial fertilizers when they would be of very great benefit and economical as well.

Nitrogen, Phosphoric Acid and Potash, the three plant food elements applied to soils, in many cases can be secured without recourse to artificial forms. On the heavier types of soils the latter two are generally present in sufficient quantities to mature many crops of fruit, and require but the

previously mentioned influence of cultivation to make them available as plant food for the tree. The supply of the first mentioned (nitrogen) on average soils can be very largely maintained in sufficient quantities by turning under leguminous cover crops, and many growers rely almost wholly on their leguminous cover crops to keep up the supply of this important and expensive plant food.

Artificial fertilizers alone can never maintain the humus supply of the soil, and the supply of this essential soil constituents must be maintained through the use of barnyard manure or cover crops.

Potash and Phosphoric Acid in commercial form are not as soluble as Nitrogen, and consequently may be applied in larger quantities and earlier in the season than Nitrogen, since their effects extend over to the second and even third season. They are best applied at the time of the first cultivation.

In cases when Nitrogen may be necessary in commercial form to increase the vigor of the trees, an application of 150 pounds of Nitrate of Soda per acre is usually sufficient, applied after the trees have started well into growth in spring.

When barnyard manure is available and is used regularly for the orchard, five to ten tons per acre per year is a sufficient quantity to maintain the humus and nitrogen supply in conjunction with cover crops. This is better applied in winter. In the colder districts the smaller quantity should be used in order that the growth of the trees may not be forced unduly and thus increase the risk from winter injury. Peaches may require the larger quantity annually, while apples will require it less frequently.

Practical Hints to Rural Teachers

By R. A. Finn, '15.

MANY teachers in our rural communities will be teaching agriculture and conducting school gardens during the present year. Those who have undertaken this work in former years will find their task a comparatively easy one, but those just beginning frequently ask many questions as to what they shall teach and where they shall teach and where they can get material and information. Most of the teachers received no agricultural training when they attended school. They are usually far away from the closest school taking up this work and have no source of information near at hand.

Two very important factors to my mind in the teaching of agriculture are that it should be very closely related to the everyday life of the child and that there should be a definite end in view. The time to take up the study of army worms, their life history, the damage they do and means of control is when everyone is interested in army worms, i. e., when the crops are being destroyed by them. The pupils go home with the knowledge they have learned at school and take along a bulletin such as, "Insects affecting Vegetables" and show it to their fathers. When need arises they and their father combat the pest successfully. The boy feels that he is a partner in running the farm and the farmer sees that the teaching of agriculture is not a fad, but a sensible and practical subject. This is but an illustration of what is being done in many schools. Where the teaching of agriculture is of a practical nature the farmers are thoroughly in sympathy with it. In conducting a school garden many

difficulties arise. Often the gardens are too large and the teachers have difficulty in planning experiments. Quantity does not count for very much. A small garden well planned where each child has a definite end in view and is wide awake to the numerous changes taking place is worth many times as much as a very large garden less thoroughly planned and known. Every pupil should have a direct object in view. If he is growing potatoes, he should have an aim to see if Early Eureka is a greater yielder than Irish Cobbler or if Brodeaux Mixture will prevent blight or if hilled potatoes give better returns than those on the level. In growing any of the garden plants or grains, material is constantly arising, cabbage worms attack the cabbage, onion maggots destroy the onions, potato beetles the potatoes, smut attacks the grain or the celery becomes blighted. Any one of these things furnishes material for many lessons.

In visiting schools I found just those subjects being taught. The class in a Hastings county school asked me to teach a lesson on the insect that affect cabbage. This was the topic that they had planned to have discussed that Friday afternoon. In fact they had early in the year chosen subjects for every week in the term and discussed them on the allotted day unless they had received material sooner than they expected. The secretary of the "Progress Club" had written the Department of Agriculture at Toronto asking for bulletins on all the subjects they had outlined and the pupils read up the data. They told me nearly all the important facts regarding insects

injurious to cabbage but knew very little about the cabbage maggot. We discussed the subject by first getting its life history. They stated that it came from a fly or it would not be a maggot—which is logical. And since it was in the root they divined that it must have been placed there as an egg by the fly. I told them the egg was deposited under the skin of the very young plant. It grew and ate the root causing the upper part of the plant to die. How are we going to control this pest? I asked. One little boy said spray the plant, but another

the young plant just above the ground and that tar felt paper was used.

Besides the actual teaching of agriculture and conducting a school garden, some schools beautify their school and grounds with flowers, shrubs and trees. Now is the time to make flower boxes and plant slips of houseplants to have them ready to plant out in the borders later in the year. Other schools have instituted a health campaign. They have lessons on physiology and hygiene in class and as practical work carry out the principles learned. They see that the class room is always well



Arbor Day in a York County School.

pointed out that this would be useless, because the spray would not reach the egg since it was inside. A girl ventured that it would be well to put some "sticky stuff" on the plant and catch the fly. I asked them how they would keep flies away from animals. The answer was "By putting on a substance that the flies do not like as tar. But they thought that tar would burn the plant as it does trees. What is it that gives the odor of tar and does not do any harm? One said that it was tar paper. I then showed the class how to make the disc to put around the

ventilated. Each pupil brings his or her own drinking cup. Individual towels have been installed in many schools by the pupils themselves due to a talk by one or two of the girls on the necessity of cleanliness and the transmission of disease by drinking out of the same cup or by wiping on a common towel. Sanitary dusters and dust preventatives to be used when sweeping have been introduced by girls who spoke on the necessity of these things. In most cases the Club does not ask for money to buy these things but each pupil brings a separate

drinking cup or towel, etc. Some schools sell enough produce from their school garden to pay running expenses. One school last year had a hotbed and raised cabbages, tomatoes, celery and cucumber plants which they sold. This netted them sufficient money to buy for each pupil a half dozen eggs of the famous Bred-to-lay Barred Rocks. They sent for bulletins on poultry and read and studied these so that they would know how to feed and care for young chicks, what kind of house was suitable and the number of eggs a good hen should lay.

By writing to the Provincial or Dominion Department of Agriculture many useful bulletins and books can be had. Many bulletins from the Dominion Department are excellently illustrated and suitable as a nucleus for an agricultural library. When the trustees are buying books for the library the teacher should suggest a book on each phase of agricultural work. In the bulletins sent out by the Depart-

ment of Education is a list of the best books on the subject.

By dropping a postcard to the Dominion Department of Agriculture, Publication Branch, Ottawa, such useful bulletins as Sheep Husbandry in Canada, Swine Husbandry, Beef Cattle, Dairying, Agricultural War Book, Potato diseases, etc., can be had free. Every school teaching agriculture should have the following bulletins.

Bulletin 171—Insects Affecting Vegetables.

Bulletin 173—Birds of Ontario.

Bulletin 181—The Teeth and Their Care.

Bulletin 188—Weeds of Ontario.

Bulletin 209—Farm Forestry.

Bulletin 217—Farm Poultry.

Bulletin 225—Swine.

Any of the above can be got free by writing the Department of Agriculture, Toronto. Now is the time to write for these and all others that your pupils or ratepayers are interested in. Do it now.

Co-operation in Advertising

Why You Should Read Advertisements

TIME was when the advertising section of a paper was regarded as a necessary evil. The editor regarded the business manager with about the same feeling of respect that a titled Oxford graduate shows his grocer's clerk. The reader tried to control his impatience as he secretly swore at the Limited Southdown's Company's bargains in underwear sandwiched in between the lines of the article "How to Be Happy Though Married." The advertisements themselves even to an interested business man were about as entertaining as a table of logarithms, as spicy as a page of statistics from a government blue book.

All this has changed until now the advertising columns of a good paper provide as interesting and educative matter as what is called the reading section. Indeed it is no uncommon thing for readers to turn to the advertisements before reading the articles. The best brains of the age are employed in instructing the public about the merits of manufactured goods, in language unexcelled by the post graduate at the editor's desk. Clever artists are engaged to illustrate these announcements and they succeed in making the advertising pages look the most attractive in the paper.

But apart from a comparison of

present day publications with those of several years ago, advertisements deserve attention for other reasons than because they are entertaining and attractive.

You can often find information about a piece of farm machinery for instance, in an advertisement that you cannot learn from a text book. A little paragraph written by an expert in the office of a Building Supply Co., will teach a farmer more about the proper construction of his barns and silos than he could find out for himself in a lifetime, and the most astonishing part of it is that the paper from which he gathered this knowledge cost him probably only ten cents and it took about ten minutes of his time to master it. You almost forgot you possessed a certain article of every day use until one day you saw an advertisement outlining new uses for this insignificant little part of your equipment, or suggesting means of making it perform its original object at less cost and with better results. People can't buy common articles of clothing today without referring to advertisements, and by this I don't mean that they need a wireless service to keep up with the styles, but that it is necessary to read the announcement of manufacturers in order to compare the qualities of different products on the market. So that they may buy to the best advantage.

This is an age of advancement, invention and discovery, and public press

is the best medium for informing the people of the progress that is being made in different lines. There is scarcely an article for man's use that is not being improved or replaced every year. If you do not keep in touch with these improvements you are likely to find that your neighbour has purchased equipment far better than yours and at much less cost because you didn't know about the best article. Advertisements can often show how it would be good business to throw two hundred dollars worth of material in the dump and spend five hundred on new to replace it. The up-to-date equipment might mean the difference between success and failure. Now often you say to your friend who shows you something new. "I never heard of that." Read advertisements and you will know about it as quickly as he. Depend upon it, the brainy men who are studying the products they are offering for sale are turning out information that is invaluable to you. If you are neglecting to read their messages you are missing something that is more of a loss to you than the cost of the advertisement would be to them.

And, by the way, when you answer that ad. don't forget to whisper that you saw it in the *Review*—that won't cost you anything and we will pay you well for it—pay you by giving you a better magazine.

City Chickens

By P. O'D. in *Saturday Night*.

FOR a long time we have wanted to write about urban poultry; but we have been too nervous to start. It may seem to the reader that we are carrying our natural delicacy too far and are becoming almost prudish, but the fact remains that we were afraid to write about city chickens for fear of being misunderstood.

You see, the word "chicken" has acquired ramifications of meaning which have nothing whatever to do with Plymouth Rocks, or Silver Wyandottes, or Buff Cochins, or any of the other standard breeds of hen. It occurred to us, therefore, that if we were to start an article about keeping chickens and dressing chickens and that sort of thing, readers of a precipitous turn of mind might jump to indecorous conclusions.

We hasten to assure the reader that we don't mean that kind of "chicken" at all. In the first place, we don't know anything about them. We are too virtuous—also too poor. It is true that occasionally, when forced by our professional duties to investigate the night-life of great cities, we have seen poultry of this sort gaily cavorting about and—but we are growing prolix. Let it suffice to state that this article is written about the sort of chicken that goes garbed in feathers—hen feathers, we mean, not ostrich plumes.

It is really extraordinary how many people in town keep chickens. The love of things rural seems to die hard in the urban breast. Unable to go out in the early dawn and chew straws while he gazes placidly at his hay field or his hog lot, the city man keeps hens.

First of all he buys a whole library of hen literature. He discovers that there are about seven hundred breeds, and that each one is ideal for his purposes. Finally he buys four hens and a rooster which can trace back their ancestry through two hundred generations or more of aristocratic hendom. No common pullets for the city man who is going in for poultry—nothing but the real blue bloods at about forty dollars apiece.

He has previously built a strictly up-to-date hen house—steam heat, hot and cold water, nursery attached, openwork plumbing, and every modern convenience. If he is a very kind hearted man, he may even put in a gramophone and hang comic pictures on the walls. They say it is very important that hens should be kept in a cheerful state of mind. Personally, we have always had our doubts about a chicken having any mind at all. But that's what the books say, and who are we that we should venture to dispute with a book?

Of course, these chickens don't lay. Purse proud and aristocratic chickens of this sort never do. They have no incentive. Why should they go to the trouble of laying eggs and having a family when they can get everything a hen's heart desires without it? Besides, the late hours they keep tend to a low birth rate.

The owner gets it into his poor numb noodle that the food isn't right. He starts experimenting, and once you start experimenting with hen feed you are headed for bankruptcy and the bug-buggy. The only thing that saves you is that the chickens die in time—

chickens that are fed everything from canary seed to lobster and champagne are apt to die young.

Is the owner discouraged?—usually, no! Ten to one he goes out and buys another half dozen members of the poultry peelage. The only difference is that this time he gets a different family, Brown Leghorns instead of Black Minorcas, for instance. But the result is always the same.

Occasionally, of course, a hen will forget herself and the social exigencies of city life and will lay an egg. Now and then they are even known to have a chicken—in extreme cases, two or three. But families of this unfashionable size are extremely rare. At a moderate estimate—allowing only a reasonable interest on capital invested, hen house, hens, food, etc.—the eggs cost three dollars and a half each, and the chickens six and a quarter. But every time one happens the proud owner goes about for days telling all his friends what a convenience and economy it is to grow your own eggs and spring chickens right there on the premises.

There is something pathetic about the way the moral character of chickens deteriorates in town. We have often wondered, in fact, why the parsons do not draw stern ethical lessons for their sermons from the way decent, well behaved country chickens take to evil courses in large cities.

Time and time again we have seen innocent and energetic young roosters from the farm come into our neighborhood—rather a respectable neighborhood, too, as neighborhoods go—nice, young roosters of good habits, who always got up at the proper time in the morning and went to bed early o' nights and crowed with fidelity and discretion.

And what happened? Why, those roosters wouldn't be exposed to the

pernicious influence of city life for more than a month before they would be staying up all night, crowing at the electric lights and keeping the hens up, too. What becomes of family life under these conditions? What sort of future is there before a hennery where the rooster sleeps all day and the hens sit around and hold mothers' meetings without an egg or a chick in the place?

There is a rooster in our block just now, who has gone absolutely to the demnition bow-wows. We first knew him as a kindly young cockerel from one of the small provincial towns, good humored, honest, and orderly. But you ought to see him now—especially you ought to hear him. The brute shouts his head off every time in the night that an automobile goes by; and he spends his afternoons sitting on the side fence watching the girls in the tight skirts—with the nastiest leer in his eye! We often hear the hens calling him; but what does he care about his family responsibilities?—not a kluck.

The neighbors are all talking about that rooster. They are also shying things at him whenever he gets within range. This brings up another unpleasant feature of keeping hens in town. The neighbors are very apt to be nasty about it. They never seem able to take the same idyllic view of chickens that the owner does—very narrow minded people, neighbors, as a rule.

Even the best behaved fowl are likely to fly over the fence occasionally into a neighbor's yard and dig worms out of the gravel walk or make impromptu salad of his geraniums and young onions. And you have no idea how annoyed the neighbor gets over these little outbreaks of playfulness. Think, too, of the eggs that must result from it. Just imagine, reader, my dear,

an egg with a geranium shell and a flavor of young onion!—or heliotrope and carrot tops!—or burdock and tomato can! The possibilities are unlimited.

This reminds us of a man we knew once who lived back of a brewery. We didn't seek out his acquaintance and make ourself a friend of his just because he lived back of a brewery—it happened that way, that's all. We couldn't very well cut a man just because he lived back of a brewery, could we?

He also kept chickens. We didn't let this interfere with our friendship either. But he had certainly the gosh darndest time with his chickens of anyone we ever knew. There were about fifty of them—three roosters—and they had a nice, roomy hen house with separate beds and great big perches to sit around and talk on, every comfort, in fact.

But did those chickens stay at home and lay eggs and rear large families and attend to the other duties of their station in life? No, they did not. They took to drink. We can hear the reader snort in disgust as he reads this—if he does. The reader no doubt thinks we are lying. Not knowing the sterling honesty of our nature, the reader doubts our word. But fortunately we have court records to back us up; for our friend sued the brewery for damages.

You see, the brewers used to throw out their used malt and the lees of the beer-vats in a huge pile just back of our friends' fence. One day an enterprising young rooster whose moral upbringing had been neglected hopped over the fence and tried some of the malt. It tasted good. Little did he know, poor bird, that he was getting into the clutches of the Demon Rum. He ate fermented malt till he couldn't jam down another grain.

Did it go to his head? Did it—dear reader, that young rooster accumulated the loveliest load of lush, the most beautiful and bountiful "bun" ever seen in that district—and it is a district rather famous for its "buns."

It was long after dark when the young rooster got home—trying to find the key hole, no doubt—and he aroused the whole hennery. He staggered around crowing comic songs, insulted all the most respectable hens in the place, started in to whip the other rooster, and put the whole place on the blink generally.

Our friend was aroused by the uproar, and rushed out, thinking that a rat or a stray dog had got into the hen house. He said that it was the finest representation of a hilarious "jag" in an old ladies' home that he ever saw. But, of course, he didn't know at the time what was wrong with the young rooster. He thought he was sick, and went out next morning and gave him some bread and milk—or whatever it is one gives sick roosters. But the rooster would have none of it. He didn't want bread and milk. What he wanted was some bromo-seltzer or a "Collins."

Was the young rooster enlightened as to the evil of his ways? Did he take the pledge and climb on to the water bucket? Alas, no! What that young rooster did was to fly right back over the fence that very afternoon and tank up once more. Worse still, he brought the other roosters with him.

That night there was another rough house in the hennery—four times rougher than the other for there were four roosters in it. They went in for close harmony in their choral work and also did a little close scrapping. They even tried to whip our friend when he went out to restore order.

Talk about drunkards' homes and

temperance lessons — that hennery would furnish the W.C.T.U. and the Prohibitionists generally with arguments for a five years' campaign. In a few days every chicken in the place had developed a taste and capacity for beer that would have filled half the population of Bavaria with envy. Life for them became just one big "bust" after another.

Instead of hopping cheerfully from bed at the first peep of dawn, those chickens slept in till noon. They didn't care who got the early worm. Then they piled over the fence to the malt pile, and stayed right there till closing time and after in fact, till our friend went over and carried them back. He said it made him feel like a police van on the Twelfth of July.

Nothing could keep those hens away from the booze. Our friend built the fence higher; but they dug a tunnel under it. When he blocked that up, they flew over into the neighbors' yards and got around that way. They would even go out by his front gate and walk around the block, coming staggering back at all hours of the night in a way that would give any house a bad name.

Finally, he sued the brewery for alienating his hens' affections—they only laid one egg in three months, and when our friend tried to eat it it went to his head. But the Judge said that a man who kept hens in town should be shut up somewhere and have his property managed for him.

Agriculture in Algoma

Farming in the district that is Geologically the oldest, and Agriculturally the youngest in Canada

By R. H. Elgie, '16.

TO THE average mind the word "Algoma" conveys the idea of a wilderness of trap rock producing nothing but Christmas trees and woodpeckers. Very little is known of it, what it can produce, or what it can offer to a prospective farmer seeking a location. As a district its great size and resources are not realized.

From the North shore of Lake Huron, it extends north to Albany River, a distance of 450 miles, with an area of over ten million acres. In the basin of the rivers flowing north of the Laurentian plateau is an area of several million acres of as fine farming land as that of Southern Ontario, and in some respects more favored than the dead level stretches of Manitoba. This area is finely adapted for the production of

cereals, vegetables and grasses; for dairying, and the raising of live stock. Lying 1,400 miles nearer the world's great markets than the central prairie provinces, and served by the main railway lines, it also is most excellently situated to distribute its produce economically and to the best advantage. Cultivated in small part, the country meantime is mainly a vast and valuable region of forests, mottled with splendid mineral areas, the home of the lumberman and the lure of the miner.

The soil is for the most part alluvial deposit, with a rich clay subsoil, and a surface of vegetable mould of great depth. The forest growth of the Clay Belt and its thick covering of moss gives to much of the country a swampy

appearance. But it is not really a swamp, as an examination shows. It consists of a few inches of moss, then a considerable depth of muck or mould, which is really decayed vegetation, then an underlying alluvial clay which extends to a great depth, and which constitutes splendid agricultural soil. Interspersed with the level plains are low, wide ridges of drier land on which the decayed vegetation is not so deep, and in some cases has a mixture of fine sand, constituting a sandy loam. There are other areas known as muskegs, which in some places are of considerable extent. These muskegs are very sparsely timbered, and are very wet. Under a deep and loose moss, in which one sinks to the knees, there is a black muck. In a true muskeg this muck is from five to twenty feet in depth, and full of water. If drained this soon dries and is capable of producing most wonderful crops.

This vast territory in relation to climate can only be dealt with imperfectly. Generally speaking the summers are warm, and the winters very cold and dry. Its many lakes and streams moderating and preventing extremes of temperature. The total annual precipitation is nearly the same as in southern Ontario, but is more evenly distributed over the growing season. Drought such as occurred last year in some sections of Ontario did not materially affect Algoma. The growing season is considerably shorter than in old Ontario; but having longer hours of sunlight the crops are correspondingly benefited, and the time of harvest in Northern and Southern Ontario tends to be equalized.

To the settler with very little capital the district affords great prospects. There is plenty of free and cheap land, and in practically all cases the sale

of timber and pulp wood give returns above the cost of the clearing. After the farmer is established he can always find work in the lumber woods for himself and teams.

The farmers as a class are prosperous. Their spirit is more progressive than in older settled parts of the country. The newness of the country develops their initiative and they are willing to take hold and apply up to date methods and ideas, and are not yet hampered by fossilized custom.

The general appearance of farm buildings and fences is probably a little less pretentious than in some parts of older Ontario, but everywhere there is an appearance of thrift.

Their roads are built with the idea of permanency. In remote districts the settler's corduroy roads are giving way to permanent and well constructed highways.

The question of markets has not as yet become a problem, except to the settler in very isolated sections. The city of Sault Ste. Marie, which is served by two railroad lines, and by boat, is a market which has never known a glut in agricultural produce. Added to this market are a number of small towns, and numerous mining and lumber camps, which buy his produce at the highest cash price.

In examining cold facts and figures, gleaned from the latest report of the Ontario Bureau of Industries, we find that the forty-five thousand acres, which are under cultivation in Algoma can compare very favorably with other districts or counties in regard to the yield per acre of many farm crops.

Her average yield per acre of fall wheat is 25.4 bushels. This is 4.5 bushels above the average obtained throughout Ontario for 1914, and is beaten by only one other county.

Hay and clover occupy nearly one

half of the cultivated land, and the price realized per ton is generally very high.

Alfalfa, as yet, has not become a factor in farming, but from the favorable yields from the small acreage sown, it is expected that it will soon occupy a very much larger area than it now does. Many of the stiff clay hills make ideal alfalfa fields when the soil has been limed. Winter heaving and killing is not serious here for the ground is covered with a thick blanket of snow throughout the whole winter.

During the season just past a 12 acre field yielded 10,800 bushels of turnips—that is, 900 bushels, or just 27 tons per acre. This seems to be an instance of exceptional productivity, but it is in no way rare. The average yield over the whole district is 57 bushels above that of the average over Ontario.

The rich clay soils seem to be specially adapted to potato growing. The average yield last year for the 1,200 acres planted was 238 bushels per acre; while Ontario's average was 159 bushels. The motto of the Algoma potato is "Nulli secundus." He is second to none in the number of bushels per acre, in the quality of potato produced, and in the number of varieties grown. The latter fact probably being the reason why his product has not a wider market.

Stock raising is a branch of farming which could be entered into by more farmers than are now engaged in it, which would result in a greater general prosperity. Referring to statistics we find that there are in the district:

- 3,911 Dairy Cattle.
- 5,864 Beef Cattle.
- 8,754 Sheep and Lambs.
- 3,576 Swine.
- 2,952 Horses.

The district is especially adapted for

grazing purposes. There is plenty of free pasture land to be found on burnt over land, and rough land. Alsike grows as a weed everywhere, and when freely mixed with Kentucky and Canadian blue grasses makes good pasture. There are sufficient springs and creeks to furnish an abundance of water. What more could a farmer wish for cheap grazing purposes!

The sheep industry is specially adapted to the rougher sections of the country, and yields good returns. At present we find that there are about 9,000 sheep scattered over the district, whereas, there could be ten times that number economically utilizing waste land. There are no difficulties encountered on account of severe winters because, although cold, the atmosphere is very dry.

Horse raising has received a decided stimulus in the past few years through the importation by private owners and by the government, of pure bred sires of the draft breeds. These sires crossed on the mares found on the farm, are giving good results. In past years the large lumbering concerns brought into the country great numbers of heavy horses. These horses were used in the woods during the winter, and sold in the spring to the farmer, who was able in this manner to procure cheaply the best class of horses raised in Eastern and Central Canada and thus building up a good foundation stock to be crossed with pure bred sires.

The dairy farmer is producing milk under peculiar difficulties. He has to stable his cattle from two to three weeks longer during the winter than the farmer in lower Ontario. He cannot produce the southern Ontario dairyman's mainstay—corn, neither can he produce mangels successfully. Yet the demand for his product and the unlimited market make amends for

any such handicap imposed upon him. When we remember that the dairyman in England substitutes turnips for corn, and still makes a success of it, we see that the Algoma dairyman is not travelling a new road. Summer months are his most profitable season, for there is a constant abundance of pasture.

The beef breeder does not encounter the same difficulties in feeding as does the dairyman, for the land and climate are very well suited to the kinds of crops which he wishes to grow. He does not find it necessary to ship his stock long distances for the home markets have a constant demand, and offer high prices.

An orchard in Algoma! Many would say, just as the small boy said of the giraffe, "There ain't no such thing." St. Josephs Island in the St. Mary's river can, and does produce some of the finest apples to be found this side of the Annapolis Valley, there being practically no scale or insect pests to affect the quality of the fruit. The chief varieties grown are—Transparent, Duchess, Wealthy, and MacIntosh. Crabs are a sure crop and great producers. There are several fruit growing companies which have large areas planted to apples, and more are being planted. One company with 1,600 acres, last year planted 3,000 trees. Another company

planted 2,500 trees, and in all parts of the island the farmers are making money out of their orchards. Our government horticultural experts have made a study of the district, and they are convinced by the results already in evidence, that there are great possibilities in apple orchards on the island.

To the market gardener there are splendid opportunities. One gardener with an acre and a half of strawberries cleared \$1,200 from one season's crop. Most kinds of small vegetables can be grown successfully. Not only is the soil rich and well adapted to truck gardening but there is a large market and a demand so great that the market gardener at the present time can in no way fill it.

Agriculture in this district has been greatly helped by the District Representative of the Department of Agriculture. He has rendered an invaluable service to the farmer. Institute work has been carried on. School gardens and school fairs have been inaugurated and proved a success. Short courses in agriculture have been held during the winter months for the young men, and in many other ways interest has been stimulated in farm life for the betterment of conditions, and for better methods of production in a district which is destined to be a deciding factor in the markets of Ontario.

Bird Protection

By W. P. Shorey, '18.

BIRDS are one of man's most valuable possessions, yet the possession on which he sets the least value. To the great majority of people birds are simply birds and nothing more. They fail to understand that each family is doing a special work and if wholly destroyed, insects will have multiplied to such an extent that trees will be denuded of their foliage, plants will cease to thrive and crops cannot

Thirty or forty rods away from my place the worms are beginning to be destructive, and in other parts of the town they have done a good deal of harm. They have done no appreciable injury on other farms where I have put up nesting boxes in quantities."

The observations of Edward A. Gill Wylie, a New York lawyer, are worthy of note. Speaking also of the army



Nesting Houses on the College Campus.

be raised. This is not fancy but plain fact.

Dr. Edward Howe Forbush, the foremost economic ornithologist of New England, reports August 10, 1914: "I have been looking over the destructive work of the army worm in this state. While the worms have been quite destructive in Wareham, Mas., they have done no harm at all on my farm. I have taken extra pains this year to attract the birds and they have eaten a great many of the worms.

worm pest he writes, "A horde of these pests suddenly came to light on a small place of about four acres. Immediately the birds of the neighborhood deserted their usual haunts and assembled on these grounds. I personally counted sixty-three Robins, Thrushes, Catbirds and Meadowlarks at one time on a little square of lawn about 120 feet by 60 feet. At another time during the plague he watched a family of House Wrens feeding their young. He said, "I counted twelve trips in ten minutes

to the nest with food, always army worms."

Dr. Forbush, in his book entitled "Useful Birds" maintains that insect pests destroy agricultural products to the value of \$800,000,000 a year in the United States. Locusts, army worms and chinch bugs, unless checked soon become countless hordes devastating wide areas of the earth's surface. It is to be remembered that insects live to eat. Some of them increase their size 10,000 times in 30 days. All birds eat and most of them eat most of the time. Mr. Forbush estimates that a single yellow throated warbler will consume 10,000 aphids or tree lice in a day. Scarlet tanagers have been seen to eat 35 gipsy moths a minute for 18 minutes at a time.

More than fifty kinds of birds feed upon different varieties of caterpillars, thirty-eight varieties are known to feed upon devastating plant lice. Beetles cutworms, grubs, borers, locusts, grasshoppers, crickets, in fact most of the injurious insects are food for a very great majority of the different kinds of birds.

The serious consequences of bird destruction are shown in the Annual Report of the Smithsonian Institution of 1913:

"During the year 1861, the harvests of France were unusually poor. Upon investigation the cause was attributed to the ravages of insects which certain birds were supposed to hold in check. These birds, it appeared, had been shot, snared and trapped throughout the country in such numbers that little repressive influence had been exerted upon the insects. A commission called for prompt and energetic remedies, to prevent the destruction of birds.

"In 1892, Australia was afflicted with incursions of immense clouds of locusts. Just as it was feared that all

the sheep would have to be sold for want of grass, starlings, spoon-bills and cranes made their appearance and in a few days made so complete a destruction of the locusts that but a few acres of grass were lost."

In the Union of South Africa it is found that near towns, where the birds have been persecuted and driven away, the growing of fruit and other market produce has become increasingly difficult or even impossible owing to the prevalence of insect pests.

The destructive habits of the small rodents, which are the natural prey of hawks and owls, are much the same all the world over. They do an incalculable amount of damage to corn, grain, root crops, to orchards and forest trees, to the roots of clover and other grasses, to ground growing fruit and to gardens both flower and vegetable.

In Montana the destruction of hawks and owls was so complete that rodents, freed from the pressure of their natural check, became a perfect plague. Nevada, Utah, Wyoming, California and the eastern provinces of Canada have all had occasion to bitterly rue the day they shot their hawks and owls.

Game birds, generally, are the greatest eaters of weed seeds. The quail is perhaps the greatest of these weed destroying birds. The U. S. Biological Survey estimates that four quail to every square mile of land would consume 1,341 tons of harmful weed seeds from April to September in the states of Virginia and North Carolina.

All the foregoing evidence goes to demonstrate the existence of a natural economic relation between the orders of life. There is a sort of interdependence and the existence of each one is dependent upon the existence of the others. But for the vegetation the insects would perish and but for the

insects the birds would perish and but for the birds the vegetation would be utterly destroyed by the unchecked increase of insect destroyers.

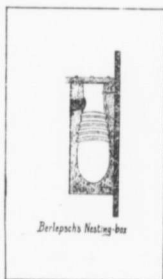
Thus far we have considered purely the economic relation of birds to the farm. Literature is full of references to birds. Nuttall says, "Of all the classes of animals by which we are surrounded in the ample field of nature, there are none more remarkable than the feathered inhabitants of the air. They play around us like fairy spirits, elude approach in an element which defies our pursuit, soar out of sight in the yielding sky, journey over our heads in marshalled ranks, dart like meteors in the sunshine of summer or seeking the recesses of the forest and the waters, they glide before us like beings of fancy."

Not many birds exist which are not in some way beneficial to our agriculture. Notable exceptions are the sharp shinned hawk and the great horned owl, which species all farmers and sportsmen should learn to distinguish. The obnoxious character of the English sparrow is also widely recognized. Its diet is almost exclusively vegetable, consisting of weed seeds and grain, yet the damage to grain far overbalances the benefit of weed seed destruction. In conjunction with this fact they are also a hindrance to the increase of our native birds. Crows are generally conceded to be a nuisance, also the jay. The robin, though a lover of cherries feeds largely on the white grub, cut worms, grasshoppers, March flies and ground beetles. Who can point a loaded gun at him and say, "He is not worthy of life?"

It is the duty and should be the pleasure of every citizen to do all in his power to protect these valuable creatures and to encourage them to remain about our homes. When

we consider the number of enemies the birds have to contend with, we often wonder that they thrive as well as they do. In order of importance their enemies rank as follows: man, the elements, accidents, cats, squirrels and other animals, birds of prey and snakes. We cannot eliminate all of these but let us do what we can to provide against them.

Baron Von Berlepsch is called the father of modern scientific bird conservation. He has equipped his large estate at Seebach as an experimental station for bird protection. His methods of feeding, his skill in imitating the natural holes found in old trees that birds use for nesting purposes, his clever way of making birds that nest in the grass, bushes, thickets, tall trees, dead trees, clay banks, etc., feel at home are copied by many other landowners. This wisdom of protection has been thoroughly proved, for at times when adjoining estates were ruined by insect pests, his own were fresh and unharmed.



Berlepsch's Nesting box

The most important factor in protecting birds is to supply cover suitable for their wants. This may be done either by leaving natural undergrowth, thickets, hedges, bushes, thorns, stacks of brushwood or by planting evergreens at convenient

places. Growing food producing plants vines and trees is also a wise provision. By using such plants as the mountain ash, mullberry, shadbush, Virginia creeper, elder, buckthorn, pinchberry, etc., a continuous supply of food is provided for the different seasons. Buckwheat, millet, hemp and sunflowers may also be grown to advantage and left uncut over winter, supplying both food and shelter.

A considerable number of our native birds build their nests on the ground, but the majority place them in trees or shrubs, either in holes, on the limbs, or in crotches. Shrubby and trees for nesting sites therefore, are essential for attracting these birds. Shrubs should be allowed to form thickets and should be pruned back severely when young so as to produce numerous crotches. To protect ground-nesting birds such as bobolinks, meadowlarks and bobwhites, grass in the nesting fields should not be cut during the breeding season. Where natural cavities for our hole-nesting birds are not to be had, artificial nesting sites should be provided. These nesting boxes may be of various designs but must conform to the birds' taste and adaptation. When properly placed and the entrance sufficiently guarded the birds readily lodge in them. The Berlepsch nesting box, used by wood-peckers, is one of the most satisfactory forms of artificial nests. Bluebirds and wrens respond very quickly to artificial sites about our homes. Martins, chickadees, the Crested Flycatcher, Free Sparrows and Screech Owls are also not adverse to ready-made nests.

Food supply is the vital factor in bird life and the most important single offering we can make in our efforts to attract birds. Winter birds often fare very badly. During the winter season chickadees, nut-hatches and woodpeckers are easily attracted by suet tied to the branches of trees. Seed eating birds such as the junco and tree-sparrows are very fond of birdseed, buckwheat, crackers, crumbs, cracked corn, broken dog biscuit, hemp seed, millet, nuts, raw or boiled rice, sunflower seeds and wheat. There are many different systems of feeding—from the cleared open space to the sheltered food house.

A start was made at the O. A. C. last fall for the winter feeding of birds. Grains were fed in the food houses erected at convenient places for the seed eating birds while suet in in mesh bags, suspended from the tree limbs, supplied food for the insect eaters. The sparrows proved a pest in the first instance but chickadees made ample use of the suet in the bags. A robin also wintered with us and added interest to our winter friends. Provision is also being made for nesting sites during the coming summer.

There is urgent need for increased interest in bird protection and no classes of people are more intimately concerned than are our agriculturists and horticulturists. It should be apparent to any thoughtful person that modern agriculture is much more favorable to insect life than to bird life and that, with few exceptions, nothing but good could come from a movement to conserve and protect our vanishing bird population.

The Breeders' Problem

By J. F. Francis, '15.

FARMERS who give proper attention to their poultry are the exception and not the rule. The average farmer mixes varieties indiscriminately, and exercises little or no judgment in the selection of breeding stock. The ordinary farm flock stands as a lesson in degeneracy of live stock, because of neglect and careless selection.

This situation is, however, rapidly changing, and a large number of farmers throughout the country, have concluded, that poultry, properly cared for, pays.

Experiments have proven conclusively that the various qualities or characters of every individual are inherited, each separately, and in a special way peculiar to itself. It is, therefore, the "Breeders' Problem" to provide each individual with the conditions necessary for its highest development, by supplying clean, fresh, wholesome food and clean, fresh quarters to live in, to dispose of all stunted and diseased stock, and select only strong vigorous individuals for breeding purposes. He should try to combine as many of the desirable qualities in each individual as possible, in order to establish a high standard which is with difficulty maintained. The keynote of success in poultry is to use as breeders a second time, only females which show a high record of performance in respect to egg-production; strong vitality of their chicks, whether in the egg or out of it, and never overlook early maturity.

The practice of continued crossing of breeds is, from a breeder's view-point, a failure. Not only does it tend to weaken constitutional vigor, but the

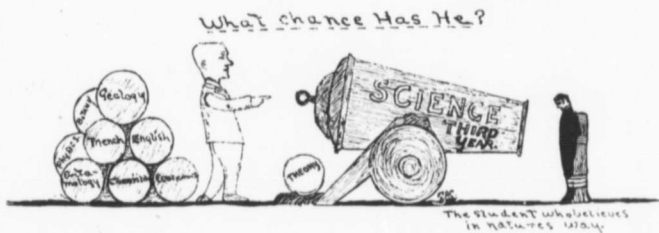
variations of type are so great that no uniformity can be secured. The truth of this last statement has been proven by the writer to his own satisfaction, by experiments recently conducted along this line. Two pure breeds of poultry were cross-bred and the results carefully noted. In the first generation a fairly uniform lot, with strong constitutions were produced, but when these were bred together the following year, they produced a generation which was very variable as regards size, type and constitutional vigor, ranging all the way from the most desirable to the most undesirable specimens. The next year the strongest and best of these were again bred together, and produced a generation much similar to those of the previous year, but at a greater expense, as the mortality among the young chicks was considerably higher. The writer is therefore of the opinion, that vigor is inherited in a definite way, which resembles very closely the Mendelian separation. This may even be the case in breeding pure bred stock of different lines or strains together. At any rate it shows that constitutional vigor is one of the most important factors to be considered in selective breeding.

Some of the most successful poultrymen as well as stockmen, practice a system of in-breeding to various degrees of intensity, in order to approach more closely the standard of excellence of that breed. In this way the chances for the appearance of undesirable qualities in the offspring, which may be characteristic of other lines or strains are overcome. Since in-breeding in-

tensifies characters whether good or bad it can be plainly seen that the animals or birds used in a system of this kind, must approach very closely those of perfect specimens. As a result of the intensifying of characters, this system is not to be recommended to the unpracticed eye of the person who is not very well acquainted with his stock, and has not had experience in the mating of those individuals which are best suited to each other, referring especially to conformation and constitution.

With reference to egg production it might here be well to correct a too often mistaken idea. Many people believe that if they can procure eggs for hatching from hens which are high producers they will get pullets which will perform in a similar manner.

That is to say, will a 200 egg hen produce pullets which will lay 200 eggs in her pullet year regardless of the kind of male to which she was mated? This, however, is not the case. Egg production is what is termed by investigators and those associated with breeding principles a "Sex-linked character," that is the capacity to transmit high laying power from female to female is limited to the male sex only. The female can transmit this quality to her her sons only, who in turn can transmit it to his daughters. It is not transmitted from mother to daughter as is generally supposed. Thus we see the importance of choosing strong, vigorous, male birds which are from high producing hens, to head the breeding flock.



THE O. A. C. REVIEW

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Editorial

THE SPRING ROBIN

WE SAW the first Spring Robin. Without doubt it was a robin and we were the first to see it. We had the necessary witnesses, were perfectly sane and sober because we saw only one, and can even yet remember distinctly the time and place where we saw it—on January 8th, on the College Campus. However, we have said nothing of it hitherto for fear we should injure our reputation, or should not be believed even when telling the whole truth. But, "truth is stranger than fiction."

This is our point. This aforementioned robin remained here all winter as a result of some experimental work being done at the college. A few nesting houses have been put up and birds induced to feed during the winter.

Of course, the work has only been started and marked results could not as yet be expected. But work along this line has been carried on elsewhere and proved successful. The benefits to agriculture from destruction of injurious insects and noxious weed seeds can scarcely be estimated. Certainly it far exceeds the injuries caused

by birds. Systematic experiments in feeding migratory birds and inducing birds of beneficial habits to remain on agricultural land if carried on over extended areas, simultaneously, could not fail to be advantageous as well as most instructive.

An article appears in this issue which gives an outline of the work being carried on at this college and in other countries.

HAVING EYES, WE SEE NOT.

The foregoing paragraphs lead us to think that there is much going on in and about the several departments of this institution of real interest to all of us which we know nothing about. We may enter as freshmen pass through the entire four-year course and yet gain only a smattering of knowledge of the real work being done along investigational lines.

It is true our college lives are very, very full as it is. Sport and recreation take up much of our time—indeed civilization has come to think these necessary in no small amount to give the all-round education. But a mature student of the upper years will

agree that we miss much that we should get for what after we have it amounts to nothing.

But when we come to decide just how to proceed to remodel our course so that we shall have the paramount interests in a college course it is another matter and quite beyond us.

PAYING THE PRICE

The student enrolment for this year is about 390. Of that number 47 men who registered in all years of the general course last autumn have enlisted in answer to the call to fight for King and Country. 30 have left for Montreal to join the University Corps. Others are going. That is the price we are paying, for what?

There may be a tendency to look too lightly upon the responsibilities resting

upon the man who does not enlist. His duty is just as clearly defined as that of the man on the firing line. And while we sincerely hope the day is not far distant when we shall welcome back every one of our boys who have enlisted, we must give due credit to those who labor at home.

This is a time when every individual must justify his existence.

Our next number will be the graduates' number. The other issues during the summer will be prepared under the disadvantage of a greatly reduced staff. We take this opportunity of thanking the several members of the staff and contributors who have so kindly assisted us during the past year. We hope for a continuance of that favor during the summer months.



The following rhyme, which won a prize of ten shillings in a competition inaugurated by an Old Country paper for the best answer to the question, "What would Bobby Burns have said about the Kaiser?" was written by Mrs. D. Campbell, of Melrose, Scotland. 'Tis a pithy bit of verse and one might well imagine the Scottish bard so expressing himself had he been living under present circumstances:

*"Deil tak' yer ugly squirmin' face,
Great savage of the sausage race.
Sune may yer carcass find a place
In some auld midden."*

Athletics

BASEBALL

THE First Team were unfortunate during the past season in that they were unable to get into any league. The City League had to be abandoned on account of the war and there was no other suitable league in which to enter. And we had a mighty good team, too. During the season they played two exhibition games, one on March 2nd, in the College gym against Brantford Y.M.C.A., and a return game in Brantford on March 11th. Our boys won the first game 13 to 6, and the return match 18 to 2. It was just enough to show that Capt. Rowland's bunch were pretty smooth. At Brantford the elongated "Windy" handed them over the plate in just such a way that the Brantford boys did some very poor hitting. Next year's outlook is good despite the fact that some of our best players are being graduated this year. The Fourth year won the Inter-year Championship. The regular schedule could not be finished but "Fifteen" had already secured first place. Taken altogether, they were probably as good a year team as the College has seen for quite a while.

BASKETBALL

O. A. C. vs. Varsity II., at Hamilton:

By winning from Varsity II. in Toronto on February 26, our team tied Varsity for the district and the play off game was held in Hamilton on March 6. O.A.C. was at full strength and the game was remarkably fast and clean. Our boys led right up till the last few minutes of play when by

a couple of lucky long shots Varsity pulled even. Our boys covered closely and checked hard with the result that Varsity got two fouls which put them in the lead. The final score was 33 to 27, and with it went O.A.C.'s hope of going farther in the district.

O.A.C. lineup was: Forwards, Munro, Wilson; Center, Culham; Guards, Neff, Baker; Spares, Forman, Rowland, Bonham.

In the Inter-year games considerable excitement was aroused. The First year won from the Second 31 to 26, and the Third won from the Fourth 26-11, and then the First and Third played off. The Freshmen were dead sure while the Third year felt that perhaps they would win—in fact, they felt sure the Freshmen would get a surprise. The game was fast, clean, and open and the end of the first half saw the score 17 to 5 in favor of the Freshmen and the Third year thermometers registering zero. But in the second half the latter came back and the margin grew less and less. The Freshmen could not seem to get going while the Third Year were getting better all the time. However, when the gong sounded the score stood 20 to 16 for the First Year. It was their second inter-year championship of the season and their joy was well marked. The Freshmen are to be congratulated.

HOCKEY

At the finish of the Inter-collegiate games the Inter-year games were held. Here again the Freshmen gave the sur-

prise by annexing the championship. But they did more. To express their happiness they held a little informal parade. Macdonald Hall was included, with the result that there was a great fluttering among the Macites. The First Year won from the Second by a score of 3 to 2, the Third won from Fourth by a score of 2 to 1 and then the First and Third played off. The teams were very evenly matched and it was "nip and tuck." In the first period the Third year had a little the advantage and "Porky" Bryden was bombarded in great fashion but only allowed one to get by. Not long after the Freshmen punctured the net behind Curran and evened the score. The play was fast and checking was not of the affectionate type, several men on both teams taking enforced rests. They did everything but score. In the last few minutes of play, Leach was badly hurt and had to retire. Time ended with the score 1 to 1. Ten minutes overtime was decided upon and in the last three minutes of this, the Freshmen scored. It was a great game and great hockey. The rooting was terrific because everybody yelled whether they wanted to or not. Mr. Iveson was an efficient referee.

INDOOR MEET

On March 4th, the annual Indoor Meet was held. One record was broken by the Freshmen, that of the Inter-year Relay. Competition was exceptionally keen, the First Year especially surprising everybody by the way they went after points. The Sophomores won the meet but it was a close shave, for the Freshmen were right at their heels. "Young Husky" Evans, '17, was grand champion, with 23 points.

The following are the results:

Pole Vault—Evans '17, Cowan '17, Shaw '16—8 feet 5¼ inches.

Rope Vault—Cowan '17, Michael '18, McEwan '18—10 feet 6¼ inches.

Fence Vault—Gregory '17, Matheson '18, Varey '16—6 feet 2 inches.

Standing Broad Jump—Smith '15, Evans '17, McGregor '18—9 feet 8 inches.

Standing Hop, Step, and Jump—Evans '17, Wallace '18, Smith '15—27 feet 7 inches.

Three Standing Jumps—Evans '17, Smith '15, Graham '17—27 feet 8 inches.

Standing High Jump—McGregor '18, Graham '17, Cowan '17—4 feet 6¼ inches.

Running High Jump—Winslow '15, Matheson '18, McGregor '18—

Putting Shot—McGregor '18, Hanlan '17, Shaw '16—38 feet 2 inches.

Hitch and Kick—Evans '17, Hockey '17, Michael '18—8 feet 5½ inches.

15 yard Dash—Newton '18, Welton '16, Delaplante '18—2 2-5 seconds.

60 yard Potato Race—Clark '16, Davis '18, Wallace '18—15 4-5 seconds.

440 yard Potato Race—Newton '18, Wallace '18, Wilson '16—1 minute 42 seconds.

Inter-year Relay—Year '18, Year '16—

Chinning Bar—Young '16, Runnals '17, Anderson '17—20 times.

Running High Dive—Delehay '17, Delaplante '18, Copeland '18—5 feet ¾ inches.

Rope Climb—Matheson '18, Cowan '17, Mann '17—11 4-5 seconds.

TOTAL POINTS

1st Year with 61 points.

2nd Year with 58 points.

3rd Year with 20 points.

4th Year with 14 points.

GRAND CHAMPION—O. C. Evans '17 with 23 points.

BOXING AND WRESTLING

The annual Boxing and Wrestling tournament was held on March 6th. The wrestling bouts were keenly contested and showed plainly that there are some mighty good wrestlers in our midst. The boxing was good but there was not enough of it.

Mills '17 outpointed Walsh '16 in the featherweight class and Romyn '16 won from Agar '17 in the lightweight. This was a good bout, both men giving a good exhibition and the decision was close. In the finals of the welter weight, Smedley '18 won from McCulloch '16. McCulloch showed better form and better style but Smedley had it on him in condition and also had a defence that was hard to break. They had to go an extra round to satisfy the judges but before it was over McCulloch was out of wind and had to quit. In the middle weight Jakes '18 won from Thompson '17 on a foul. Tounsley '15 won the heavyweight as he was the only entry.

In the wrestling bouts there was more competition and some of the bouts were splendid exhibitions. Runnals '17 won the featherweight and Carncross '16 the lightweight. There was only one bout in the featherweights but five

were entered in the lightweight, Slack and Carncross wrestling in the final. In the welterweight there were only two entered, Scott '18 and Carncross '16, the former winning the bout by securing a fall in about six minutes. In the middleweights, Clare '18 and Brown '18 gave a good exhibition, Clare proving the stronger man of the two and winning this class. But it was in the heavyweights that the spectators got the treat. All the old warhorses, Bill Young '16, Dempsey '17, Husky Evans '17, A. G. Brown '18, Scott '18 and Clare '18, were lined up and the way necks were twisted and half-nelsons manipulated would scare Gotch or Hackenschmidt. Husky Evans and Clare gave probably the best bout. "Husky" was a little the stronger but Clare had the condition and in the end it was this that gave him the decision. Scott and Clare wrestled for the final and it was the best exhibition of science of the afternoon. Scott was the lighter, coming up from the welters, and this lack of weight lost him the bout.

One thing was noticeable and that was the fact that O.A.C. has some good material and next year at the Inter-Faculty tournament in Toronto a few of the horny-handed sons of Mother Earth may be heard from.

College Life

LITERARY SOCIETY NOTES

THE last meeting of the Union Literary Society on March 6th was something new. The feature of the evening was an impromptu debate between representatives of the Senior and Sophomore years. Those taking part were given their subject and their side about an hour before the meeting and certainly deserved credit for the manner in which they conducted the debate.

Resolved: "That self-made men have done more for humanity than men who have inherited wealth and position." was the subject, Messrs A. E. Springstead, C. H. Curry and G. L. Smith of the Sophomore year taking the affirmative, while Messrs. A. Cory, R. B. Hinman and W. J. Bell upheld the negative. The judges gave the decision to the negative.

A piano duet by Misses Horning and Widdefield, solos by Miss McIlquham and Mr. W. Walker, and several selections by the College Orchestra were much appreciated by the audience.

A week later the annual clash between representatives of Macdonald Hall and the Alpha Literary Society took place. This debate was not impromptu as was evidenced by the carefully prepared speeches of the debaters. The resolution read—Resolved: "That the truth should always be spoken." Messrs R. J. Skelton and D. M. McLennan upheld the cause of truth and honesty, while Misses M. Williams and E. G. Dickenson contended that there were exceptions to the "Golden Rule."

So ably did the Macdonald girls contend for their few exceptions that the judges, who up to this time have been considered stern upholders of

truth, decided that the interests of humanity could be best served by a slight deviation from the straight path of truth.

The meeting was an enjoyable one and the committee were ably assisted by Misses M. Johnstone, C. T. Black and Messrs. Patton, Sproule, Parsons, Brownlee and Black.

This meeting closes the series of meetings of the Literary Societies for this term. From now on the students on both sides of the campus will bend every effort towards passing the inevitable examinations at the end of the term.

ELECTIONS

The semi-Annual elections were held on March 20th. The results were:

REVIEW

<i>Associate Editor</i>	- - -	J. C. Neale
<i>Agriculture</i>	- - -	D. M. McLennan
<i>Horticulture</i>	- - -	C. C. Duncan
<i>Experimental</i>	- - -	T. Morse
<i>Poultry</i>	- - -	W. Strong
<i>Query</i>	- - -	C. N. Graham
<i>Alumni</i>	- - -	H. H. Selwyn
<i>College Life</i>	- - -	C. M. Nixon
<i>Locals</i>	- - -	E. T. Chesley
<i>Artist</i>	- - -	D. A. McArthur

Y.M.C.A.

Treasurer - - - L. W. McKillican

LITERARY SOCIETY

<i>Hon. President</i>	-	Prof. R. Harcourt
<i>President</i>	- -	W. P. Macdonald
<i>Treasurer</i>	- - -	M. C. McPhail
<i>Secretary</i>	- - -	N. Marshall

Our Boys enlisting in the University

Corps were entertained in the Dining Hall on March 24th. About twenty-eight have enlisted but as some had gone home, they could not all be present. Dr. Creelman and the officers of the College Company were present and speeches were given by Dr. Creelman and Prof. W. H. Day. Toasts were drunk to the King and to "Our Boys" who have enlisted for the defence of home and country.

They left on Thursday morning for Montreal where they go into training before going to the front, and were given a hearty send-off by the students who marched down in a body. Our best wishes go with them and we hope to soon see them back to finish their College course.

JUNIOR'S BANQUET

To show their spirit of hopefulness and optimism, the members of '16 held

a banquet in the Royal Canadian Cafe on April 1st.

After all had done justice to the menu a short program of toasts and speeches was indulged in. Hon. President S. H. Gandier acted as toastmaster. Toasts were drunk to the King, Local Heroes, Our Year, the Ladies, The Faculty, Our Additions and Subtractions, and Kitchener and Our Boys.

Those responding were Messrs. Faucher, Welton, McDermott, Romyn, McCulloch, Coughlin, Hogan and Jones

"Come fill the cup and in the fire of Spring,

Your winter garments of repentance fling;

Exams. may come, in sooth they come apace,

But '16 meets them with a brazen face."

Alumni

*"Go from the East to the West, as the sun and stars direct thee—
Go with the girdle of man, go and encompass the earth."*

—ARTHUR HUGH CLOUGH.

W. R. REEK, B.S.A.:

W. R. Reek graduated from this College in 1910, after which he acted as Demonstrator in the Physic Department until the fall of 1911. He was then appointed and acted as Private Secretary to Dr. C. C. James, who was then Deputy Minister of Agriculture for Ontario. Later, Mr. Reek was sent to England as a Representative of the Dominion Government in connection with the Department of Immigration, with his headquarters in London.

In 1913, he returned to Canada to

fill the vacancy occurring through the resignation of Mr. R. W. Wade, as Associate Professor in the Animal Husbandry Department of this College. In this position, Mr. Reek readily showed how to combine the qualifications of a Live Stock Judge with the ability to explain in an interesting manner the details of this branch of Animal Husbandry. In this respect, Mr. Reek has come up the necessary standard as an efficient staff instructor.

In all student activities he has shown a keen interest, every where he has demonstrated his cosmopolitan training and practical nature. This enthusiastic spirit has gained for him a large place in the hearts of the students. *The Review* on behalf of the students, desires to take this opportunity to wish Mr. Reek every success in his

new work as Agricultural Advisor for the Province of Prince Edward Island.

A. LEITCH, B.S.A.:

Mr. Leitch has recently been appointed as Superintendent of the College Farm, his past experiences in similar positions should be extremely valuable in helping to maintain the efficient standard of work carried on by this department of the College in the past.

"Archie," when at College, was an active student both in sport and study, as his college records will readily show. He graduated in 1905, as a Live Stock Specialist, his first position after graduation was as Farm Superintendent of the Mimico Industrial School. Here he remained for one year, then accepting the position in a similar capacity on the Rathbun Lumber Company's Farm at Deseronto. Later, he acted as Superintendent of McCleans Dairy Farm, East Toronto, until 1909, when he accepted the post of Associate Professorship of Animal Husbandry and Superintendency of the Dairy Farm at the Iowa State Agricultural College located at Ames; he remained here for one year. For the next three years, Mr. Leitch had charge of the Pure Bred Herd of Holsteins of the Hamilton Farms', situated at St. Catharines, Ontario. As a specialist in Dairy Cattle and Farm Management, we have in the person of our new Farm Superintendent a man of capabilities, with vast experience and broad training, who deserves every success we can wish for him.

F. A. CLOWES, B.S.A.:

F. A. Clowes, '08, has been successfully carrying on the work of the Hawaii Agricultural Experimental Sta-

tion and Sub-stations, since their inauguration in 1911. He has his headquarters at Mountain View P. O., Hawaii. He expects to obtain a year's leave of absence to take up the studies and work required for a Master's degree at the University of California Berkeley, Cal.

Orloff Mallory of class '14, is now employed by the Dominion Government in the Department of Marine and Fisheries at Parry Sound.

His work consists mainly of attending to the stores for the Government boats, light houses and light ships on the Great Lakes and on some of the inland lakes; however, he finds some spare time to indulge in "light farming" by keeping poultry and bees.

E. Newlin Brown, of class '10, is dairy farming in the States at Pineville, Pa. He is specializing in Pure-Bred Stock, Dairy Cattle, Berkshire hogs and White Plymouth Rock poultry.

G. F. Kingsmill, B.S.A., '14, is assisting Mr. Morley Petit on the Agriculture Department of the College.

A report has just come to hand of the marriage of J. G. Gamage, of class '16, to Miss Jean Galbraith, both of London, Ontario. The knot was tied at Detroit early in the year, the happy couple have since returned to London and are now residing with the groom's parents, carrying on a Florist's business in that town.

Class '16, and the *Review*, extend their hearty congratulations to Mr. Gamage and his wife, which is more especially emphasized as he is the

first member of the original class '16 to enter the matrimonial maze.

WINNIPEG O.A.C. BOYS' ASSOCIATION.

"For Auld Lang Syne."

Bound by fraternizing instincts inherent in those having come under the spell of the Ontario institution, the Winnipeg O.A.C. Boys welcomed Dr. G. C. Creelman, on March 1st, in the Western Metropolis. It was merely an informal luncheon and smoker, where all freely rehearsed reminiscences and where Dr. Creelman gave a very entertaining and informal talk concerning various phases of his work, chiefly pertaining to the O.A.C. Advantage of this appropriate occasion was taken to form a Winnipeg O.A.C. Men's Club, in which J. A. Hand was elected President and A. A. Toole, secretary. It is hoped that many such informal meetings will be held during the year in welcoming to the City professors and other individuals intimately associated with the mother Agricultural College.

The members represented on this occasion were as follows:

Harris McFayden, '05, Mgr. McFayden Seed Co.

I. B. Henderson, '11, Editor, Country Life in Canada.

M. C. Herner, '11, Prof. of Poultry, M. A. C.

J. A. Hand, '05, Mgr. Publicity Department, Grain Growers' Grain Co.

R. G. Thomson, '11, Editor, Farmer's Advocate, Winnipeg.

L. D. Jackson, Chief Chemist, Western Canada Flour Mills.

F. W. Broderick, '05, Prof. of Horticulture, M. A. C.

J. M. Brown, '14, Lecturer in Animal Husbandry, M. A. C.

J. E. Bergy, '14, Lecturer in Poultry, M. A. C.

W. W. Emerson, '12, Advertising Manager, Farmer's Advocate, Winnipeg.

V. W. Jackson, '—, Prof. of Botany, M. A. C.

E. A. Weir, '12, Advertising Manager Farm & Ranch Review, Calgary.

A. A. Toole, '12, Live Stock Editor, Farmer's Advocate, Winnipeg.

Walter (Rusty) Campbell, of class '12, is now in Liverpool, serving with the 30th Battalion, which left Victoria, B.C., in February. He had, previous to enlisting, been employed by the B. C. Government as a fire ranger and timber cruiser in the interior of the Province.

G. Garlick, '16, Signaller on the 4th Brigade, of the Ammunition Column, C. F. A., C. E. F. at Toronto.

S. N. Lord, '16, Hospital Orderly, 34th Battalion, C. E. F., at Guelph.

E. C. Hessel, '16, Lieutenant, 33rd Battalion, C. E. F., at London.

C. R. Arnold, '17, Provisional Lieutenant, C. E. F., at London.

G. A. Wearne, '17, in training with Infantry Regiment at Toronto.

L. V. Coldwell, '17, enlisted in England with the Territorials.

Stanley Thompson, of '16, Signaller on the 4th Brigade, C. F. A., C. E. F., at Toronto.

W. A. Townsley, '15, Lieutenant, with the 16th Battery, C. F. A., C. E. F., at Guelph.

The following is a list of all men who have enlisted with the University Company at Montreal:

A. G. Bagsley, '17, H. A. Beattie '15,

C. A. Bradley '17, G. F. Brooks '18,
 H. F. Christie '18, N. A. Dickson '18,
 N. D. Dow '16, E. R. Donaldson '18,
 R. W. Donaldson '15, P. H. Ferguson
 '16, J. E. Fitzgerald '16, C. I. Forman
 '17, H. C. Hockett '16, M. W. Jones
 '16, M. D. Jordan '18, W. M. Kedey
 '15, W. B. Leach '18, R. M. Lewis '16,
 M. E. McGuire '17, Robt. Murray '16,
 H. W. Pearson '18, D. G. Read '18,
 C. E. Sanderson '18, J. C. Shipton '15,
 Geo. Smedley '18, J. A. Steele '16,
 J. G. K. Stones '18, B. W. Ware '18.

E. W. Hart '15, and G. S. Peren '15,

have joined the Canadian Field Artillery at Toronto. Andrew Cory, '15, has been appointed Lieutenant Instructor on the Staff of the Artillery School at Kingston, Ontario.

*"One who never turned his back but
 marched breast forward,
 Never doubted Clouds would break,
 Never dreamed, though right were
 worsted, wrong would triumph,
 Held we fall to rise, are baffled to fight
 better, sleep to wake.*

—BROWNING.

Macdonald

Macdonald Hall was the scene of a gay time Saturday evening March 20, when the Homemakers Class and Short Course Classes entertained the Mac girls at a Fancy dress party. Prizes were given for the best costumes, the winners being Miss K. Kennedy and Miss K. Schwinger.

Y. W. C. A. REPORT 1914-1915

ON THE first Saturday evening of the fall term the Y. W. C. A. entertained both the new and the old girls at a most enjoyable promenade. The first Sunday evening meeting took the form of a song service. Since then the meetings have been held regularly with an average attendance of 56. The gymnasium has been made attractive with flowers and a bright fire and the musical selections have been a most enjoyable feature of each meeting. During the first term, the speakers were other than our own members and included Dr. Ross, Professor Reynolds, Professor Harcourt, Mr.

McLaren, Mrs. Goldie and Mrs. McCrae of the city and Dr. Benson and Miss Wrong of Toronto.

A Red Cross Branch of our society was organized early in the term, a report of which was made out by Miss Lay, the leader of that department.

At the regular Hallowe'en Dance the Y. W. C. A. and Y. M. C. A. Executives carried out a most entertaining program of games and contests in the Drawing Room and Library.

In November, the "World's Week of Prayer" was observed by special meetings conducted by the girls each morning in the Hall, and in a more formal manner at Roll-call.

During the second term, the meetings have for the most part, been conducted entirely by the different classes in turn, and some splendid papers have been read by our own members. We have, however, had the pleasure of hearing several speakers from outside, including Miss Wrong of Toronto, Miss Conklin, Travelling Secretary of

the Student Volunteer Movement, Miss Stover of Guelph, Rev. Mr. Woodsworth of Winnipeg and Mr. McLaren. During the year, several joint meetings of the Y. W. and Y. M. C. A.'s have been held in Massey Hall. On October 22, Chancellor McCrimmon, of McMaster University, addressed a union meeting. November 11th, Professor Reynolds gave a most helpful and interesting talk on "Prayer." March 5th, Dr. Abbot, of Toronto, gave an illustrated lecture on "The Other Man," which was greatly enjoyed.

The work of the Bible study Class was reported by Miss Gray, leader of the Bible Study Department.

Miss Black reported the work of the Mission Study Committee.

The reports of the Treasurer and leader of the membership committee were very encouraging.

AU REVOIR TO THE RINK

To the girls who enjoyed our winter sports came a strange feeling, almost of sadness—as they lifted their skates from the benches and more or less, silently left the rink on Saturday March 21st. We all love the first spring day, yet each will admit, I think, that way down deep there comes a sort of lonesome feeling as we pack our snowshoes and skates. Winter has been good to us but there is a lingering backward look.

NECESSARY EXCUSES AT ROLL CALL

There has been a lot of dissatisfaction even much trouble, over the excuses handed in for lateness and absence from Classes. The following was picked up en route to the Institute:

Dear Miss ——, Please excuse me for being late; I fell in the mud. Hoping you will do the same, I am,

Yours truly,

Freda G.

We have heard that more stringent rules and regulations are being prepared for Macdonald Hall, regarding absence from Guelph during term and regarding absence from College Campus. Of course, these regulations will concern only those over twenty-one. Hereafter, all girls at the Hall will be twenty-one.

If the unknown author would call at the Hall any of the Seniors would be pleased to give him adequate remuneration.

Dear Maid:—

Your gown to me has been a source of blessing

Continually its saved my suit when in this lab. —I'm messing—

An' now my clothes are in such shape that spots are quite their pattern

My need for pinny's vanishes my science me admonishes,

I truly hope your lack of clothes has' n't made of you a slattern.

I've had the blues, indeed I've had; Don't me abuse.

Its serge I wear, I do declare, of drinking booze don't me accuse;

I'm mother's babe till I'm much older I've been tied to apron strings and

now I've been tied without em. There's something in Macdonald

things we'd like to know about em.

If something only will please smile, nor call it sneaking knavery—

We'll furnish flowers, our cheques still good,

When next you dress in other lavery.

So nifty the Senior Fool when forgiveness will be extended

His race is very shortly won, his college life will soon be ended,

But yet before he leaves behind the things around the campus,
 That kept him free from dampness
 The only part of womankind that I've had brought to my attention.
 As the part whose variability is a thing of common mention

And yet of all those freaks of dress at which we've often rubbered,
 There's never one that I could bless as now I will
 Maid M's Macdonald mother-hubbard.

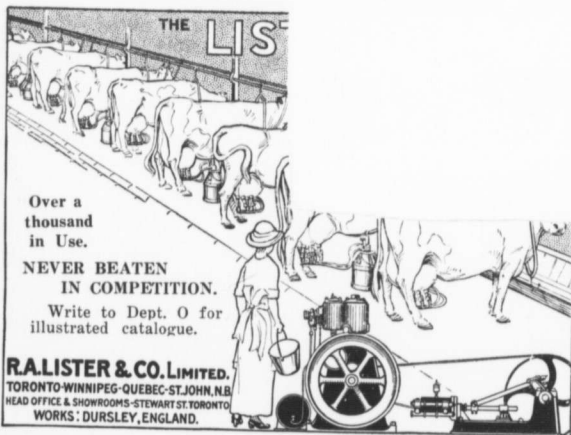
Locals

Why can you not apply the term "volatile" to a Freshman? Give up? Because he never dries up; he's always green.

The Choral Club were practising the "Amen" in Macdonald Institute. Prof. Shildrick—"Don't hang onto the ——men so long, ladies."



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REGARDING SPIRITUAL THINGS

Overheard in President's office on registration day:

"What religion are you, Mr. Sullivan?"

"Don't know; what kind are you short in?"

TIME: 10.30 Sunday evening.
 PLACE: A boarding house on Forbes Avenue.

SCENE: Show in the parlor singing "Let me Abide With Thee" for the eleventh time.

CONGLIN—(in room up stairs, plugging Quantitative Analysis)—"I can stand it if she can."



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The attacks and onslaughts of animals can't face it. It's strong, yet springy. Manufactured from Open Hearth steel galvanized wire. When made by this process, impurities are burned out of the metal, removing one of the chief causes of rapid corrosion or rusting. If you are considering the fence question, let us estimate on your job—and advise with you as to the best way to build—we will put you in touch with our nearest agent. Send for our latest catalog. Ask about our poultry fencing and ornamental gates. *Agents wanted in open territory.*

THE DANWELL-HOXIE WIRE FENCE CO., Ltd.,
 Winnipeg, Man., Hamilton, Ont.



C. REVIEW

NEVER FOLLOWED BEFORE

"Yes, we were followed for days by a cruiser."

"Are you sure it was a cruiser?"

"Everybody called it a cruiser except one of the old maids."

"What did she call it?"

"She called it a man-of-war and giggled every time she said it."

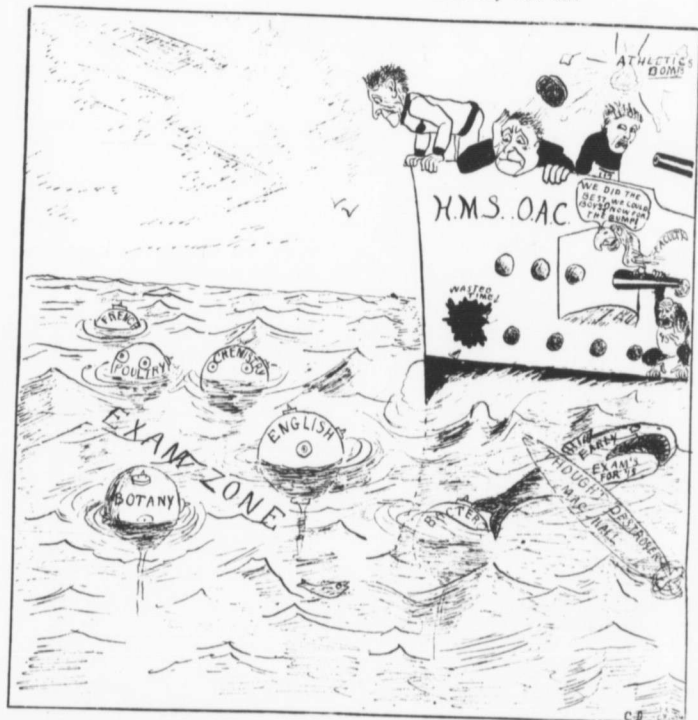
FRANK DONALD—(to Hamilton St. Car Conductor)—What end of the car will I get off at?

CONDUCTOR—Doesn't matter; both ends stop.

SULLIVAN—Say, Chesley; is that Bay Rum in that bottle on the dresser.

CHESLEY—Bay Rum? No! That's gum.

SULLIVAN—Perhaps that's why I can't take my hat off.



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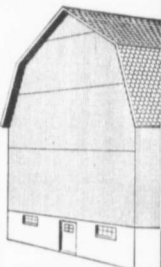
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FIREPROOFING SHINGLES

The Use of Paint Greatly Reduces
Their Danger.

Building conditions in Canada are such as to make the use of shingles for roofing houses, stables, etc., almost universal. Their general use, in an unprotected condition, adds considerably to the ordinary fire risk, as well as to the conflagration hazard, and, consequently, increases the incensed. To overcome this disadvantage, numerous investigations and experiments have been and are still being made with the object of discovering a material the application of which will render the shingle roof fireproof, or, failing this, to secure a process of treatment of shingles whereby they may be included in the category of slow-burning structural material. Thus, it has been demonstrated that the use of a good quality of linseed oil carrying a suitable pigment will materially reduce the haz-

ard. By the application of paint, the shingles are protected from the weather, thus preventing warping and the formation of pockets in which hot cinders may lodge; irregularities in the surface are also filled up by the paint.

Experiments have demonstrated that, under a one-minute exposure to flame, painted shingles are barely affected while unpainted shingles are badly attacked. Under a three-minute test, the unpainted shingles were severely burned while the effect upon the painted ones was such that the actual burning was limited to the portion directly exposed to the flame, the paint retarding the spread of the fire and the charring of the wood. In the absence of any positive fireproof-surveillance rate on the buildings containing material, the results obtained from the use of paint upon exposed shingles may be considered one of the best means of reducing the fire risk on shingle-roofed buildings.—D.



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Pratts Roup Remedy, 25c.-50c.
Pratts Roup Tablets, 25c.-50c.
Pratts White Diarrhea Remedy, 25c.-50c.
Pratts Cholera Remedy, 25c.-50c.
Pratts Head Lice Ointment, 25c.
Pratts Gape Remedy, 25c.-50c.
Pratts Bronchitis Remedy, 25c.-50c.
Pratts Cough Tablets, 25c.-50c.
Pratts Sore Head Remedy, 25c.-50c.
Pratts Scaly Leg Remedy, 25c.-50c.

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The First Three Weeks

are the most dangerous of a baby chick's life. To raise every chick it is necessary that the first food should be nourishing, strengthening and of a kind that builds without taxing their delicate organs.

Pratts, Baby Chick F O O D

is a well-balanced scientific food ration to be fed for the first three weeks. It has been used for years by practical poultry raisers everywhere, and the fact that they all endorse it is the strongest recommendation of its value. Use it once and you'll never be without it.

"YOUR MONEY BACK IF NOT SATISFIED"

Your dealer has it, 14-lb. bag, \$1.00; 6½-lb. pkg., 60c; 3-lb. pkg., 25c.

Pratt's Poultry Regulator

is a splendid digestive tonic that will keep your flock in vigorous health. It prevents disease and ensures fertility. Your dealer has it, 25-lb. pail, \$2.50; 100-lb. bag, \$9.00. Also in packages at 25c. 50c and \$1.00.

Write your name and address on margin of this ad., tear out and mail with 10c for 160-page Poultry Book.



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

Mr. Eric Rowley, of the second year, who hails from Burlington, Ont., informs us that the councillors ordered new clothes for the fire department there last week. By special wire we learn that the uniform came yesterday. It fits him dandy.

The following has been handed in in answer to query:

What is domestic science, hey?

That's just a little quirk

To keep from scaring girls away

Who don't like kitchen work.

—*Kansas City Journal.*

DID THIS EVER HAPPEN YOU

In telephone box—

"Hello; give me 833, please.

Central—"823?"

"No; 8-3-3."

"Hello, is that 833."

"No, you have the wrong number."

"Central, you gave me the wrong number; I want 833."

"Line's busy."



D. McARTHUR
O. A. C.
Feb 15

Gentlemen—I hope—

Progressive Jones says :

"Grow Bigger Crops During the War"

THIS is the Canadian farmer's golden harvest-time. With wheat selling over the dollar mark, and other grains and vegetables bringing war-time prices, farmers should do their utmost to grow as big crops as possible this year. This, friends, is the time of all times to enrich your soil with

Harab FERTILIZERS

It is the sure way to make your soil yield bumper crops and make more money for you. By using the proper fertilizers you can greatly increase your yield at no extra cost of labor or seed. Would it not pay you to grow the maximum from your soil?

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If you've been in the habit of using Davies' Fertilizers, keep on using them. They are excellent fertilizers. It's merely a matter of choice between Harab and Davies'. The Ontario Fertilizers Limited supply both.

If Harab Fertilizers were not exceptionally profitable to use, I don't think there would be such a great and growing demand for them, do you? But perhaps you would like to read the new fertilizer booklet that describes them fully. If so, just drop a card to The Ontario Fertilizers Limited, and say "Please send me your new Harab Fertilizer booklet." They have promised me to send my friends this booklet promptly without charge.

Yours for bumper crops,

Progressive Jones



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reduces the percentage of loss in fruit over 80 per cent, as shown by Government tests in 19 different orchards. Used on potatoes, a SPRAMOTOR has increased a yield of almost nothing to 400 bushels an acre.

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SAVINGS BANK DEPARTMENT

The advantage of a Savings Bank Account is that it earns you 3 per cent. interest night and day, and you can always get your money any time you want it, and every day your money is deposited with us we pay you.

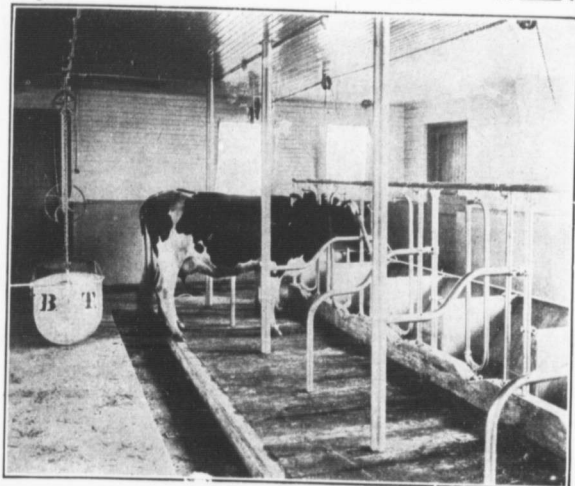
The Dominion and Provincial Governments have large sums of money on deposit with this Bank and this should assure the public that your money is absolutely safe, as we are one of the oldest, largest and strongest Banks in Canada.

We want your name on our list, and we also want to meet you personally, when you call. \$1 will open an account. Office old Traders' Bank building, next door to post office.

GUELPH

F. D. ANDERSON, Manager,

ONTARIO



BT SANITARY STEEL STALLS

The Bt sanitary steel stalls in the O. A. C. Barn, Guelph, are Galvanized. This prevents rust attacking the steel so the equipment lasts longer and looks better. No extra charge is made for the Galvanizing, although it costs 90c a stall, and Galvanized pipe in the open market costs 40 per cent. more than black pipe. This is only one of many improved features of BT Goods, which do not cost the farmer a single cent.

Write Beatty Bros., Limited, A 180 Hill St., Fergus, Ont., for catalogue of Galvanized steel stalls, steel stanchions, pens, iron horse stable fittings, feed and manure carriers, hay tracks, hay cars.

BT STANDS FOR BEST

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

Locals

Do the thing while others are talking about it.

If you don't believe in your own ability, others won't.

The successful man tries to do today what he might do tomorrow.

Ambition is the current that makes a live wire out of a dead one.

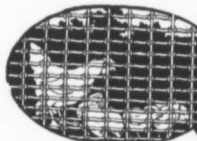
A thin skin is as great a handicap as a thick head.

THE RECEPTION ROOM

*She sat on the steps at a party,
Encrapped in an absent air;
Came her lover with greetings hearty—
She gave him a vacant stair.*

—The Club Fellow.

Blessed is the boy who wants a good thing and hustles for it.



PEERLESS POULTRY FENCE

A Real Fence—Not Netting

Strongly made and closely spaced—making it a complete barrier against large animals as well as small poultry. Top and bottom wires No. 9—intermediates No. 12 wire—made by the Open Hearth process which time and other tests have proven to be the best, best for cutting. Ask about our firm and organized selling. Agents wanted in unassigned territory.

The Banwell-Hazin Wire Fence Company, Ltd.,
Winnipeg, Man. Hamilton, Ont.



The Royal Bank of Canada

Capital	-	-	-	\$11,560,000.00
Reserves,	-	-	-	\$13,500,000.00
Assets,	-	-	-	\$180,000,000.00

A General Banking Business done. Drafts issued to, or cashed from, all Countries; 374 Branches throughout Canada, West Indies and Cuba, and our own offices in London, Eng., and New York.

Savings Bank Department with separate room for Ladies.

R. L. TORRANCE,

Manager,

Guelph Branch.

"What we have we'll hold.
What we haven't we'll
(Our New Slogan for Canada) make"

We have just made
the New

Gillette BULLDOG Safety Razor-

THE stocky "Bulldog" handle gives a good, firm grip that most men like. Its extra weight seems to "carry through" the keen-edged blade in a stroke that's particularly smooth and easy.

Shaving with the Gillette is so quick and comfortable that there is no temptation to neglect it, it sends a man to his day's work clean, refreshed, looking and feeling his best. If you haven't already done so, get a Gillette—you'll enjoy it!

"Bulldog" Set, \$5—"Aristocrat," \$5—Standard Sets, \$5—Pocket Editions, \$5 to \$6—Combination Sets, \$6.50 up. All "Made in Canada."

Gillette Safety Razor Co.
of Canada, Limited,
Montreal.

55



Still \$5. Per Set

Made in Canada



The Empire Touch

Firm and gentle massage of the teats by natural atmospheric pressure. That's the Empire way. It makes even nervous cows give down quickly and in many cases even increases the milk yield. Costs less to install. Does the work perfectly from the start. Double or two-cow unit takes care of 20 to 30 cows per hour. One man can operate 2 double units.

EMPIRE MECHANICAL MILKER

Nearest to Nature

The secret is in the Empire Teat Cups. No compressed air used. There can be no chance of sore or inflamed teats or udders, as the massage is firm and natural, never harsh and quick.

Empire Cream Separator

The machine that has already helped put so many dairies on a paying basis. Easy to clean and operate and outdoes all others in results. Let us send you full description and pictures of Empire Milkers and Empire Cream Separators that are making good in many fine dairies. Ask also for our offer on the Empire Sta. Rita Engines and Empire Feed Mills. Write for catalog.

**The Empire Cream Separator Company
of Canada, Limited
Toronto and Winnipeg**




PEEP SIGHTS

for Farm Drainage Purposes, as designed by Prof. W. H. Day, sent by mail to any address.

H. Occomore & Co.

124-126 Wyndham St.

GUELPH

H. H. WORDEN

O. A. C. BARBER SHOP

Three Barbers. No Waiting.

St. George's Sq. Cars stop at Door.

OSTEOPATHY

DR. GORDON V. HILBORN

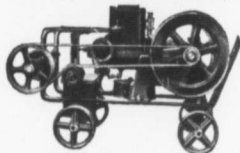
DR. MARY SHERRIFFS

Eyes Scientifically Tested.

10 SUFFOLK ST., W., GUELPH
PHONE 534

"Goes Like Sixty"

Engines, Grinders, Wood Saws
Ensilage Cutters, Spraying
Outfits, Pumps, Washing Ma-
chines, Speed Governors, Etc.



Gilson Engines have special exclusive features which put them in a class by themselves. Every man who gets a "GOES LIKE SIXTY" engine secures for himself

"Safety, Service and Satisfaction"

PRICES RIGHT—EASY TERMS

Write for full particulars and our new illustrated catalogue.

Gilson Manufacturing Co. Ltd.

52 YORK STREET - - GUELPH, ONT.

Apple Trees

All standard varieties, one and two years old, large, strong and clean; grown with special care from selected buds for our own planting.

AT RIGHT PRICES.

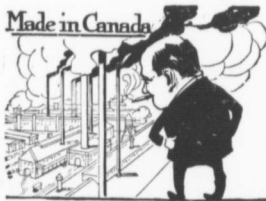
Write us for prices and information.

LYNNDALE FARMS,

Simcoe, Ont.

P. E. Angle, Supt.

Made in Canada



**Develop your
home market
buy Windsor
Table Salt**



Rennie's Seeds Always Grow

THE BEST VEGETABLES AND THE FINEST FLOWERS
CANADA'S OPPORTUNITY—Every foot of fertile soil in Canada must be sown and cultivated to its limit this season. The world needs all the products of the soil we can sow during 1915. While our supplies are large, we advise ordering seeds immediately in case of shortage, as the demand will be enormous.

We are agents for—

Cyprus Incubators and Brooders

Cyprus Poultry Foods

“ Chick Food

“ Developing Food

“ Scratching Food

Cyprus Laying Mash

“ Growing Mash

Pigeon Food

Short Cut Alfalfa

Zenoleum Disinfectant,

Pratt's Poultry Foods, etc.

Write for prices.

WM. RENNIE COMPANY, Limited

Head Offices and Warehouses: Adelaide and Jarvis Streets, Toronto. Branches:
190 McGill Street, Montreal, Que.; 1138 Homer Street, Vancouver, B. C.; 394
Portage Avenue, Winnipeg, Man.

A Copy of Our New Seed Book—FREE—write today.

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

Locals

GETTING EVEN

*Like the lava from a crater
Came the gravy on his pate;
For he failed to tip the waiter,
So the waiter tipped the plate.*



ECONOMY

"Dearest, I've dropped my diamond ring down the bath pipe. You must send for a plumber."

"No—I'll buy you another ring; it will be cheaper."

The Little Dutch Inn Tea Room

Lunch from 12-2 o'clock.
Afternoon Tea from 4-6 o'clock.

Arrangements made for Special or Evening Parties

Prove it Yourself!



I will send you absolutely FREE a

**"1900"
GRAVITY
WASHER**
for 30 days
FREE TRIAL

You don't pay a cent—I even pay the freight.

Everybody who has used this Washer says it is the "best ever."
Write me to-day personally for booklet and particulars.

A. I. MORRIS MANAGER, "1900" WASHER CO.
357 YONGE STREET
TORONTO, CANADA
FACTORY: 79-81 PORTLAND STREET

If you have electric light, ask me about my "1900" Electric Washer and Wringer outfit.



Hotel Carls-Rite

"The House of Comfort"

Opposite the Union Station,
TORONTO

American Plan, \$2.50 per day
European Plan, \$1.00 per day.

W. F. WATT, Manager



Greenhouse GLASS

SINGLE AND DOUBLE STRENGTH

Special Make, Flat
and Nicely Cut Edges

The Toronto Plate Glass Im-
porting Co., Ltd.

91-133 Don Roadway - Toronto

... THE ...
New Spring Fashions

HIGH-CLASS LADIES' TAILORING
AND TAILORED DRESSES

We are always to the front with the latest
fashions and goods. Try us and you will come
again and send your friends.

J. N. LANE
Ladies' Tailor

Masonic Block, Quebec Street, Guelph

WHY PAY TWO PRICES FOR YOUR CLOTHING
THEY COME DIRECT FROM THE MILL TO YOU

Suit or Overcoat to Order

NO
MORE

\$15.00

NO
LESS

MADE BY

The Scotland Woolen Mills Co. Limited

SALES AGENTS:

KING EDWARD CLOTHING CO.

OPPOSITE CITY HALL

"Success" says Disraeli, "is the child of audacity."



"Late again, Simpkins! How's that?"

"Well, sir, I got up late and only myself ten minutes to dress."

"But I can dress comfortably in that time."

"Yes, sir, but I wash."

The man who succeeds is the man who is active, does not wait for orders, and is prepared for tomorrow's opportunity.

The Rosery

MISS E. S. MARRIOTT

FLORIST AND DESIGNER

51 QUEBEC ST., WEST
GUELPH

PHONE 966
SUNDAY 395L

PHYSICAL CHEMICAL & BIOLOGICAL APPARATUS

Send particulars of your requirements and we will gladly furnish quotations

The Geo. M. Hendry
Company, Limited

Educational Equipment,

215-219 Victoria St., Toronto,
Ontario.

Spring Athletic Goods

We carry a full line of

Baseball, Cricket and Tennis Supplies

Every requisite for the

Runner, Swimmer and Footballer

WRITE FOR OUR SPRING CATALOGUE

John Brotherton

578-580 YONGE STREET

TORONTO



Write it on the Film---at the Time.

Make every negative more valuable by permanently recording at the time of exposure the all important date and title. It's a simple and almost instantaneous process with an

Autographic Kodak

Now ready in a score of styles and sizes at prices ranging from \$7.00 upwards.

Ask your dealer, or write us for Kodak catalogue.

CANADIAN KODAK CO., Limited, TORONTO.

10,000 FARMERS WANTED

To Stand Behind the Sarnia Metal Products Co. Limited, and the Organized Farmers in a Great Co-Operative Proposition

We want every farmer in Canada that contemplates using Corrugated Iron, Metal Shingles or any other Sheet Metal Building Materials, to write us at once for information of our new co-operative plan by which we are supplying the farmers of Canada with Sheet Metal Building Materials at the lowest possible cost.

\$25.00 to \$50.00 Saved Every Farmer QUALITY

We guarantee the galvanized iron used in the manufacture of Sarnia Metal Products to be equal to that of any iron used by any manufacturer in Canada in the manufacture of similar lines of roofing products which they are selling to the farmer, at the time of advertising, at an advance of 25 to 50 per cent. above the prices we are quoting. And please remember that all Sarnia Metal Products are made from galvanized iron of a quality specified by the organized farmers themselves.

PRICE

By an agreement with the farm organizations we have agreed to supply all farmers with sheet metal building materials at a small percentage in advance of the cost of our raw materials, leaving the control of the selling price in the farmers' hands. We have estimated our profits on a very large volume of business, and every order you send us will help in making our price still lower.

SERVICE

Our factory at Sarnia, just completed, is the most modern factory in Canada for the manufacture of the lines we offer, and we carry such large stocks and are situated in such an advantageous location that it is possible for us to make the quickest possible delivery of orders.

A Vital Question

If approached by another company or its agent in an endeavor to sell you Corrugated Iron, etc., simply ask them what they would supply you the same material for if it were not for the Sarnia Metal Products Company, Limited, and its co-operative plan. We have some information in regard to the plan used in the endeavor of others to head off our business, which proves very interesting reading.

If you contemplate the erection of any new buildings or the re-roofing of any already built, please send us a rough sketch, and we will do the rest.

WRITE AT ONCE TO HEAD OFFICE.

THE SARNIA METAL PRODUCTS CO. Limited SARNIA, CANADA

Our lines are sold and distributed through the United Farmers' Co-Operative Company of Ontario.



"I See Bill Erected Another Natco"

—Same old story. Bigger profits, more stock, an additional silo. And why is the second silo always a Natco, too? The reasons why are best appreciated by owners of other silos not built for good, whose walls are not air, moisture and frost-proof, resulting in much spoiled ensilage. The Natco stands year in and year out just as the day it was erected, yielding sweet, succulent silage in all parts, through all conditions of weather. Better benefit by the ex-

perience of others and erect the silo that's windproof, decayproof, fire-proof and verminproof—the

NATCO EVERLASTING SILO

"The Silo That Lasts For Generations"

It's built of hollow vitrified clay tile which will endure forever, and whose glazed surfaces absorb no moisture and totally exclude air and frost. It's reinforced by bands of steel laid in the mortar, and can resist all wind and silage pressures; thus a taller silo with a smaller diameter can be erected for there is no danger of a blowdown. Plan for your new silo now. Send today for a list of Natco owners in your province and ask for Catalog 7

National Fire Proofing Company of Canada, Ltd.
Toronto, Ont.

Made
in
Canada

CANADIAN PACIFIC NEW LIMITED TRAINS

"THE CANADIAN"

Between

MONTREAL, TORONTO, DETROIT, CHICAGO Via CANADIAN
PACIFIC and MICHIGAN CENTRAL RAILROADS

via Michigan Central Gigantic Steel Tubes between Windsor and Detroit. Leaving Montreal 8:45 a.m.; Toronto 6:10 p.m., arriving Detroit 12:35 a.m. and Chicago 7:45 a.m. daily.

Equally good service returning.

Through Electric Lighted Equipment.

TORONTO—WINNIPEG—VANCOUVER

Toronto-Vancouver Express No. 3 leaves Toronto 5:55 p.m. daily. Vancouver-Toronto Express No. 4 arrives Toronto 11:45 a.m. daily. Manitoba Express No. 7 leaves Toronto daily except Sunday 10:50 p.m., arriving Winnipeg second day. Ontario Express No. 8 leaves Winnipeg 9:25 p.m. and arrives Toronto 5:15 p.m. daily except Tuesday.

For further particulars apply to Canadian Pacific Ticket Agents or write M. G. MURPHY, D. P. A., C. P. Ry., Toronto, or J. Hefferman, C. P. & T. A., 32 Wyndham St.

GREENHOUSES FOR THE FARMER

The possibilities of raising many fruits and vegetables under glass are attracting the attention of farmers.

Hot-house products command high prices and find ready market, and the greenhouse also affords a means of propagating plants, to be set out later, for very early vegetables.

If you intend building this year look into our proposition NOW and get early returns. We have designed a special house for farm use, which is constructed to give the highest efficiency at low upkeep and operating expense.

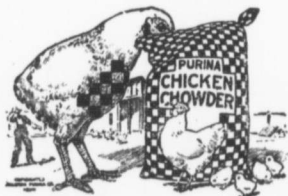
We will be glad to send you further information about farm green-houses. Write for it to Dept. A.

GLASS GARDEN BUILDERS, LIMITED

Makers of Greenhouses, Heating and Ventilating Apparatus, etc.

201 CHURCH ST. TORONTO

P. O. BOX 1042, MONTREAL



Keep It Before Them All the Time
and Watch Them Grow

PURINA CHICK FEED

SAVES BABY CHICKS

And Makes Them Round and Healthy
FOR PROFIT

Feed Purina Chick Feed and Purina
Chowder to your laying hens.

Write us for 1915 Checkerboard
Booklet.

THE CHISHOLM MILLING CO.
TORONTO.

Ontario

Veterinary College

Under the Control of the Department of
Agriculture of Ontario

Affiliated with the University of Toronto

Established by Professor Andrew Smith, F.
R.C.V.S., D.V.S., in 1862, under the aus-
pices of the Upper Canada Board of
Agriculture and taken over by the Gov-
ernment of Ontario, 1908.

COLLEGE REOPENS ON THURSDAY,
OCTOBER 1st, 1914.

Calendar, 1914-1915 Sent on Application.

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

110 University Avenue, Toronto, Canada.

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



A VIEW of the Dairy Barn at Guelph, O.A.C. covered entirely with PRESTON SAFE LOCK SHINGLES and ventilated with ACORN VENTS.

The rink at the O. A. C., shown in the last month's Review, is entirely covered with ACORN CORRUGATED IRON.

These are but two of the many public buildings which are covered with our iron. Thousands of roofs and complete buildings all over the Dominion are protected by ACORN BRAND products.

Preston Safe Lock Shingles are a guaranteed proof against lightning. We guarantee this **IN WRITING** over the seal and signature of our company.

Acorn Corrugated Iron is used for a complete covering of the famous MODEL BARN which was shown at the National Exhibition, and which is being used by the best farmers of Canada.

A SPECIAL BOOK FREE

We have just issued a book on Farm Barns and Buildings, showing reproductions of some of the best barns in Canada, together with letters from many of our customers. May we send you a copy free of all charges.

Clip the Coupon to-day and send it to us.

The Metal Shingle & Siding Co., Ltd.
Preston, Ontario.

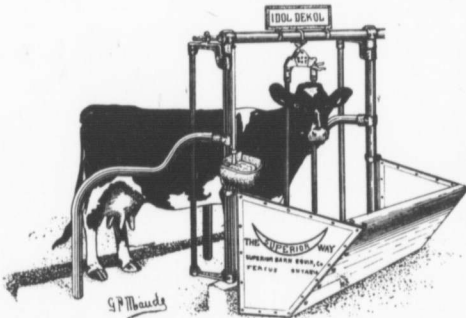
Send your Free Book as advertised in the O. A. C. Review.

Name.....

Address.....

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

Stable Your Cattle the Superior Way



If you are thinking of building a new barn or re-modelling your present one, I want you to know all about my **SUPERIOR SANITARY STEEL STABLE FITTINGS**

Consisting of Horse Stalls, Horse Box Stalls, Horse Stable Fittings, Cow Stables, Cow Stanchions, Maternity Pens, Calf Stanchions, Calf Pens, Bull Pens, Hog Pens, Water Bowls, Manure Carriers, Feed Carriers, Feed Trucks, Milk Can Conveyors.

Manufacturers of the only universal Rotating Adjustable Stanchion made. Get my 1915 Book; it is free; write to-day.

SUPERIOR BARN EQUIPMENT CO.

Geo. P. Maude, Mgr.

FERGUS, ONT.

"CORN IS CORN"

Very true, corn is corn—but we have pop corn, sweet corn, field corn and almost endless varieties of each.

So when you dismiss the subject of cleaning with the thought that all washing agents are the same, may you not be overlooking the possibility that they are not.

We guarantee that after you have used one barrel of

Wyandotte
Dairyman's
Cleaner and Cleanser

Indian in Circle



you will note a very great difference in the cleaning it does compared with the cleaning any other washing agent does you have ever used.

It differs both in being more efficient and more economical. Can you afford to pass it without a trial?

Ask your dealer or order from your supply house.

In Every Package

The J. B. Ford Co., Sole Mfrs., Wyandotte, Mich.
This Cleaner has been awarded the highest prize wherever exhibited.
It Cleans Clean.

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

How Can You Do It?

That's what we are usually asked when we tell our customers what guarantee goes with the Van Brunt Drill.

1. We agree to replace, free of charge, any disc bearing (when properly oiled) that wears out during the life of the drill.
2. We guarantee that one oiling of the disc bearings is all that is necessary to seed 100 acres.

How can we do it? Why, because the bearings are of liberal size, are hard as flint, have extra smooth finish, and are **dust proof** and **oil retaining**. We've made this guarantee for years and have never been called on to make it good. The Van Brunt Drill Makes Good for Us.

"ASK THE MAN WHO HAS BEEN WEST."

JOHN DEERE PLOW CO.

OF WELLAND, LIMITED.

77-79 JARVIS STREET - - - - TORONTO

Sweater Coats and Sweaters To Order



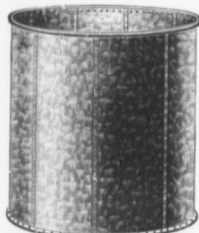
Our goods are all HAND-FINISHED.
They do not fray at edges and button-
holes.
The pockets wear as long as the coats.



Write for prices.

Thos. Warren

359 Spadina Ave.
TORONTO



Wayne Steel Tanks

Do not buy wooden tanks or build concrete ones until you have investigated the WAYNE STEEL TANK.

The WAYNE TANK is moderate in price, and has twice the life of a wooden tank and many advantages over cement.

No fuss or muss. Use it in the barn to-day, and to-morrow put it in the yard if you wish. They do not get water-soaked, and freezing weather has no effect on them.

If your dealer does not handle the Wayne, let us hear from you direct.

WAYNE OIL TANK AND PUMP COMPANY, LTD.
WOODSTOCK, ONTARIO

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

Locals

A SOVEREIGN REMEDY

A Philadelphia woman was ordered by the doctor to put some ice in a bag and bind it on the temples of her sick boy. On inquiring after his patient the next day, he was informed: "Oh, Tommy's better, but the mice are dead."—*Kansas City Times.*



It is not what you get, but what you expect to get, that makes life worth while.



GROWING A COVER

"Why is Jones growing a beard?"
"Oh, I believe his wife made him a present of some fancy ties."



Make a Corner Cosy

BY COLLECTING THE CUSHION
COVER COUPONS WITH EACH
PACKAGE



RIDER AGENTS WANTED

everywhere to ride and exhibit a sample 1915 Hyslop Bicycle, with all latest improvements.



We ship on approval to any address in Canada, without any deposit, and allow **10 DAYS TRIAL**. It will not cost you one cent if not satisfied after using bicycle 10 days.

DO NOT BUY a bicycle, pair of tires, lamp, or sundries at any price until you get our latest 1915 illustrated catalogue and learn all about our special proposition. The low prices will astonish you.

ONE CENT write us a postal, and catalogue with full particulars will be sent to you **Free, Postpaid**, by return mail. **Do not wait.** Write it now.

HYSLOP BROTHERS, Limited
Dept. 28 TORONTO, Canada



Cheaper than Home-made Ties



25 Cents postpaid

Can't Slip
Can't Break

Strong as two knots—but won't bind. Handy as a snap—but won't break

If you bought as good rope as the 1/2-inch Hard Rope that goes into this tie and fitted it with snap and ring—a flimsy thing at best—you would pay more than the price of Griffith's Handy Tie.

Griffith's HANDY Rope TIE

So simple you can put it on or off with your mitts on. Strong and proof against slipping or binding. Live dealers sell them. If yours does not, we will mail one for 25c, postpaid (30c west of Port William). Write to-day. Ask for our Book of Bargains, full of money savers, on sale everywhere.

G. L. GRIFFITH & SON
DEPT. R
Stratford, Ont.



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

O. A. C. Students Co-operative Supply Store

A Full Line of

Agricultural Text Books

BOTANICAL SUPPLIES

Plant Mounts,
Labels,
Weed Seed Vials, etc.

ENTOMOLOGICAL SUPPLIES

Insect Pins,
Stretching Boards,
Boxes,
Butterfly Nets, etc.

DRAINAGE SUPPLIES

Paper
Instruments, etc.
Transportation Charges paid
on orders of \$5.00 and over.

STUDENTS' CO-OPERATIVE SUPPLY STORE

O. A. College, GUELPH, ONT.

Standard Steel Tube Posts

For the Up-to-date Farmer!

The Steel Tube Post outlasts the wooden posts five to one. Dampness won't rot it, insects can't weaken it, and it takes one-third the labor to erect.

Standard Posts and Standard Woven Wire Fencing make a combination that ensures the farmer using them the best job possible in fence erection.

There's an agent in your vicinity. If you don't know him, write to us and we will send you full particulars.

STANDARD TUBE AND FENCE CO.

Limited.

WOODSTOCK - - - ONTARIO

Makers of Standard Woven Wire Fencing, Farm Gates and Steel Tube
Fence Posts.

PHILOSOPHY OF A CYNIC

We are told that God made man in His own image, but woman seems to feel the necessity of improving her appearance.



*The rain pours down in silvery sheets
And bitter is my cup,
For all my life I've longed to see
The rain go pouring up!*

—Baltimore Sun.



Work, but don't worry; work is a tonic, worry a poison; a day of worry will bring more gray hairs than a week of work.

TORONTO'S FINEST FAMILY HOTEL.
HOTEL WAVERLEY EUROPEAN PLAN
Phone College 781
Rooms, Single or En Suite with Private Baths.—
Telephone in every room.
ROOMS WITH PRIVATE BATHS \$1.50 UP.
ROOMS WITH RUNNING WATER \$1.00 UP.
Special Weekly Rates.
482-488 SPADINA AVE. (at College).

Triple Benefit Policies

Protection Under a MUTUAL Endowment Policy the Company undertakes to pay the amount stipulated in the contract instantly upon receiving proof of the policyholder's death.

Savings Should the assured survive a specified number of years, the MUTUAL will pay the amount of the policy to the policyholder himself. It is like withdrawing savings.

Investment If a participating policy the MUTUAL will, if desired, accumulate the dividends for the assured. In this way our policyholders have withdrawn sums equal to their premiums with 3 to 4 per cent. compound interest.

THE MUTUAL LIFE ASSURANCE COMPANY OF CANADA
WATERLOO, ONTARIO

102

A STUDENT'S VACATION

Is often spent procuring the sinews of war for his next year's course. A BICYCLE is sometimes the most useful article of equipment he can possess for this work.

One objection to buying a new wheel for this purpose is that the cost is too large a proportion of his summer's earnings.



We can solve this difficulty by selling you a Second-Hand bicycle from ten to twenty dollars that will give you entire satisfaction.

We have new Bicycles from \$25 to \$50, and all kinds of supplies and accessories.

R. G. McLEOD

181 King St. West, TORONTO.

HINMAN
THE UNIVERSAL MILKER



"MADE IN CANADA"

THE HINMAN CAN BE INSTALLED IN ANY STABLE.

Half the price.

Half the power,
Half the trouble.

Let us show you how it will save you money.

Price \$50.00 per unit.

H. F. BAILEY & SON

Sole Manufacturers for Canada

GALT, ONT., CAN.

MELVIN GAYMAN

LIMITED

**INVESTMENT
BROKERS**

St. Catharines, Canada



We have over Three
Hundred Fruit and Grain
Farms on our lists for sale

It will pay you to get in
touch with us before
buying

CATALOGUE FREE ON REQUEST

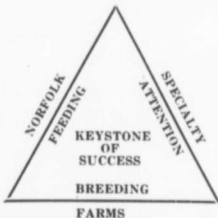
**Day Old Chicks Eggs for Hatching
STOCK**

Nothing But O. A. C. Bred to Lay Strains.

1,000 Barred Plymouth
Rocks.
1,000 Single Comb
White Leghorns.
100 Single Comb Rhode
Island Reds.



Free Range



Pekin Ducks.
Bronze Turkeys.



Shade and Spring
Water.

Eggs \$1.50 per 15; \$6.00 per 100; \$50.00 per 1,000; Duck Eggs \$1.00 per 11;
\$7.00 per 100. Day-old Chicks 15 and 20 cents each. Turkey eggs, 30 cents each.
Ducklings, 25 cents each. Write

E. F. MONTGOMERY, ST. WILLIAMS, NORFOLK COUNTY, ONT.

The Empire Typewriter

SAVES YOU

\$40 to \$60

BECAUSE IT'S

Made in Canada

With three exceptions every
Canadian Chartered Bank
uses 50 or more Empires

"THERE'S A REASON"

Empire Typewriter

18 Adelaide Street West
TORONTO, ONTARIO

STONE'S FERTILIZERS

Do you realize that there will be a largely increased demand for Food Stuffs this year? Are you preparing for the higher prices by increasing your production?

STONE'S FERTILIZERS

will help you to get the most out of your land. They will pay you a large dividend on their cost.

BIGGER YIELDS,

BETTER QUALITY

Brands for every crop. Write for particulars.

William Stone Sons, Ltd

Head Office: Woodstock.

Branches: Ingersoll & Stratford.

Live Agents wanted.

TILE AND PIPE

Concrete Tile from 4 in. to 24 in. always in stock, also
Sewer Pipe from 8 in. to 60 in. Pipe all made from
crushed stone and vaporized 48 hours.

R. Blair Co. Ltd. - Woodstock, Ont.

WHY?



EVERY YEAR CANADA IMPORTS MILLIONS OF DOZENS OF EGGS AND HUNDREDS OF THOUSANDS OF CHICKENS.

Because Canadians do not realize the profit there is in raising chickens. Poultry keeping pays splendidly—ask Denmark. Keep hens—Keep them laying. Hatch out the eggs in an incubator.

The Improved Model "66" Incubator Holds 60 Eggs. Among its features are—Round like a nest. No cold corners. Heat absolutely even. Eggs visible at all times. Every unit of heat utilized. When heat increases, thermostat turns down lamp; when heat decreases, it turns it up automatically. The price is \$8.00, f.o.b. Toronto. But to keep our plant running and our employees working steady, we offer 1,000 incubators at cost—\$6.00 each on terms set out in coupon. Remember, these are "Made-in-Canada" goods. This advertisement will not appear again. Our large catalogue mailed free.

THE MODEL INCUBATOR CO., LTD.

196-200 River Street, Toronto

C. J. Daniels, Mgr.—Please send me any time between now and April 15th next, One Improved Model 60 Egg Incubator.

I enclose \$2.00 and will remit the balance, \$4.00, when incubator is shipped.

Name

Address

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

Note The Convenience

of the Standard Cream Separator with its low supply can, and crank shaft just exactly at the right height for easy turning. These are only two small features of the

Standard

Cream Separator, but they serve to show its up-to-dateness. In fact, the 1915 Model Standard is far in advance of other separators, as you can see for yourself by visiting one of our agents. Get him to show you the interchangeable capacity feature by which you can change from a 350 or a 450-lb. machine to a 600-lb., 800-lb. or 1,000-lb. capacity at small cost, where with an ordinary separator a new machine would have to be bought.

See the self-oiling system and the oil-tight case. No oil catcher is necessary under this machine. And you need oil it but once every three months.

Have him explain the skimming system. Ask about the electrically welded spacing caulks on each disc; also the guide pin. Get complete information. The more you know



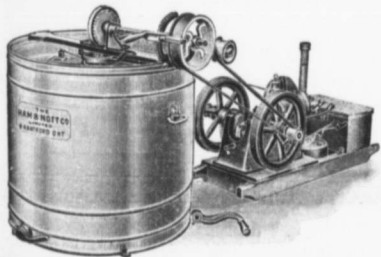
"Made-in-Canada"

about the Standard Cream Separator the more you'll appreciate its many advantages.

The Renfrew Machinery Co. Limited

Agencies Almost Everywhere in Canada.

RENFREW, ONTARIO.



POWER HONEY EXTRACTORS

Power on the farm is almost an essential nowadays.

In farm bee-keeping, a Power Honey Extractor saves time and labor and adds to the pleasure of the operation.

For strength, simplicity of construction and easy running, our Power Extractor cannot be excelled. Write for catalogue.

The Ham & Nott Co., Limited
BRANTFORD, ONTARIO.



FARMERS

Consider *Purity* in Paint
in *Preference* to Price.

You wouldn't pay the regular price for Sugar that analyzed 10% of sand. You wouldn't pay "all wool" prices for cotton-and-wool clothing. Why should you pay your good money for impure Paint, when you can get

MARTIN-SENOUR "100% PURE" PAINT

We guarantee Martin-Senour "100% Pure" Paint (except a few dark shades that cannot be prepared from pure Lead and Zinc alone) to be **100% pure** White Lead, pure Oxide of Zinc, pure Linseed Oil, pure Colors and Turpentine Dryer; and to be entirely free from adulteration or substitution; and sold subject to chemical analysis.

Every experienced Painter knows that the above formula is right. It is the standard of the paint world.

You get absolute purity — extreme fineness — uniform quality — when you insist on "100% Pure" Paint.

SENOUR'S FLOOR PAINT — **RED SCHOOL HOUSE PAINT**
The old reliable. — for the barn and sheds

MARTIN-SENOUR WAGON AND IMPLEMENT PAINT
for wagons, tools, etc.

We'll send you, free, "Farmer's Color Set" and our fine book, "Town and Country Homes", if you write for the name of our nearest dealer-agent.

ADDRESS ALL ENQUIRIES TO

The MARTIN-SENOUR Co.

LIMITED
655 DROLET STREET, MONTREAL.

75



The Most For Your Money

You aim to "make two blades grow in place of one." To do this, you must get the MOST from every hour—every acre—every cent. To be a successful Scientific Farmer, you must be a shrewd Scientific Buyer.

In buying Fence, for instance, you want the HIGHEST QUALITY at the LOWEST COST. You get it in

PAGE FENCE

"Direct from Factory to Farm"
(Freight Paid)

There are many miles of PAGE FENCE that has seen 20 years service—and still looks good for 20 more. Because PAGE FENCE is built to last a LIFETIME.

No. of bars	Height	Stays inches apart	Spacing of horizontals	Price in Old Ontario	SPECIAL FENCE
6	40	22	6½, 7, 8½, 9, 9	\$0 22	No. 9 top and bottom. Balance No. 13. Upright 8 inches apart.
7	40	22	5, 5½, 7, 7, 7½, 8	24	18-bar, 48-inch\$0 43
7	48	22	5, 6½, 7½, 9, 10, 10	25	20-bar, 60-inch 48
8	42	22	6, 6, 6, 6, 6, 6, 6	27	Set tools 8 00
8	42	22	6, 6, 6, 6, 6, 6, 6	29	3-ft. Gate 2 25
8	47	22	4, 5, 5½, 7, 8½, 9, 9	30	12-ft. Gate 4 25
8	47	16½	4, 5, 5½, 7, 8½, 9, 9	31	13-ft. Gate 4 45
9	48	22	6, 6, 6, 6, 6, 6, 6	33	14-ft. Gate 4 70
9	48	16½	6, 6, 6, 6, 6, 6, 6	33	25 lbs. Staples 75
9	52	22	4, 4, 5, 5½, 7, 8½, 9, 9	31	25 lbs. Wire 70
9	52	16½	4, 4, 5, 5½, 7, 8½, 9, 9	33	
10	48	16½	3, 3, 3, 4, 5½, 7, 7, 7½, 8	35	
10	52	16½	3, 3, 3, 4, 5½, 7, 8½, 9, 9	35	
11	55	16½	3, 3, 3, 3, 4, 5½, 7, 8½, 9, 9	38	

ALL FULL NO. 9 GAUGE.

Freight Paid on Orders of \$10.00 or over.

HIGHEST QUALITY

It is made of the very best carbon steel fence-wire. Every bit of wire is full No. 9 gauge—even the locks. Laterals are woven under uniform tension. Up-rights are correctly spaced—exactly as specified in our catalog. You never see PAGE FENCE "sag." PAGE Locks are simple—yet absolutely slip-proof. PAGE Galvanizing is the finest ever used on Fence. For 22 years, PAGE FENCE has been Canada's biggest-selling fence.

LOWEST PRICE

PAGE FENCE is sold DIRECT FROM FACTORY TO FARM. All middlemen's expenses and profits are cut out. There is just one small profit between you and us. That's why PAGE—the Highest-Quality—FENCE can be bought at the price of "ordinary" fencing. Instead of buying through the Dealer—at 100 per cent. over manufacturing cost, you sell yourself PAGE FENCE and get BETTER Fence at LOWER Cost.

MAIL YOUR ORDER

Start your farm on a Scientific basis. Fence your fields with PAGE FENCE. Get "life-time" service—at the price of ordinary "2 or 3 year" fence. PAGE FENCE (Direct)—at our low prices—is the HIGHEST QUALITY Fence at the LOWEST Cost. When you buy other fence—you GIVE MORE or GET LESS.

Orders should be mailed to the nearest PAGE Branch; with cash, check, bank-draft, money or express order enclosed. Immediate shipments from nearby stock. Freights paid on all \$10 orders or over.

PAGE WIRE FENCE CO. Ltd.

Write for FREE copy of our big 80-page General Merchandise Catalog. QUALITY goods at WHOLESALE WALKERVILLE prices.

DEPT. 106, 87 Church ST. JOHN MONTREAL

DEPT. 106, 39 Dock ST. JOHN MONTREAL

DEPT. 106, 100 James E. ST. JOHN MONTREAL

DEPT. 106, 1137 King W. TORONTO



The Survival of the Fittest

Tried in the furnace of competition and subjected to the test of years of practical use on nearly 2,000,000 farms the world over, the De Laval has proved its overwhelming superiority to all other cream separators.

Twenty years ago there were as many makes of factory as of farm separators, but for the past ten years the De Laval has had this field almost to itself, 98 per cent of the cream separators in use by creamerymen and market milk dealers to-day being of the De Laval make.

It has taken the inexperienced farmer a little longer to sort the true from the untrue, the wheat from the chaff, in the maze of confictory catalog and local dealer separator claims, but year by year the ever-increasing proportion of farm separator buyers is reaching the same conclusion as the creameryman—that the De Laval is the only cream separator they can afford to buy or use.

Many other cream separators have come into the limelight of publicity

for a few short months or a few short years, claiming to be "as good as" or "cheaper" than the De Laval, but their users have sooner or later found them lacking in some one respect or another, and even where a few have seemingly done well their users have come to learn that the De Laval was a still better machine.

The unfit or the less fit cannot possibly survive for long in separators or anything else. Think of all the separators you used to see advertised so extravagantly in your favorite farm papers? Where are they now? Why do you seldom, if at all, see their names mentioned? Simply because the fittest must survive and the others must fall out of the race.

The De Laval has triumphed over all other separators, and its supremacy is now almost as firmly established in farm as in factory separators because its separating system, design and construction are essentially different from and superior to other separators.

DeLaval Dairy Supply Co., Limited
MONTREAL PETERBORO WINNIPEG VANCOUVER
50,000 Branches and Local Agencies the World Over

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