

Vol. XVIII.

No. 6.

The
D. N. G.
Review

MARCH

1906

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TELLS

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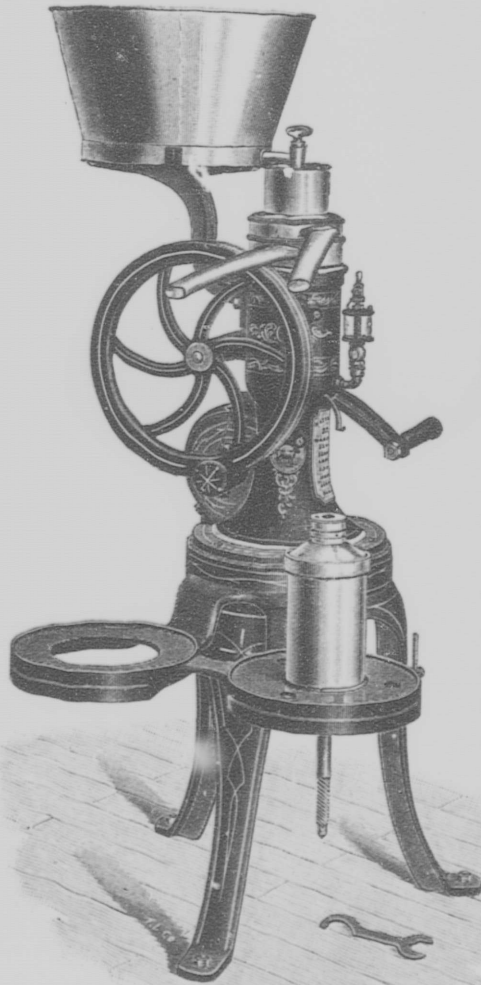
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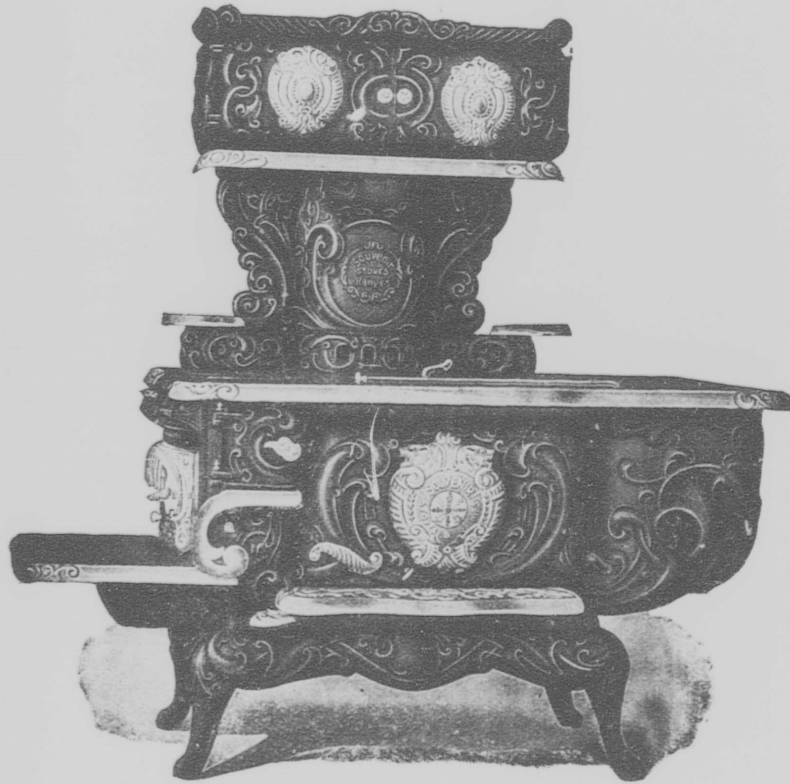
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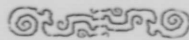
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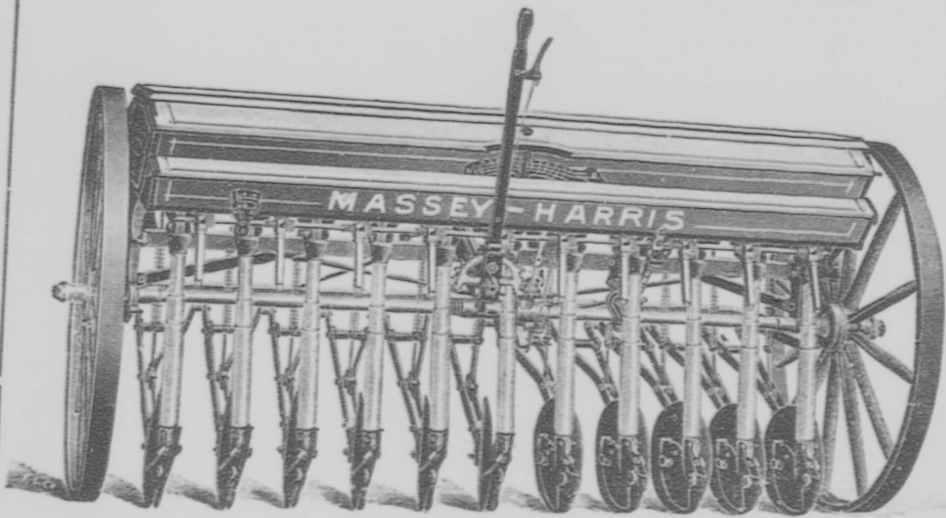
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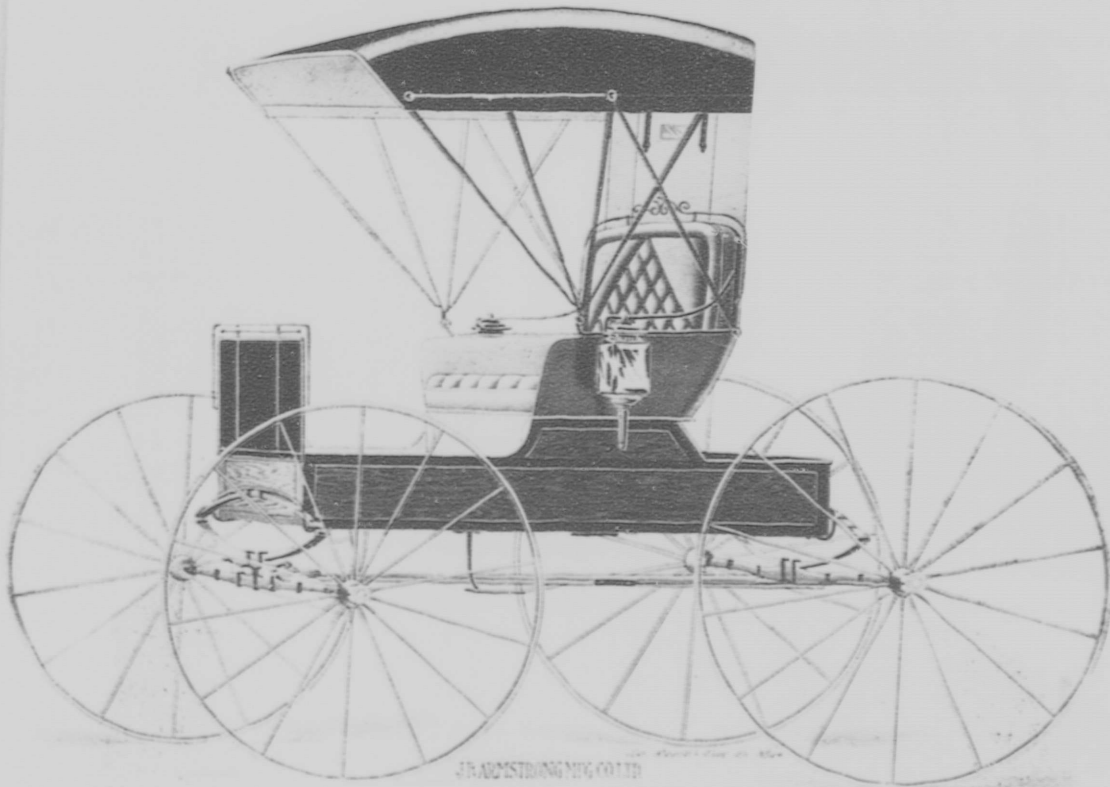
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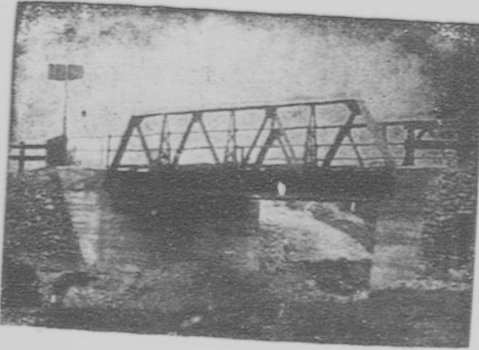
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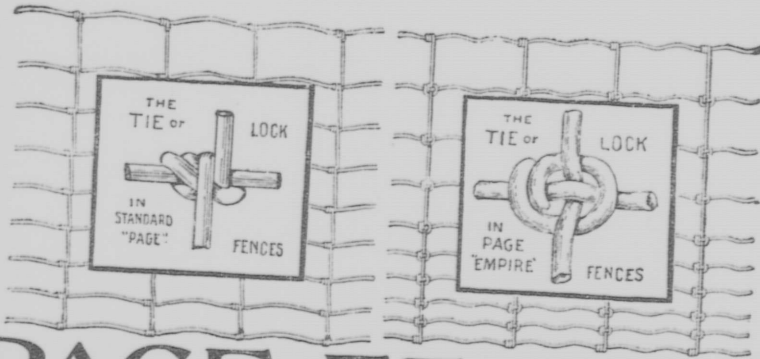


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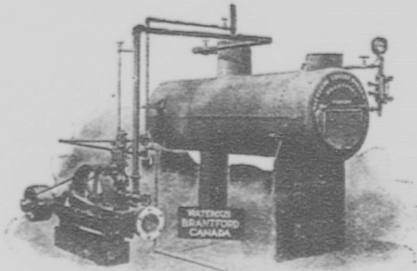
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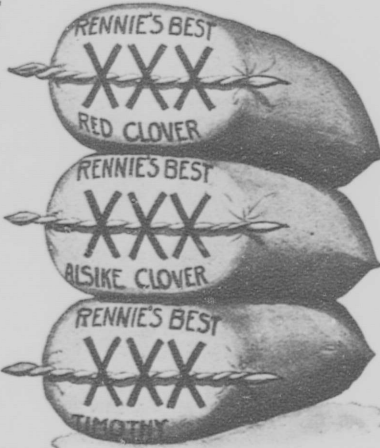
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The O. A. C. Review

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

THE DIGNITY OF A CALLING IS ITS UTILITY


VOL. XVIII.

ONTARIO AGRICULTURAL COLLEGE
MARCH, 1906.

No. 6

Agricultural Economics

BY WALTER JAMES BROWN, B.S.A., LL.M.

O subject, at the present time, is more worthy of serious study than economics; but unfortunately it is not popular, and is very imperfectly understood by a large percentage of the people, especially by agriculturists as a class. It has been even defined as the "dismal science." One reason for this unpopularity is that hitherto economic investigation has fallen for the most part into the hands of lawyers and men of letters, not into the hands of those who have had a genuine scientific training. In other words, its cultivators have lacked that sound preparation in the sciences of inorganic and vital nature, which is necessary to supply a proper basis of doctrine, and furnish lessons of method. Their education has been largely of a metaphysical kind, hence, economics under their treatment has retained much of the form and spirit which belonged to it in the seventeenth and eighteenth centuries, instead of advancing with the

times and assuming a truly positive character.

Many of the readers of this magazine are probably thoroughly acquainted with the meaning and scope of the word economics; but to the few who are not familiar with its use the following explanations may be helpful. Economics, regarded by earlier writers on the subject, particularly by English economists, simply as the science of material wealth, is now coming to be looked upon as the science of man's temporal well-being in the widest sense. It may be divided into three great branches: (1) pure economics, the science of value or exchange, which concerns itself only with general principles, and has often been restricted to purely material considerations; (2) social economics, which applies these principles to problems connected with the growth and well-being of organized society, and (3) national economics, which studies them from the point of view of a statesman, and treats of such questions as the tariff, taxation,

currency and public education. Economics has also been divided, since the early days of the science, into parts treating respectively of the production, the distribution and the consumption of wealth. A more popular and clearer division of the subject is current, namely, political economy, political science and sociology; although some writers claim that sociology is the largest science and embraces the other two. However, the arguments advanced in support of this view need not be considered here. Political economy properly understood is the science of the industries. It discusses such subjects as labor, wages, capital, money, rent, value, etc. Its aim is to investigate and explain the nature, relations and laws of the three constant factors and elements of the industries—human wants, work and wealth. Political science deals with the form and principles of civil government, and the extent and manner of its intervention in public and private affairs. It is a department of the science of civics and includes the principles upon which jurisprudence is founded. Sociology is a branch of ethnology, and treats of the origin and history of human society and social phenomena, the progress of civilization, and the laws controlling human intercourse. It is a philosophical study of society. Dr. R. T. Ely says: "Sociology deals with all the phenomena of society; that is to say, with all that concerns men living together and having certain necessary, agreeable and desirable relations with one another."

The subject of agricultural economics is a division of political economy, and is sufficiently comprehensive to require a large volume for its adequate treat-

ment, consequently within the limits of this article, nothing more can be attempted than to outline one or two of its important phases. If we view political economy in the light of a science which treats of the relations arising among men in their efforts to gain a livelihood, and of the relations between men and the physical universe, consequent upon these efforts, it will be easier to understand the meaning of the term economics as applied to agriculture. It should be remembered also that one of the first principles of production in any human industry is that the energy required to satisfy human needs should be used with the greatest possible economy, "not that men may work less strenuously, but that they may live more abundantly." Agricultural economics is really the science of earning a living on a farm, or by farming, and treats of the principles which should guide those engaged in agriculture in the expenditure of energy in the production of saleable commodities. In its broader sense it treats of the principles which should guide those institutions which are necessary to impel the promoters of agriculture to do that which conserves the interest of society as a whole. This will be understood when it is borne in mind that agriculture is the basis, in most countries, of national wealth; in fact, Quesnay claimed that nature, by which he meant the productive powers of the soil, was the sole source of a nation's wealth. He believed that agricultural labor was the only productive industry, all others being sterile. That this labor, when it produced more than the farmer and his household consumed, was the origin of all wealth. He advocated that a national policy should do nothing to de-

velop such sterile industries as commerce and manufactures, but merely remove all restriction from agriculture, from the trade in grain, etc. His theories have been applied, with no small measure of success, to the national policy of France. As is well known, agriculture is to-day practically the only source of wealth of the French nation, which, in spite of calamitous wars, reckless financing and numerous devastations, is one of the richest and most powerful nations in Europe.

In Canada a new era in agricultural development has dawned. For many years our energies have been devoted chiefly to working out a scientific basis of production. Corps of specialists have been employed and a large amount of money has been expended in solving many of the problems of tillage, breeding, selecting and feeding cultivated plants and domesticated animals. As a result, sufficient data is now available to enable the practical farmer to undertake his work intelligently, and place his calling upon a basis of equality with other scientific and learned professions. From this time forward the attention of the agriculturist may be devoted more especially to such questions as farm organization, selection of competing crops, relative intensity of culture, the development of animal husbandry, dairying, etc., in their economic relations, the size of farms, the forces and conditions which determine the prices of agricultural products, the value of farm land and equipments under different conditions, farm labor, transportation, markets, etc. These questions have been forcing themselves upon the consideration of many farmers and have received all the attention that the circumstances would permit; in other words, the more

progressive farmers of the country have endeavored by all the means in their power to put their whole system of husbandry not only upon a scientific basis, but upon a business basis as well. As these questions are studied and discussed in the light of economic truth, by farmers throughout the whole country, and a simultaneous effort is made to solve them, the industry of agriculture in its various phases will receive a strong impetus, and it is safe to say, will advance more rapidly than at any time in its previous history. During the past five years in the Province of Ontario alone, the value of farm land has been increasing at the rate of \$40,000,000 a year; but when each acre, animal and implement is doing the best work of which it is capable, under an intelligent and thoroughly organized system of management, the increase of farm products must necessarily be considerable, and the value of farm lands will be greatly enhanced.

To bring about and mature this evolution in agriculture will necessitate a still more vigorous campaign in behalf of agricultural education. It seems strange, but it is nevertheless true, that a scientific agriculture is one of the latest attainments of even enlightened and progressive nations. Many countries that have made rapid advances in all the other arts seem to lag behind in this, importing food for large numbers of their people from abroad, when they could easily have raised enough and to spare at home. Even Canada, which is above everything else an agricultural country, imports from the United States each year farm products aggregating millions of dollars in value. The greatest bulk of these products is made up of our common staples. It is true that the agri-

cultural classes have a strong tendency to cling to old, and, in many cases, obsolete, methods of tillage, etc., and often refuse to employ the same foresight and enterprise that is essential to success in commerce and manufacturing. This is due in part at least to their comparatively isolated situation, their distance from the great centers of population and the imperfections of their daily education, resulting from a lack of contact with other minds. The farmers are in many sections a very conservative class, and cling to old traditions with great tenacity. During the past few years, however, a remarkable change has taken place in nearly all the Provinces of the Dominion, and scientific agriculture has become a potent factor in our national progress. Without a thorough knowledge of the characteristics and relative values of soils, farm crops, breeds of animals, systems of culture, etc., it is practically impossible to decide intelligently the various problems that enter into the economics of production. Hence the absolute necessity of a scientific and practical foundation upon which a rational and workable system of commercial agriculture may be constructed.

At one time in this country each farm family, or each small community, tried to produce for itself all the food, clothing and shelter necessary to its well-being—each family carried on both agriculture and manufactures. That was a time when the farmers were self-sufficing; such a system was applicable and essential to pioneer life. But today we have found that a given amount of economic activity will produce the means of satisfying a greater number of wants when each man devotes himself more or less exclusively to one line of production. This specialization

brings larger returns, because, (1) some parts of the country are especially well suited for the production of certain products; (2) some men are especially well fitted for performing one kind of work, while others can best do something else, and (3) any man can accomplish more when he devotes all his time and attention to one kind of work than when he changes about indefinitely from one thing to another, so that he never acquires a high degree of skill in any line, to say nothing of the loss of time in making changes. Applying these principles, we have, as a result, a highly specialized commercial agriculture.

The first problem the modern farmer has to meet is that pertaining to the selection of land, in which he considers its character and location, and the kind of management necessary to be employed to enable him one year with another to win the largest net profits. The second problem is the relation of such factors as horses, cattle, machinery, buildings, etc., in their application to economic agricultural production. A third problem which should be considered at the same time as the first two, is that pertaining to the location and surroundings of the farm home. This resolves itself into two phases; first, the providing of a source of food supply such as a garden, in which a variety and abundance of fruits and vegetables may be secured primarily for home use, and secondly, the creating of beautiful surroundings by planting flowers, shrubs and trees. Touching upon this matter, one of the greatest economists, John Stuart Mill, has said: "Solitude in the presence of natural beauty and grandeur is the cradle of thoughts and aspirations, which are not only good for the individual, but which society

could ill do without." After the farmer has satisfied the desire for food, clothing and shelter, by making proper provision for their attainment, it is possible for him to give attention to the creation of beautiful surroundings, but to enjoy these he must have leisure, and must avail himself of the means of acquiring it, that is, by systematizing his work, and giving proper attention to its intellectual demands. If he follows the rule of seeking the largest net profits, he will not be bound to any one system, and will produce for home consumption, just to the extent that he can produce more cheaply than he can buy upon the market.

The fourth problem to be considered is the organization of the farm. The land has been selected, the equipment necessary to carry out his system of husbandry has been decided upon, his home and surroundings provided for, then comes the question of the choice of crops, and the place of animal husbandry in the economy of the farm. In actual practice nearly all these problems will be present for consideration at one time, and the working out of the details under each head will be carried on simultaneously. He will have to decide, for example, the quantity of land, labor and implements which shall be brought under one management in order that the best results shall be attained. The crucial question to be answered in this connection is the actual skill, amount and value of knowledge, and the degree of efficiency and activity possessed by the manager. Upon the answer to this question, and the limits fixed thereby, hinges the whole problem of farm organization.

Assuming that the management is

reasonably efficient, the fifth and last problem to be introduced here, involves a consideration of the character and demands of the available markets. A system of commercial agriculture has for its object the securing of the largest total net profits for the farmer; but in view of the fact that the prices he may secure for his produce are fixed within certain limits, it is essential that he should obtain a margin of profit by reducing the cost of production of each article to its minimum. The farmer must know the absolute cost of producing each bushel of grain, pound of meat, basket of fruit, etc., that he sells, and should, if he expects to continue in business indefinitely, sell only those articles that represent in the largest measure his skill, and carry away from his farm the smallest amount of those ingredients which are essential to maintain his soil fertility. On the other hand, in order to compete successfully in the open markets of the world, it is necessary for the farmer to study the forces and conditions that determine the prices of agricultural products, that he may, for example, make a forecast as to what will be the exact quantity and character of the produce he will likely sell best at certain definite dates in the future.

The foregoing survey of the subject of agricultural economics, while exceedingly superficial, may serve some useful purpose by calling attention to a new and practical science that deals with many of the most vital questions in which agriculturists are interested. It may also suggest to the agricultural student one or two avenues for special inquiry and further study that ought to yield an appreciable amount of pleasure and profit.

Why Do We Do It?

By JOS. E. WING

(Continued from February Number.)

So after all there was in me a desire to teach, to have others like the things that I like, and why I should feel that way I can not yet fathom. It is a motive too deep for me to grasp. What does it matter to me whether my neighbor has artistic impulses and makes his handiwork express his artistic sense or not? Is it because I, in turn, must drive by my neighbor's house? It must be that. So after all that motive is all selfish in me. Unless perhaps I feel that the neighbor, in learning to develop beauty about himself, should grow to love better his home and surroundings, and be a better and happier man for it. It is always a comfortable feeling to know that your neighbors are well and happy. That must be a part of the reason why I desired my neighbors to see these stone gateposts, and hoped that the posts would approach the ideal that lay in my memory, and, by the way, they did not reach that ideal! But that is not to be expected, in the nature of things. The thing done is but the shadow of a dream, and the shadow is usually indistinct compared with the vividness of the dream.

But there are other motives in those gateposts. First, I tried to build them so solidly that they would endure without repair for a century at least. I went to much trouble to imbed within them bars of iron that would prevent them cracking, to brace them beneath the soil so that they should never get awry, and in this hidden goodness of those posts I naturally take some pride, it was not done for show! For what

then? It bespeaks of old age coming on and dread of trouble and care. It is the prudence of one who dreads to see things tumbling down or getting awry. It is the feeling that one has that he wants his fences tight and his gates strong. Barons had that feeling in the middle ages and called upon their serfs to dig for them deep moats and pile for them walls of massive stone. It is fear, and a desire for an easy, secure life. It is a desire to sleep long and undisturbed by marauders. True, with me the marauder would be but a passing cow, but the instinct is the same. It is part of the longing for immortality, the longing to have things endure.

Now, there is something else built into those two posts. Let's see if I can express it. When, after living in our new land during my youth, I went away to an old land, and saw there the walls of stone, eaten by the tooth of time, crumbling to earth again, loved by the little wall flowers and nourishing stray clumps of grass, there awoke in me a new instinct, the veneration for the old, and a yearning to know my Great Grandfather, to walk beside his crumbling walls, to know of a certainty that I am linked with that mysterious and fascinating past.

And I came back to our new land with these pictures in my heart, and a desire to see cheap temporary wood pushed into the background and permanent things take its place. Had I been a rich man I would have loved to build of stone, to build, and yet to build, as the squirrels bury themselves in their

never-to-be used stores. But being a poor man I could only build of stone these two gateposts to remind me of days in other lands, of a day in California, of days in Kentucky, of a region in Virginia, of a corner of New York, of England and Island of Jersey and Normandy in France. So there is built into these posts this desire to bring and transplant into Ohio's soil somewhat of the flavor of other lands. And this is doubtless the strongest motive that I had at all, this it was that led me years ago to plan them and draw their outline and lay it away, and to begin years ago to save stones for them.

On the top of one of these posts is a simple iron standard, holding out an arm, on which a lantern can be hung. Sammy Robinson hammered out that standard and arm, and I prize it because it has in it the inherent goodness of the man who hammered it. It is an expression of his life, of the rugged honesty of the man at heart, it is strong enough to hold a ton's weight. I did not put that up through vanity altogether, for indeed I feared that men would laugh, but it seemed to me that it was needed there to make the thing complete, and as I set it in place my mind ran ahead to happy days that we hope may come, when guests would arrive a-foot or in carriages to make glad the old house in the edge of the woods, and the lantern swinging there would be both a guiding ray and beacon light. So there was more of the instinct of the squirrel, the gathering together of material for pleasure in the distant future.

And then, there is the impelling force that moves all of us, the dislike to die and be forgotten, the longing for some sort of life after death, if only the life of other men's memories, so that I thought as I laid the rocks and mixed

the cement, "some day men may say, 'old Joe Wing made those posts away back in the last century. He owned this farm then. He planted these trees.'"

You see, friends, I am laying bare all of my heart to you. I do it because I feel so sure of your understanding me, and I feel so sure, too, that we are all so very much alike that what one of us feels the others feel too, and I am seeking honestly for the reason why we do things. I do not see that one knows aught of others that he does not gain from examination of his own acts and impulses.

Why do we do it? Habit comes in and is a most powerful influence. Habit is indeed a more important thing than we realize. Habit is much more than half of the reason why we do it. Let me illustrate. One day I set out on a journey. After I had seated myself in the car I remembered that I had an unopened letter in my pocket. I took it out and instead of opening it at once I began to look out of the window, to watch the disappearance of the familiar fields of my native country. As I sat looking out of the window I all at once became conscious that my right hand was searching for something in my left breast pocket. I was astonished at this and puzzled not a little to know what it was that I was unconsciously seeking. Finally it occurred to me what it was that that intelligent right hand of mine had sought. It was a little aluminum paper knife and letter opener, that a few years before I had carried in that pocket. I had never carried it when at home, but in my travelling clothes. There was then a sub-consciousness, a directing force that took note of my needs, and, without my attention, directed my muscles and set

them to doing the thing that they had often done before under similar circumstances. So the act of seating myself in that car, of holding in my hand the unopened letter, set this act going, and the trained hand automatically sought for its helper, the paper knife, that had so often been found in that pocket a few years back! The wonderful part of it was that what the thinking we should have forgotten, the hand had remembered. Every day I see more and more of the effect of habit. It is the most discouraging thing in the world, this force of habit, and of our being bound to habits that are clogging, are destructive, are degrading. Why, if it was not that men get into the habit of eating too much and drinking too much the good doctors of this town would hardly ever be called upon save at childbirth. Did you ever think what it is that makes the great diversity of types of people in the world, and in our own village? It is largely habits fixed in them by early environment. Many a man is a good man because he has formed the habit of being kind and honest. Many a man is dirty and disagreeable because he has formed that habit. Now, I am talking in generalities. I want to get down to bed rock. Why do I do certain things? Because, having done them before, I am conscious of my power to do them. Suppose it is a bad thing that I do. The memory, the habit, of having done it before comes to me. Maybe it is a thing that I do as a result of sudden impulse, of passion. Maybe it is a deliberate act of wrong doing. There is with me the most curious and hard to be understood underlying directing force. There comes to me all at once the conviction, yes, the knowledge that I will do a certain

act. It is probably something that I don't wish to do, something that my conscience does not approve. I reason with myself. I say, "you are strong, you can do as you please in this matter, you can go as far as you please, and then turn away." So, often quite gaily, I dally with the temptation, saying to myself the reassuring words that deceive. But all along there is the inner consciousness that I am sure to end by doing the thing that will cause me remorse. After the act is done one wonders why, and feels sure that never again will he be so weak. I feel that I know so much about temptation that I would like to warn every human soul, beware of the first fall! The first time that you violate your own conscience, the first time that you do what your sense of the ideal frowns upon, you have made a groove in your soul, and in spite of you sooner or later your action will slip again into that groove. The oftener the groove is used the harder it is to keep out of. I do not believe at all in resisting temptation. I believe in fleeing from temptation of any sort as though the devil were after you, as, indeed, he is if you linger. Here I am assuming that all men are like unto myself. There may be men who grow strong while dallying with evil. I am not one of them.

Why do we do it? A great many puzzling things are done because of men's pride, of their love of the approval of their fellows. Call it ambition, it is all the same. Boys learn to smoke and to drink whiskey, not because they expect to get great pleasure from these acts, but because they see men doing these things. I know that I learned to smoke cigars because it seemed to me that by so doing I put myself into a class of young men older

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than myself whom I admired. They were worldly, they dressed well, they were not bashful and awkward as I was. I felt that to be like them, to be unafraid and unashamed and to be able to talk easily with the girls and to be admired by the girls was the thing most to be desired of anything in the world. To learn to smoke seemed the first step. Therefore, I learned, and, curiously enough, the act of holding a cigar in my mouth seemed to me to put me nearly in the class of these older men. So I smoked until another class of men and women, a class that I admired yet more, showed to me their disgust and disapproval of a boy's smoking. Then I promptly quit smoking! There are ideals that spring up from the inner man, no doubt, but depend upon it, most of our ideals are borrowed ideals. The young man has a lot to answer for, he is worshipped by the boys below his age. Ten times stronger than his father's advice is the example of that older boy who has the admiration of his own lad. So we do it because we want to be thought brave and manly. Nearly every man is proud of some thing that he does, some trait that belongs to him. You might be astonished to know that the drunkard is often proud of his abandoned condition, proud of his disregard for law, for order, for money. It seems to him that he is thus showing his strength, his courage. There are plenty of men proud of their ignorance, therefore, they will not learn if they can help it. There is nothing in the world more valuable than ideals, for they lead men. Make the ideals higher, and make more universal the high ideals and a lot of things that we do we will cease to do. Hero worship is a help to make a man do his best. We do things

because men whom we admire do them. An illustration of that. One day a few weeks ago I was in Kentucky on a special train preaching the growing of Alfalfa. The work was hard, wearing, too hard altogether. I was conscious that I was working too hard, getting too tired. Towards the last I felt inclined to flunk, to say "it is no use, I am done. Your audience may go to the deil." I had sufficient reason, the route was twice as long as I had agreed to go on. Nearly all my help had gone, and I was left with a very heavy end to carry, and, as I have said, I was very weary. Just then I happened to remember Teddy Roosevelt, how he gloried in work, how nothing was too hard for him to do. I thought how he would probably enjoy the very work that I was doing, and how he would welcome each fresh audience as a new opportunity to do good, and then I grew ashamed of my weakness and childishness, ashamed of my fatigue, and went at it again nearly as strong as ever. That is an illustration of the influence of external forces. The inner man of me was beaten, ready to retreat, a coward. Then there came the rallying thought, "this is cowardice, this is to be ashamed of, be a man, be as much of a man as this President of yours, whom you love and admire." And that helped me out. So we do things that are not just natural to us, that are better than is in us, because of the influence of other men whom we admire. Therefore I am a believer in hero worship. But for all that I must admit that Teddy did me up pretty well on that Kentucky Alfalfa Special, that the promptings of the inner self, call it cowardice if you like, was self preservative. I wish I knew just how long Teddy would go on when he was

wearily before he would insist on having rest. And I wish that I knew whether he has in his mind and heart the image of some one else whom he admires and who prompts him to do things better than is natural for him to do! What a lot of things in this world we would like to know, and never will, because men hide their real selves from their friends.

Why do we do it? I think that I know why some men and some women have done grand things in the world, things that seemed beyond human will and volition beyond human calculation and conception.

That is when these men have in some manner gotten a little way beyond the house of clay in which they dwell and have realized in some faint degree the meaning of the Universe, the beauty of it, the goodness of that which we call God, the exceeding beauty of a life of helpfulness, of a life of love, and have felt the divine joy of renunciation and service. There come times I hope in every human soul, every soul at least that is not warped and twisted and imbruted by appetite and hatred and lust, there comes times when all at once there is a feeling, "why I am a part of this wonderful world, I am one of these wonderful beings that we call men, there is so much of beauty in the world, there is such joy in comradeship, there is such possibility of goodness and of kindness in me and in all men. Why, I must set out to see what I can do to do my part in this world, to make it as happy and as pleasant and as clean as it may be." And that is the time when you give the hearty hand-clasp to your friend whom you feel to be despondent, maybe over his business, the smile and goodly greeting to the old man whom you know to be stumbling toward his

end, the smile and merry word to the little child whom you meet, you feel that it is worth while to kick the stones out of the path and to stop to uproot weeds and to plant trees and flowers. This thought, this uplift, this hope is all that can redeem man and lift him up from the level of the intelligent brute. This feeling that after all we are a thought of God, a part of God, that this good, sunny, showery, growing, blooming world, while we may never understand it, it is all for us, that we are infinitely more and greater than these bodies of ours and can go infinitely farther than we can take them. Fear drives us to do some things, no doubt, but love, and dawning understanding should cause us to do many other things, and much more worthy. Love, and faith, will prompt us to do the best things in the world. If I might go backward a little here I would say what a misfortune it is that men have lost so many of their old beliefs! Do you remember that strange old man, Johnny Appleseed, who wandered in the wilds of Ohio, with his uncouth attire, wearing a mush pot for a hat on his head, carrying on his back a bag of apple seeds, in his inner pocket a copy of the New Testament? Do you remember how he visited all the pleasant valleys where some day men would come to dwell, and with prophetic insight planted apple seeds and surrounded them with brush fences? It was in a day when Indians abounded, and they scalped whom they would, but they never touched Johnny Appleseed. He had no fear of wild man or wild beast or raging rivers or tempest or hunger. He went calmly through the forest, planting his apple seeds and tending to his little nurseries. Some days he would come to the cabins of the set-

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ters, and there he was ever welcome. He would sit at table with them, and after the repast he would tell to them, the rough men, the homesick women, the wondering little children, to all of them he would tell the wonderful story of a Man who was God and who came to earth to dwell and to teach men to love and not hate, to plant and not tear down, to forgive and be kind, and compassionate one with another. Then he would pray with them to that Son of God, that to him was so real, his guiding star, his reason for doing, and after that he would leave them to go on his way to others needing him in the distant forest. What a truly great man! How much greater than many a general who for his wars has monuments piled high! What made him so great? That undoubting faith of his. That feeling of his being a part of God, of having some of God's work to do, that joy in doing what he conceived to be the work of the Master. I say to you, my friends, that if ever any one of us becomes a great man it will be through the adoption of an ideal like unto that which old Johnny Appleseed served. We will see a light, somewhere, oh there are as good chances of service as ever there were, and we will follow it as the wise

men followed the star. We will dream a dream, some how, and make it come true as did Joan of Arc, so long ago. There are as great things to be done as have already been done. There is call always for volunteers to do them. There is right here in our own village work to be done. There are ideals to be created, ideals to be held up, there are younger ones than us to influence, there are boys going out from us to be men, and girls going out from us to be women, it is for us to tell them the story of the meanings of life, to awaken in them the highest ideals and the holiest purposes. There is not one of us here but has his influence. Why, I never see Doctor Nincehelsor drive down our road, but I feel within me a quickening sense of gladness and cheer. He inspires it within me, and radiates health as he goes by! It is better than the pills he gives, this presence of him! And so of every one of us, others are doing things because of what we are! It is a startling thought, is it not? It is a solemn thought, when you come to think it over. Now, gentlemen, pardon me for this preaching. I have only skimmed the surface of the greatest subject I ever tackled. "Why do we do it?"

Oct. 31st, 1905.



Sketch of the Argentine Republic.



T this time when there is so much discussion of South American countries and affairs, it may be of particular interest to take a passing glance at the Republic of Argentina.

Argentina is so far away to the south of Canada and so apart from the regular routes of North American travel that only a minimum percentage of people realize that in the southern end of the western hemisphere, there is a nation of such size, resources, possibilities and progress that it is entitled to the attention and respect of the world. A diversion of study and investigation would exert a mighty influence in educating the North American people to a realization of the fact that they should devote more time and energy to making the intimate acquaintance of their Latin neighbors. It would demonstrate what

Latin America can do and is doing under favorable conditions of temperate climate and national wealth. It might teach some critics of Spanish America to remove the "beams" from their own eyes before they point out the "motes" in those of their southern neighbors.



An Old Timer.

buying and selling capacity in excess of Japan, with 40,000,000 people, and China, with 400,000,000!

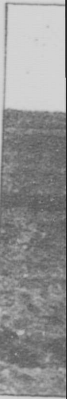
Canada's commerce with Argentina is very small, and there is no reason why we cannot negotiate a commercial treaty, giving to the Argentina some advantages that could not seriously injure Canadian industries. In this way, she would not only sell far more to Canadians, but buy from them in greater proportion. Pure bred stock is bought from the United States at very great prices. Why should not Canadians sell to us the pure bred stock, which is required in our broad pampas? Canada has the advantage over the United

Argentina's Vast Commerce.

The Argentine Republic, as it is called today, is a very prosperous and progressive country. Its foreign commerce reached, in 1905, the immense total of \$505,000,000 gold. This was greater than that of any other Latin country. It exceeded the foreign commerce of Japan, of whose marvelous progress we now hear so much, and it went far beyond that of China, concerning which there is general discussion. In other words, Argentina, with only 5,000,000 people, showed a

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States in that her stock is in much better condition, and we are looking forward to the time when Canada will supply us not only with live stock, but also with farm machinery.

Her Area and Temperate Climate.

The immense area of Argentina can be easily appreciated by remembering that if a line were drawn from the Canadian border to the Gulf of Mexico, Argentina would equal all the country to the east thereof. It covers, approximately, 1,200,000 square miles, of which a large proportion is adapted to the homes of a progressive race. A most important fact, however, that too often is unappreciated in the northern hemisphere, where the south and South America are usually synonymous with heat, is that Argentina is located almost entirely in the temperate zone. It extends from 55 degrees west to 70 degrees west, and it reaches from 22 degrees south to 55 degrees south. The greatest length is nearly 2,000 miles; its greatest width is about 900 miles, but it narrows or tapers down in the Patagonian end.



Breaking Up the Prairie.

The Estancia.

The typical Argentine "estancia," ranch or stock farm is a tract of land varying in size from 3,000 to 700,000 acres. The average may be estimated at 25,000 acres.

All estancias are organized and managed more or less on the same principle; the property is fenced in and divided by wire fences into paddocks or fields, varying from 200 to 3,000 acres, and having one, two or more troughs and wells for watering the stock, when the property is not crossed by streams; a given number of paddocks are used for breeding, and the best quality camp is reserved for fattening; the head station or estancia house is situated more or less in the center of the camp, and comprises the owner's house, the manager's house, the laborers' or peons' quarters, the sheds or deposits for keeping implements, hides, wool, grain, etc., and for shearing; the trough for dipping sheep, the coach house, and the poultry yard. The central station is generally surrounded by an orchard, vegetable garden, and a more or less large area of timber; cattle are kept in separate paddocks,

according to sex and age, and are worked and looked after from the central station, the stud herd and milch cows being always kept in the immediate vicinity of the central station. Sheep are kept in flocks of from 1,500 to 2,000, and are shepherded by men, living with their families in detached houses, generally built on the exterior limit of the property or on the lines of the divisions of the paddocks. All breeding estancias keep cattle, sheep and horses, there being hardly any place where one kind of stock is exclusively kept. No sheep and very few horses are kept at estancias where fattening steers is the principal object. When dairying forms part of the work of a breeding or fattening estancia, milch cows are kept in herds of 150 to 250 by dairymen, who have charge of the care and milking of each herd, and get 40 to 50 per cent. of the profits obtained in the sale of milk or cream, these articles being forwarded daily to the factories or other wholesale or retail



Ranch Life. Proprietor's House.

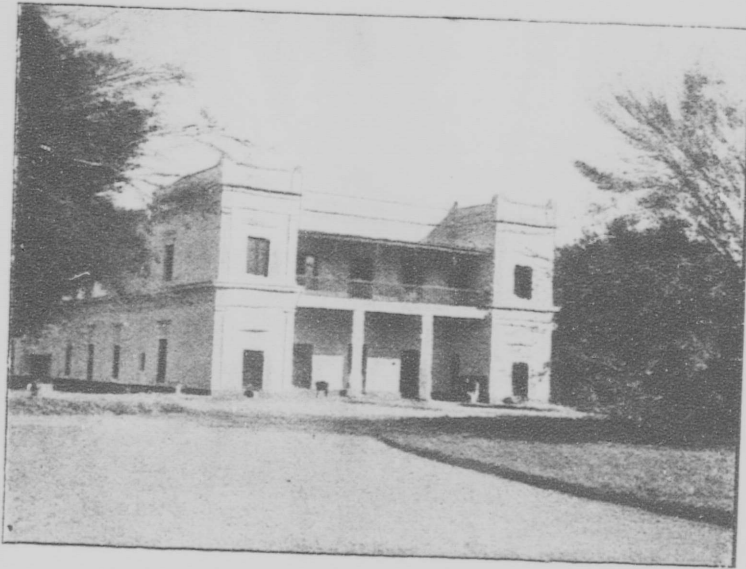
sellers of dairy products. When agriculture is combined with animal industry it is carried on by families, who obtain 150, 200 or 300 acres of land, and are supplied with plows and the necessary horses and bullocks to work them, harrows, etc., and get half of the crop for 2, 3 or 5 years, the reaping and threshing being divided. Sometimes the estanciero supplies only the land and the working animals, and gets 10 or 20 per cent. of the crop, paying only the threshing expenses of his share.

Stock-raising in the Argentine is about the best paying business existing, owing to the low value of purchased or rented land and live stock, and to the system of extensive breeding on natural pasture. The profits obtained naturally depend on the capital invested, as, owing to the system of breeding, the expenses do not follow in arithmetical proportion to the number of

stock kept, but are relatively lower as the number of stock is greater, thus the cost of tending 1,000 head of cattle would be about equal to the expenses required for 500. Consequently, in the case of persons settling with a small capital, there is always a great advantage in association, as the joint expenses are less.

Estancia Life in Argentina.

The ranches are owned by wealthy Argentines, who res' de in Buenos Aires during the winter and upon the ranches in the summer. The stranger at first stands aghast when his host, a wealthy estanciero, calmly tells him that he has grazing upon his broad pampas 60,000 sheep, 40,000 cattle and 10,000 horses! Again, when the hospitable owner takes him for a little morning gallop to one corner of his ranch, and he finds that to reach that corner he



Ranch Life—Manager's House.

must ride hard for five or six hours from the house, which is usually located at the center of the estancia, he begins to realize what farming means in Argentina.

The hospitality dispensed at these estancias makes life on them fascinating to the visitor. The house is usually roomy, cool and comfortable, and situated in a picturesque spot, where trees, flowers and fruits abound. As Argentine men do not believe in race suicide, and as their families usually contain several beautiful daughters, there is always abundant social enjoyment for the male guests. There are also sons, who carefully entertain any visitors of the fairer sex.

The Metropolis of South America.

Let us now have a passing view of Buenos Aires. There you find a city of 1,000,000 people, that is growing faster than any city of the United States, except New York and Chicago, and can compare favorably with the Euro-

pean capitals in general appearance. It is different from all South American cities in size, prosperity, activity and attractiveness.

It has magnificent public buildings, imposing business structures, palatial clubs, stately residences, spacious hotels, elegant opera houses and theatres, broad boulevards, beautiful parks, excellent schools, libraries and museums, and handsome churches. It can pride itself on its electric street car system, its well-lighted and paved streets, its telephone and electric light facilities, and its water and sewerage works. These, indeed, are not perfect, but there are few municipalities on this continent that have as good an average as Buenos Aires in these respects.

It would not be well to close this article without mentioning what is being done for education in Argentina.



A Street of Buenos Aires.

The Federal and State Governments expend \$13,000,000 to educate 400,000 children, who attend the public schools.

During the year 1892, there were in the Argentine 2,800 schools, public and private, with a roll of 246,532 students, and 6,995 teachers. During the year 1903, the number of schools increased to 5,000, with an attendance of 500,000 students. The number of teachers reached 12,000.

The University instruction is given in two schools of engineering, four schools of law, three schools of medicine and pharmacy, one of sciences and letters, one school of mines and several schools of agriculture and veterinary science.

The Government is striving now to found more industrial, technical and agricultural schools. With this object, and in order to form a competent staff, it sends to North America and Europe every year a certain number of young men, to study in their colleges.

PELAYO DIAZ, '07.

The Canadian Seed Growers' Association and Its Work

BY L. H. NEWMAN, SEC. C. S. G. A.



HE people of Canada produce many million dollars' worth of products. The greater part of this vast amount is the product of plant and animal life, and might be greatly increased, since both are amenable to the skill and energy of man. While it is true that the proper use of man's skill may prove a great creative power, yet it is equally true that the neglect of this skill may actually mitigate against this accumulation of national wealth. There is no standing still in nature. "We realize that all things, living and non-living, are on an ordered journey, a journey which is immensely greater than what we usually associate with the term progress, and a journey which by no means necessarily coincides with our limited conception of what progress is." —(Leighton.)

When man attempts to assist nature he puts himself in harmony with her, recognizing and accelerating her laws, and directing her forces. It has long been demonstrated that man can materially assist nature in producing better animals by recognizing and taking advantage of certain principles known as the laws of breeding. So familiar are we with the achievements of animal breeders that little comment is occasioned. Unfortunately, however, these principles have not been so closely associated with plant life, and yet

they are quite as important, and must form a like basis for improvement. Hitherto, people have failed to appreciate the life processes of plants, and have been slow to recognize that they might greatly assist nature in producing *better* plants. Animal breeding is an old and well established art, while the principles of plant breeding were not made known until the latter part of the eighteenth century, and, so far as we can learn, were first turned to good account in the early days of the last century by Thos. A. Knight, a noted English physiologist. Knight devoted his attention chiefly to the improvement of plants through hybridization, while Van Mons, a Belgian horticulturist, operating about the same time, sought for improvements through continuous selection. Since this date much valuable work has been done in the improvement of plants, both through hybridizing and by selection. Hybridization is generally looked upon as the only sure way of forcing plants to vary in character, and has been used largely by plant breeders for this purpose. Since the work of hybridization requires a more technical knowledge than that possessed by the ordinary individual, and since such extreme care is essential in performing the work, it must necessarily be limited to comparatively few outside our Experiment Stations. Fortunately, however, our plants will vary considerably if left to

themselves, thus making real improvement possible, when an intelligent selection is made of those plants varying in the right direction.

By reason of this fact, it is possible for the man of average intelligence to greatly improve his crops, once he understands the underlying principles of improvement along this line.

In view of assisting to a better understanding of these principles, and of directing the efforts of those who are desirous of securing better strains of seed for use on their own farms, the Canadian Seed Growers' Association was formed.

Before outlining the system adopted by this Association, we shall consider further some of the main points to be observed.

First of all, we must learn to recognize that the variations to which our plants are subject are not all due to the one cause, but may be divided into two classes in this respect. The first of these is a variation or change which takes place **suddenly** within the growing plant, the reason for which is difficult to determine. The newly-acquired characteristics resulting from this variation are capable of being transmitted to the offspring, hence the explanation of how we are able to improve upon existing types of plants.

The second class of variation is brought about as a result of an abrupt change of environment, a superabundance of food, air, sunshine or moisture. Plants changed as a result of these factors are not capable of transmitting their newly-acquired characteristics totally, since investigation goes to show that when seed from such plants is sown under normal conditions, these characteristics are not necessarily reproduced. It is, therefore, obvious

that little real improvement can be effected within the strain by selecting plants stimulated to extra growth by external factors.

While this may be true, still the great importance of offering our plants the very best environment possible must not be under-estimated. In all past ages the struggle for existence has been the main factor in determining the nature and character of the plant. Either a plant or an animal will struggle along under most adverse conditions. Improve those conditions, and latent powers, hitherto unsuspected, will show themselves and create great modification. Favorable conditions will also expose to a greater degree the differences existing between plants and will thus facilitate a closer study, of the individuals.

While we have these two great classes of variation in plants, we have still another variation within the individual again, which an examination of a head of wheat or a hill of potatoes will reveal. Such a study would show that in nearly every head of grain there exists a number of smaller kernels, and in most hills of potatoes the presence of smaller ones. Investigation goes to show that the small seed from the productive head is really better for seed purposes than is the large plump seed from the unproductive head. This being the case, it is not enough that we simply "fan" our seed grain, thereby securing the largest kernels, important though this may be, or that we select for seed purposes the most desirable potato tubers, irrespective of the productive capacity of the plant. We must rather take both factors into account if we are to realize the largest returns for our labor. This can be accomplished by means of

the system adopted by the Canadian Seed Growers' Association, before referred to, which system, starting from the beginning, is as follows: The beginner, having decided upon the variety he wishes to improve, secures a sufficient quantity of seed to sow at least a quarter of an acre of land, which land should be in a good state of cultivation and as free from weeds as possible. At harvest time comes the critical point, for it is then he must decide upon the type of plant he wishes to perpetuate, keeping in mind that great law heredity, viz., that "like begets like." Keeping his ideal in view, he should select in the main, from a strong, healthy, vigorous plant, bearing in the case of the smaller grains, as well shaped, productive head and one that is decidedly superior to surrounding plants in this respect, but not so influenced by particularly favorable conditions. *The starting point, once given, all permanent progress lies in continued selection,* carried on patiently and persistently year after year. Each year a sufficient number of heads of the desired type should be selected, to give, when threshed and cleaned, twice as much seed as is required to sow a one-quarter-acre plot again. By selecting an extra quantity of seed in this way the danger of losing well-bred seed through the failure of a crop is avoided.

Modifications of this system are necessary with such crops as corn, but the general principles are the same, and must be closely followed. By the system as outlined, therefore, a member operates his plot with two objects in view, viz.: First, to develop and maintain a high class strain of seed, adapted to the conditions on his own farm, and secondly, to create a supply of such seed for his own use.

The work of each member of the as-

sociation, operating under its regulations, is inspected each year and careful performance records are kept. In this way the history and value of the variety or strain can be determined, as it can in no other way, and in course of time, if sufficiently improved, the strain is registered as pure-bred or pedigreed seed.

While the majority of the members of this association aim simply to produce pure-bred seed for their own use, yet there is a need and an opportunity for many to take up this work as a commercial enterprise and with a view to producing a quantity of such seed for sale. We believe that the distribution of such seed throughout the country would be of great service to the farmers and to the farming interests of Canada, and should exert a wholesome influence as to the importance of using only the best. Our aim should be to reduce the agricultural profession to an exact science, and in no other phase of farm life is there a greater opportunity at the present time than that offered in the production of pure-bred seed. The success of our agricultural students will depend, not so much upon the knowledge acquired during their college course, as it will upon the extent to which they put this knowledge into practice. Someone has said that no education is a true education unless it can be applied either directly or indirectly. To students, therefore, passing from college to their respective farms, is offered a splendid opportunity of applying science to practice and bridging over the gap which now exists between the two. The success of our ex-students in this and other lines will go far to vitalize agriculture and lift it from the ruts of tradition and prejudice.

Canadian Live Stock Association

By H. GERALD WADE

Registrar and Editor Shorthorn Breeders' Association.

THE IMPROVEMENT of our live stock is a most important matter to all Canadians, seeing that Canada is so largely dependent for its prosperity on its agricultural products, which exceed those from all other sources. To improve our live stock, we must employ pure-bred animals, and as, without registration certificates, there can be no guarantee of purity, the proper recording of all purely-bred animals becomes a necessity to safeguard the interests of all concerned. With properly constituted National Records, all avenues for fraud are eliminated, and breeders have records upon which they can depend. Hence a brief history of our Live Stock Associations may prove of interest to the readers of the O. A. C. Review.

The first establishment of Live Stock Records was the work of the late Agricultural and Arts Associations in 1881, the result of the efforts of a few enlightened and enterprising breeders. This work was carried on for fourteen years through their chief executive officer, Henry Wade, and was extensively developed as pure-bred stock increased in the country, and in 1895, when the Association was legislated out of existence, Mr. Wade was appointed Registrar of Live Stock, and carried on the work which had been previously effected by the Arts Association.

At the National Convention, in 1904, a resolution was passed favoring the nationalizing of all records for pure-bred stock kept in Canada. Arrangements, varying slightly to suit conditions, were drafted. These were signed by the Minister of Agriculture on the one side, and by the various incorporated live stock record associations on the other. These agreements provided that the records should be conducted independent of the Dominion Department of Agriculture by the record association for each breed, and that the certificates, before being issued, should be submitted to an officer of the Department, who should affix the seal of the Department if correct.

During the past year, all the different record associations, with one exception, became nationalized. The object of this was to unite the breeders of the various Provinces into one large organization for the Dominion, to keep one set of records, to issue one standard certificate, to secure from the railway companies the continuation of the special shipping privileges on registered animals, and to develop the associations on national lines. Hitherto, records have been kept in the various Provinces, varying to some extent in their standards and methods of administration.

At the last session of Parliament, the act respecting incorporation of live stock record associations became law, and since that time, all certificates issued have been uniform in style and have borne the seal of the Department of Agriculture. The establishment of these national records and the issuing of uniform certificates, will, it is to be hoped, be the means of inducing Canadian railroads to make permanent the present half rates now charged when live stock recorded in the National Records are carried over their lines.

Record Associations. The following is a brief sketch of the Associations whose records have been nationalized.

Dominion Shorthorn Breeders' Association. This Association is the most important cattle Association in Canada, and one of the most important Live Stock Associations on the continent. The Shorthorn was the first breed of live stock to be registered in Canada. Commencing in 1864, a written herd book was opened for that purpose under the auspices of the Agricultural and Arts Association, and the certificates based thereon were found satisfactory to the public convenience until 1867, when a step in advance was made. The registrations up to that time were issued in printed form and constituted the first Shorthorn Herd Book in Canada. This book began a series of nine volumes, entitled the Canadian Shorthorn Herd Book, which continued until 1886. In 1881, a number of Shorthorn breeders who were not satisfied with the standard required for registration, organized themselves into an association entitled the British-American Shorthorn Breeders' Association. Under their auspices, three volumes of herd books were issued, but in 1886 it was seen that the interests of the industry would be best served by having in Canada only one standard of qualification for certificates for registration and a movement was set on foot by which this was accomplished. As a result, the present association was formed under whose auspices all Shorthorn registrations since that date have taken place.

This Association has published twenty-one volumes of its herd

book, making a grand total in these twenty-one volumes of 119,809 pedigrees. Volume Twenty-two of the Herd Book was closed on December 31st last, and will contain 12,000 pedigrees. It is now in the printers' hands and applications are being received for Volume Twenty-three. This Association has a membership of over 2,500 members, comprising a very large proportion of the leaders of the live stock industry throughout Canada. The President for 1906 is Mr. W. G. Pettit, of Freeman, Ont.

Canadian Ayrshire Breeders' Association. In 1872 the registration of Ayrshire cattle was started and a herd book, entitled the Dominion Ayrshire Herd Book was issued in 1881. This association has issued fourteen volumes. The President for 1906 is Mr. Robert Hunter, of Maxville, Ont.

Canadian Hereford Breeders' Association. This Association was organized in 1890. Its constitution is similar to that of the other live stock associations and three herd books have been issued up to date. Mr. R. J. Mackie, Oshawa, is the President for 1906.

Canadian Jersey Cattle Club was organized on December 20th, 1894. Mr. R. J. Fleming, Toronto, is the President for 1906.

The Holstein Friesian Association of Canada was organized in September, 1884. Since its establishment nine volumes of the herd book have been published. This Association is in an excellent financial standing and has shown its enterprise by donating a considerable portion of its funds to the encouragement of official testing for advanced registry, and of public tests of dairy cows at the leading exhibitions. Although incorporated under the Live Stock Record Act, it is independent of the National Records. Mr. R. S. Stevenson is the President for 1906.

Canadian Clydesdale Horse Association. This is the most important horse association in Canada. It was organized in 1886, and has been energetic and enterprising. The spring stallion shows held under the auspices of this and the Shire Horse Association, have been the means of bringing out some of the finest displays of heavy horses ever seen on the continent. The Association has published fourteen volumes of its stud book. The President for 1906 is Mr. T. Graham, of Claremont, Ont.

Canadian Shire Horse Association. This society, organized in the interests of the English Shire Horse, was established in 1890, and has published one stud book. The President for 1906 is Mr. J. M. Gardhouse, of Weston, Ont.

Canadian Hackney Horse Society. This is the youngest of the horse associations in Canada. It was organized in February, 1892. As in the case of the Clydesdale and Shire Associations, it has found that the giving of prizes to be competed for at the leading shows through a Canada, is the best means of promoting an interest in the breed. It has published one stud book. The President for 1906 is Mr. E. C. H. Tisdale, of Beaverton, Ont.

The Dominion Swine Breeders' Association was organized in September, 1880. It now embraces every important breeder of pure-bred swine in Canada, and so far sixteen volumes of its records

have been published. Mr. R. H. Harding, Thorndale, Ont., is the President for 1906.

Sheep Records. A committee was appointed by the Record Board to go to Chicago and meet the American Sheep Records International Associations and discuss with them the possibility of establishing International Associations for sheep. All the associations interviewed (except the Leicester and Lincoln Associations), appointed a committee to meet a committee to be named by the Minister of Agriculture, and go fully into the details of the scheme. The committees appointed by the American associations were given in each case, power to act for their respective Associations and arrangements are now being made to hold this joint committee meeting.

American Records. It is to be hoped that in the near future, our Canadian Records will be recognized in the United States. All animals must now be registered in American Records before they are allowed to enter the United States, duty free, and these American Associations are almost without exception joint stock companies. This puts the interest of the breed in the hands of a few men, to the detriment of the rank and file of the farmers. On the other hand, where National Record Associations are formed and conducted as they now are in Canada, the records remain the property of the breeders and the small breeder or farmer who pays his annual membership fee has just as much voice in the control of the business as any other man. The ease with which any kind of animal with a pedigree can be brought into Canada from across the line and the almost prohibitive character of the regulations by which the Government of the United States controls a similar trade into their country is a matter that demands earnest attention at our hands. Breeders in Manitoba and the Territories who purchase pure-bred live stock in the United States should be particularly careful to have all such animals recorded in the National Records before they come into this country, as, referring especially to the Shorthorn breed, many of the pedigrees in the American Herd Book are not eligible for record in our National Herd Book, since they do not trace in all their crosses to imported dams. Special attention has been called to this matter from time to time as a large number of cattle have been brought across the line during the last few years whose pedigrees have had to be rejected for the above reason.

The report presented at the different live stock breeders' meetings last month by the National Record Committee, showed that the nationalization of records has met with all other success. The saving to the different associations in the cost of recording, has been \$626.00, and in the cost of printing and other expenses, there was a total saving of \$2,700.00. In March, 1904, at the first annual meeting of Canadian Live Stock Breeders, the nationalization scheme was launched, and in March, 1905, the work of nationalizing the records can be said to be nearly completed. There is now no conceivable reason why the Department of Agriculture at Washington should refuse any longer to recognize our records and an exchange of official amenities is in order.

Experiments with Farm Crops

THE MEMBERS of the Ontario Agricultural and Experimental Union are pleased to state that for 1906 they are prepared to distribute into every township of Ontario, material for experiments with fodder crops, roots, grains, grasses, clovers and fertilizers. Upwards of 1,600 varieties of farm crops have been tested in the Experimental Department of the Ontario Agricultural College, Guelph, for at least five years in succession. These consist of nearly all the Canadian sorts and several hundred new varieties, some of which have done exceedingly well, in the carefully-conducted experiments at the College, and are now being distributed free of charge for co-operative experiments throughout Ontario. The following is the list of co-operative experiments in agriculture for 1906:

No.	EXPERIMENTS.	Plots.
1	Three varieties of Oats	3
2	(a) Three varieties of six-rowed Barley	3
	(b) Two varieties of two-rowed Barley	2
3	Two varieties of Hulless Barley	2
4	Two varieties of Spring Wheat	2
5	Two varieties of Buckwheat	2
6	Two varieties of Field Peas	2
7	Emmer and Spelt	2
8	Two varieties of Soy, Soja, or Japanese Beans	2
9	Three varieties of Husking Corn	3
10	Three varieties of Mangolds	3
11	Two varieties of Sugar Beets for feeding purposes	2
12	Three varieties of Swedish Turnips	3
13	Kohl Rabi and two varieties of Fall Turnips	3
14	Parsnips and two varieties of Carrots	3
15	Three varieties of Fodder or Silage Corn	3
16	Three varieties of Millet	3
17	Three varieties of Sorghum	3
18	Grass Peas and two varieties of Vetches	3
19	Two varieties of Rape	2
20	Three varieties of Clover	3
21	Sainfoin, Lucerne, and Burnet	3
22	Seven varieties of Grasses	7
23	Three varieties of Field Beans	3
24	Three varieties of Sweet Corn	3
25	Fertilizers with Corn	6
26	Fertilizers with Swedish Turnips	6
27	Sowing Mangels on the level and in drills	2
28	Two varieties of early, medium or late Potatoes	2
29	Three Grain Mixtures for grain production	3
30	Three mixtures of Grasses and Clover, for hay	3

The size of each plot in each of the first twenty-seven experiments, and in Nos. 29 and 30, is to be two rods long by one rod wide; and in No. 28, one rod square.

Each person in Ontario who wishes to join in the work may choose any ONE of the experiments for 1906, and apply for the same. The material will be furnished in the order in which the applications are received until the supply is exhausted. All material will be furnished entirely free of charge to each applicant, and the produce of the plots will, of course, become the property of the person who conducts the experiment.

J. BUCHANAN,
Director.

The O. A. C. Review

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Editorial

Once more the time is fast approaching when the student begins to examine the innermost regions of his mind for reliable indication as to his possible fitness for the crucial test forthcoming in the spring examinations. Failing to find in himself that thoroughly comprehensive knowledge of his term's work, which he knows is essential, he will, if he is wise, commence to apply himself to the task of review. It is then that he finds out for the first time how much of the vast amount of material laid before him in lectures, he has been able to condense into his notes. To the men in the senior year, this consideration does not apply, for their notes are usually supplementary to

More Text Books

good text books, and, moreover, their wider experience enables them to obtain a fairly consecutive series of notes. But with the first and second year man, the case is different. With the exception of a few auxiliary text books, his notes form the only visible supply of information he has, and too often, either through lack of preliminary education, through inability to grasp and note the central ideas, or through carelessness, he has failed to retain a clear and concise summary of the term's work. And then his trouble begins, possibly to end with the dreaded supp. or two at the end of the term.

That this undesirable result is due to a defect in the present lecture method is beginning to be recognized by the larger American Universities,

and already steps are being taken, notably at Princeton, to revolutionize the whole educational system. In this University, text book and other reading under the personal supervision of a preceptor, is now taking the place of some of the lectures. The lectures are largely explanatory of the material with which the student is already familiar by reason of his compulsory text book reading. By this system much time is saved to both lecturer and students, a wider scope is given to the originality of the lecturer and the student is enabled to give his whole attention to grasping the subject under discussion, instead of devoting it to mechanical jotting down of notes for future reference.

While this system in its entirety might not readily adapt itself to our conditions here, there is one feature of it worthy of consideration—the increase in the number of text books. We have many good text books now, but there are many subjects in the first and second year work bearing on which we have no text. Naturally, to increase the number of books adds considerably to the expense of the course, but the benefits derived should go far towards overcoming this objection. Leaving aside the consideration of saving and improving of time already mentioned, when it comes to a question of studying, there can be no comparison between the hap-hazard, incomplete notebook, and the well-arranged, concise, and comprehensive text book. Later, when the student has passed on to professional life, or has returned to the farm, he finds that he has forgotten many details for which he must depend upon references of some kind, and what more valuable nucleus of a reference library could he have than a series of familiar text books?

Professor Day's new book on swine is the kind of publication which we would like to see appear with greater frequency. Other members of the faculty have, from time to time, contributed small volumes bearing on their particular subjects, but at the present rate it will be a long time before our supply from this source or from outside sources is ahead of our requirement.

There have recently been added to the Farm Department three pure bred Clydesdale mares. It

A Step in the Right Direction

is with pleasure that we note this valuable addition to our live stock, for in it we see the commencement of a more liberal policy toward this department, and the foreshadowing of work which will be of inestimable benefit to the horse-breeding interests of the country. This is, however, a vision of the future, for as yet, official sanction has not been given to any definite or extended work. Nevertheless, as a start has been made by providing these brood mares, we trust that plans will soon be made and passed for definite experimental work in horse-breeding.

The present summer will see great additions to the buildings and to the

New Buildings

equipment of our College. Work has already been commenced upon the new Mechanical Building, which, at a cost of some \$30,000, is to provide Carpenter and Blacksmithing shops, Classrooms for Manual Training work and hall in which the students will be instructed in the mechanism of farm implements, and where such implements will be run from shafting. No more valuable addition to our present equipment could

be made than such a Machinery Hall, for up to the present time no instruction whatever has been given in Agricultural Engineering.

In addition to this, additions will be made to the Chemical Department. Plans are also on foot for the rebuilding of the greenhouses of the Horticultural Department, and for the extension of the experimental work there.

The matter of extending the dormitory is under consideration. This extension is much needed. At the present time the College residence is overcrowded, and the College Hospital even has been turned into students' rooms, with the result that for every trivial ailment students must be treated at the city hospital, Guelph.

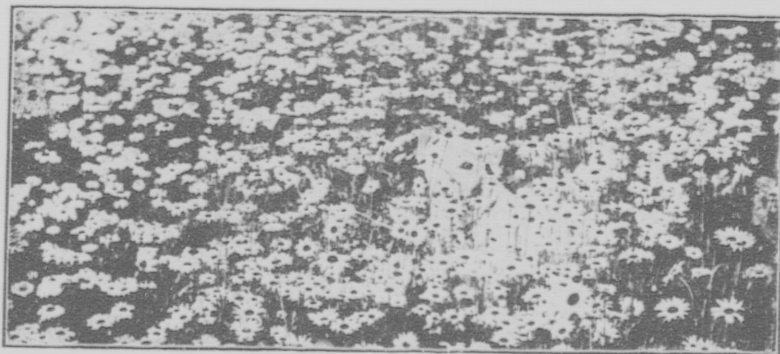
On account of the lack of accommodation in the residence, many students have necessarily been refused admission to the College. When there is such keen competition for entrance into a college as now exists at the O. A. C., then is the time for extensions. Our College must increase in usefulness; it must educate more young men than it has educated in the past. To enable it to do this its residence must be enlarged.

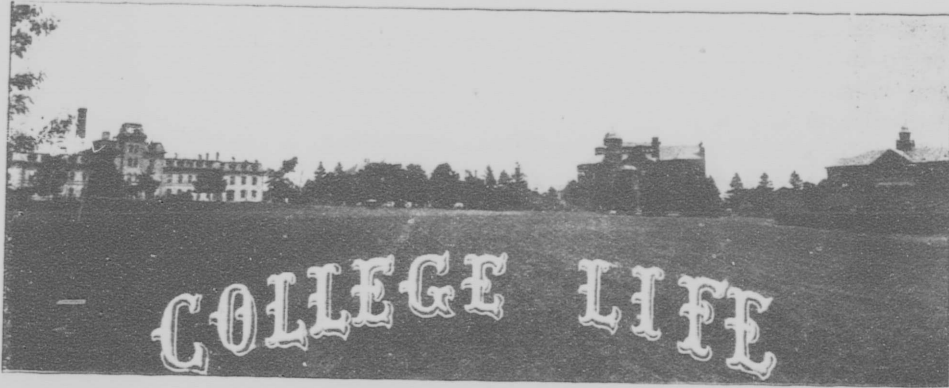
"When is the Review coming out?" is the query which has been hurled at

An Explanation

us with increasing regularity and persistency this term. We like to know that people are interested, but we are sorry to have given so much cause for enquiry, since, to many, our repeated lateness must seem a reflection upon our management. Our January number, however, was purposely delayed in order to give us an opportunity to meet our outside advertisers to renew old contracts and to include new ones. This cannot be done until after the various firms have had their annual meeting, usually the third week in January.

About the middle of February, we found it necessary to transfer our printing from Guelph to London. This, of course, entailed many delays, and as a consequence our February number was also late. We hope that our readers will grant us their indulgence in this matter, in view of the circumstances which have caused these much-regretted delays.





ANOTHER college year is drawing to a close. Exams are perilously near. Many are seriously contemplating the commencement of the "brave little run" which will tend to the recovery of ground lost through past thoughtlessness, or through the performance of necessary work in connection with Literary Society, Y. M. C. A., Review, or Athletic Association.

Conditions in and about the college seem, in many ways, to favor hard, earnest, cheerful study. Probably greater harmony and more sincere good comradeship never prevailed in the dormitories than now. The weather is spring-like and invigorating; so spring-like is it in fact, that our rink has faded out of existence some time since. The ground is quite bare. There has not been throughout the winter, sufficient snow to make good sleighing for more than a few days at a time, so that there have not been the usual sleighing and snow-shoeing parties that were so much in evidence, and so largely patronized by college students last winter. Basketball, baseball, hockey and general athletics in the gym, have been the main factors in keeping up a healthy college spirit, and in giving vent to youthful aggressiveness and enterprise. No small measure

of success has attended the efforts of our various college teams, as will be seen by referring to the athletic columns from month to month.

The February meeting of the united Alpha, Delphic, Maple Leaf and Macdonald Institute Literary Societies, was held in Massey Hall, on the evening of the 17th. The president, Mr. H. B. Smith, was in the chair.

Among the items on the programme was an address by Prof. Lohead, Honorary President, on "Modern Literature," in which he dwelt on the inferiority of modern literature, as compared with that of somewhat earlier days, and of the desirability of reading wholesome and elevating literature, instead of the light, frothy, uneducative matter which is so abundant to-day, and for which there is evidently so large a demand.

Professor F. C. Harrison, who has severed his connection with this College to become prominently connected with the Macdonald Agricultural College at St. Anne's, gave a very entertaining reading entitled "The Owl Critic."

One of the principal features of the union meetings is a debate, in which the more advanced and ambitious members of the various societies, find opportunity for developing their re-

spective talents under somewhat more difficult circumstances than ordinarily prevail. The subjects chosen for debate, are usually of a political, social, or economic character. This not only involves the necessity of a pretty thorough acquaintance with the subject for discussion, but also the delivery of an argumentative address, and the exercise of alertness and keenness in meeting and refuting arguments of opposing speakers. Further, the social side of the students' nature is developed by thus coming together under identical conditions and for a common end.

Oratorical Contest.

The oratorical contest, occurring toward the close of each college year, is the occasion of no small stir throughout the student body. This is one of the most important events of the year. Probably no other indoor occurrence attracts such numbers of spectators as does the annual oratorical contest.

During past weeks, the gymnasium and Massey Hall have echoed and echoed the voices of the contestants, as, in practice deliveries, their flights of eloquence, held spellbound with rapture and amazement, an imaginary audience. But on the evening of March 9th the scene was changed. The night fixed for the contest of 1906 had ar-

rived. The stern reality had to be faced. In the gymnasium, with its walls gaily decorated with bunting, and its stage tastefully ornamented with some of the choicest products of the florist's skill, awaited an audience of well nigh eight hundred people. Among the friends and acquaintances of the competitors, speculation as to the relative ability displayed by the latter on previous occasions, and as to

their probable placing on this occasion, was to be heard everywhere. The five orators were successively announced by the chairman, Prof. J. B. Reynolds. Each speaker, in his oration, handled his subject in a manner which showed extensive reading, deep thinking, a logical and impressive selection and marshalling of ideas, much originality, and an excellent command of the English language, except that in the last respect Mr. Nag Tany fell short, having been in this country but a short time, too short, in fact.

to have acquired a thorough familiarity with English idiom and accent. The above mentioned characteristics are especially applicable to the orations of Messrs. H. B. Smith and G. G. White.

To give variety to the programme, the services of George E. Fax, humorist, of Toronto, and of two of the best of Guelph's talent, namely, Miss A. Springer and Miss T. Clark, were secured. We wish here to express our



G. G. White.
Winner of Oratorical Contest.

appreciation of, and our admiration for the very excellent rendering of the numbers contributed by Miss Springer, Miss Clarke and Mr. Fax. Mr. G. C. Goulding, one of our talented students, supplied a number for the evening's programme, which, needless to say, was much appreciated. Mr. Goulding and his banjo are old friends of those who attend our leading college events.

The following was the judgment of those who scored the speakers:—

First—G. G. White; "The Destiny of Canada."

Second—H. B. Smith; "Japan, the Island Empire of the East."

Third—H. Barton; "Canadian Citizenship."

Fourth—W. A. Munro; "Protection of the Weak."

Fifth—B. R. Nag Tany; "Universal Free Education."

The first prize is a standard dictionary, donated each year by the graduating class of 1888, and called the Creelman class prize, in honor of President Creelman, who was a member of that class. The dictionary was presented by B. E. Patterson, one of the class donating the prize. The second, third and fourth prize winners received ten, eight, and six dollars respectively. Mr. Nag Tany's oration was in some respects highly meritorious, and entitled him to a high standing, but his inability to express himself clearly and intelligibly in English rendered the judges unable to consider him for one of the regular prizes. The judges, however, very generously donated to Mr. Nag Tany, on their own behalf, a special prize of \$5, in consideration of the commendable effort he made, in spite of his lack of familiarity with English.

Associated with, and adding interest to the oratorical contest is the Creelman class prize, already mentioned. In donating this prize the boys of '88 have set a worthy example to the graduating classes of later years, but

although this prize has now been won for the fifth time, none of the other years have as yet seen their way clear to follow suit. In connection with our student organizations, and with the institution itself, there are scores of opportunities for our numerous classes to show their generosity and their continued interest in the college—opportunities which, if taken advantage of, would not only keep their memories forever green in the minds of the students of today, but which would also go far towards maintaining their own class unity.

In this respect the boys of '04 and '05 did not wait to see their individual future firmly established, but took the matter in hand before graduation. To the former we are indebted for the oil painting of Dr. Mills, which now adorns our library, and to the latter we owe the promise of a substantial scholarship for the best all-round man in each year's graduating class. But, between the years '88 and '04 there is a wide gap yet to be filled in. The boys of '89 stand next in line, and we respectfully offer the suggestion that it is "up to" them unless they wish to see another year step in ahead of them.

The Student Volunteer Movement.

This movement, which is an outgrowth of Y. M. C. A. work, has now become a tremendous power in the forwarding of the cause of foreign missions, under its watchword, "The Evangelization of the World in This Generation." The objects of this movement are four-fold: (1) To lead students to a consideration of the claims of foreign missions upon them as a life work. (2) To foster the purpose of all students who decide to become missionaries. (3) To unite all such students in organized and aggressive movement. (4) To create and maintain an active

interest in foreign missions among those students who remain at home.

The success of any movement must be judged from the standpoint of how far it has accomplished its objects. Through the agency of the movement, no less than 2,953 volunteers have sailed to the foreign field (one-third of whom have been women); during the past year there were in the colleges of North America 1,049 mission study classes with an enrollment of 12,629 students, and students' contributions to home and foreign missions have increased from \$10,000 in 1886, to over \$80,000 in 1905.

The fifth quadrennial convention of this movement has just been held in Nashville, Tenn. Under the auspices of the Y. M. C. A. of the college and the Y. W. C. A. of Macdonald Hall, six representatives were sent to Nashville. They were Messrs. Bracken, Clowes, Baker and Rose, and the Misses Tennant and Card.

The whole of the Eastern Canadian delegation to the number of 189, travelled from Toronto, and on both journeys a most enjoyable time was spent. Opportunity was given of stopping over at Detroit, Cincinnati and at the wonderful Mammoth Cave, Kentucky.

For five days the citizens of Nashville threw open their doors with the greatest possible hospitality, to the students and other delegates to the number of over 4,100, who for five days listened to some of the finest Christian speakers of the world. These speakers sought to impress all present with their personal responsibility, as well as of the responsibility of their fellow-students at home, to carry Christianity to all those nations as yet without it. That this message sank deep into the hearts of those present, is testified to by the numbers of students who volunteered for foreign fields, and by the enthusiasm for the cause which these addresses created.

In the space at our disposal it is impossible to give an adequate report of the great convention, but details are on file in the Y. M. C. A. reading-room.

It has been a privilege to attend such

a gathering and it is a privilege which carries with it responsibility to disseminate the enthusiasm of the convention. Nevertheless, it is also the duty of the student to see that they, too, receive from the delegates some of the Nashville enthusiasm.

Northfield.

In 1886, 251 delegates from 89 colleges, assembled at Northfield, Mass., for the first international Christian student conference ever held. This was the commencement of the conferences and summer schools now held in various places in America.

The first consideration of these conferences is to deepen the spiritual life of the students present, and through them, the Christian life of their colleges. So strong is the influence exerted, that probably few men attend these conferences without being made better and stronger men. The association with men from other colleges and universities, the opportunities of coming into contact with some of the strongest Christian men of the day, men like Mott, Speer, Campbell-Morgan, Zwemer and many others, and the opportunities for distinction on the athletic field, make the summer conferences events which every student should make the most strenuous effort to attend at least once in his college course.

For some years now, much good work has been done by the college Y. M. C. A., but in an unobtrusive way. Now is the time for aggressive effort on our part, that the work may take the place in our college life which it should occupy. In order that this may be accomplished, the executive feel that a large delegation to one of the summer conferences, from the O. A. C. is imperative. That students may be able to attend one of the conferences, they must, of course, arrange their vacation accordingly. For their own sake, and for the sake of the work in the college, we urge all men to obtain details from the executive, and to endeavor to make their presence felt at the conferences, and as a result, in our college next year.

Athletics



Barton—Left Wing.

HOCKEY is now almost a dream, and a nightmare at that. Why? Because the Bankers have the cup. That they have won it, too, we must admit, however grudgingly. One small ray, betokening the dawn of a brighter day, comes to dispel our evil dreams—the promise of a more successful season next year, begotten by the splendid playing of this year's team, and by the knowledge that the majority of our stars will remain.

Following, we give the names of the men who have won their colors and a short resume of their hockey characters.

Barton—Left wing, 170 pounds; hardest worker and most consistent player on the team; good skater, fair stick-handler; uses weight to decided advantage.

Foysten—Right wing, 150 pounds; inexperienced, but hard-working player, good stick-handler, good skater, but severely handicapped by heavy ice. Altogether, very useful man, and with experience should make a brilliant player.

Foster—Captain, centre, 145 pounds; ideal captain, cool, uses his head, controls his men wisely and well; hardest and most accurate shot on team; clever stick-handler and fast skater and does not play to gallery.

Savage—Rover, 145 pounds; best man for position, being heady player and a great help to defense; splendid check; very speedy skater, although heavy ice soon tires him on account of insufficient training; excellent shot, extremely good stick-handler, best on team.

Dan Johnson—Coverpoint, 180 pounds; apt to leave his place, although often does so to advantage; checks well, but should use weight more; plays cool, hard game and lifts well.

Monroe—Point, 165 pounds; keeps his position well; lifts moderately well; checks hard.

Weir—Goal, 150 pounds; very cool; quick with hands and feet; always in right place at right time; has done phenomenal work and has certainly earned his colors.

Hodson—Spare, 135 pounds; lightest man on team, but exposes himself too much to referee's notice; fast skater; follows up well; checks closely; sometimes shoots well; possesses great endurance.

The team, as a whole, have had a very successful season. They have scored 50 goals to their opponents' 23, have won seven games, lost two, and drawn one. Their weak points have been, too open a defense and a lack of

close checking. We have only to watch the Bankers' defense to see the proper tactics of defense men.

The strong feature of our team has been the team play. Every man seems to have realized that he was not playing for himself, but for the College; and, consequently, while we have men who are capable, there have been no spectacular plays, except by the goal-keeper. Another strong point, and one to be proud of—we had the cleanest team in the City League, consequently they were the best exponents of the game, as they did not waste time getting back at their opponents.

Now the chances are, that, though we expect to lose our defence, we shall keep our forward line intact for next year. If we can get a good defence we ought to produce a winning team. We are not lacking in attacking qualities; we only need equally good defending ones to be absolutely invincible.

On Feb. 14th., we played the first game of the new round, defeating G. C. I. by 4 goals to 3. Duncan acted as substitute for Foysten, but was off the ice the greater part of the game on account of a broken skate.

On the 17th, we defeated the Raymonds.

Feb. 24th, we met our Waterloo at the hands of the Bankers. There had been a big thaw during the week, and the ice was rather heavy; but, in spite of this, the large crowd at the rink saw the fastest game of hockey played on Guelph ice this winter. The College boys set an alarming pace. The play on both sides was extremely fast during the first half, the College boys excelling in combination; the Bankers, in individual work. Koyl made

some fancy rushes, and it was after one of these that the Bankers scored their first goal. Towards the end of this half, the Bankers began to weaken, and the puck remained in their quarters. However, their splendid defence work and close checking prevented any telling shots. When half time was called, the score stood 1—0 in favor of the Bankers. After nearly 20 minutes intermission, the puck was again faced off. The Bankers being almost "done," the play was in their territory nearly all the time, but again their close checking saved them. When about two minutes of play remained, Foster went down to a heavy check and was carried off unconscious. After a short delay, he very pluckily returned. Just as he was hurt, Johnson had netted the puck, but the goal was not allowed as the



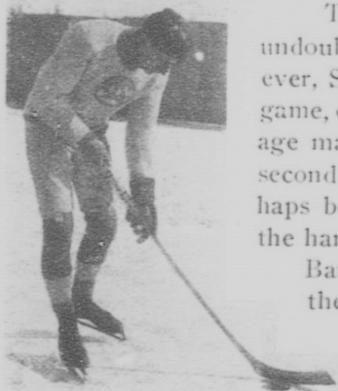
Foster (Captain)—Center.



Savage—Rover.

referee's bell had sounded. Before time was called, Koyl scored another goal, increasing the Bankers' lead to two goals.

The splendid defence work of Koyl and Campbell undoubtedly won the game for the Bank boys. However, Savage and Foysten did not play their usual game, owing to the condition of the ice; although Savage made some beautiful shots from the side, in the second half. Foster did not seem able to shoot, perhaps because he didn't get a chance. Barton played the hardest game on the ice. On the other hand, the Bankers several times were showering shots on the College goal; and had it not been for the magnificent work of Dougie Weir in goal, the score would have been larger. Taking the game on the whole, our team certainly had the better of the play throughout. Our



Hodson—Spare.

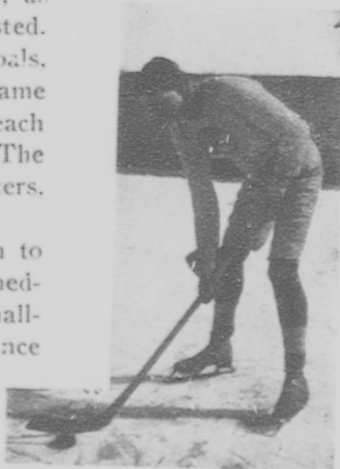
forwards outplayed theirs; but their defence, with the exception of the goalkeeper was superior to ours.

The team were: Goal, Weir; point, Monroe; cover-point, Johnson; rover, Barton; center, Foster; right wing, Foysten; left wing, Savage.

Despite the fact that it is considered unsportsmanlike to say anything derogatory to one's opponents, especially when they are victorious, we feel impelled to say that it is hardly generous to delay the game at half time, without any valid excuse, just because the team is badly "done," also, anyone—however good a player he may be—that deliberately refuses to resume play at the proper time, trading on the knowledge of his own usefulness to his team, is an extremely poor "sport." Furthermore, we wish that anyone, who feels that he cannot refrain from using offensive epithets regarding our players, would also refrain from visiting our gymnasium on Tuesday nights and doing the hail-fellow-well-met act.

Feb. 28th, we beat the Hardware by 4—3; as the score indicates, the game was keenly contested. Indeed, our opponents scored the first two goals, and at half time the score was 3—3. In this game the feature was the lifting of the cover-points, each of whom scored a goal by his high lifting. The team was the same that played against the Bankers, except that Hodson replaced Savage.

Feb. 23rd, the basketball team went down to Berlin to play their return game with the intermediates. Our boys were handicapped by the smallness of the room, and their very slight acquaintance with Canadian rules. The Canadian game is very strict and penalizes any attempt at touching the opposing men, consequently our team lost nearly 20 points



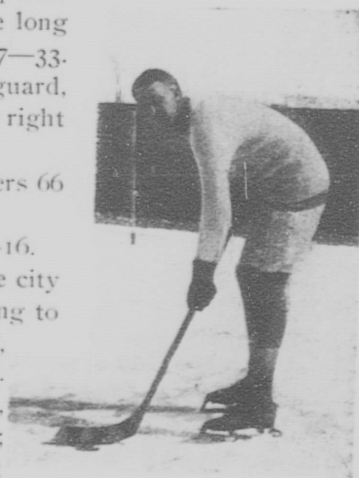
Foysten—Right Wing.

from this alone. They proved themselves superior in scoring, but were unable to pull down the long lead gained on fouls. The final score was 37—33. The team were: Left-guard, Hodson; right-guard, Weaver; centre, Clowes; left forward, Hayes; right forward, Treichler.

Feb. 27th, the College defeated the Bankers 66—21 in indoor baseball.

March 6th, the Faculty beat Bankers 22—16.

The same evening a picked team from the city defeated the College 21—16, with one inning to spare. The game was close until the 8th, when several fumbles gave the city seven runs. The team were: Pitcher, Johnson; catcher, Hare; first base, Duncan; second base, Yeo; third base, Warner; right shortstop, Row; left shortstop, Hodson; right field, Kerr, left field, Curran.



Johnson—Coverpoint.

The committee appointed to revise the constitution has submitted its report to the executive. Several important changes have been enacted. First of all, the new constitution is to be tried for a year, to test its suitability. The Y. M. C. A. will possibly print the constitution in their handbook, so that every student may have a copy and be unable to plead ignorance of its clauses, especially those referring to emblems.

As regards the election of officers, the duties of secretary and treasurer are to be divided; the treasurer to be chosen from the incoming Third Year, and to be entitled to a vote. The football manager is to be elected at the close of the football season, so that all arrangements can be made while other colleges are in session, and we shall not be shut out of any league, because we



Monroe—Point.

omitted to make application in time. Captains of teams for the next season shall be elected by the members of the teams at the close of the season. The men who play on the team are the men who know the requirements of a good captain, and also know to what extent different players will suit. Therefore, they are the men to choose the captain. Their choice must be submitted for the approval of the executive, just to prevent any suggestion that the team is being run by a clique.

Class representatives shall be elected by their own classes—this is obviously the only correct mode, as, after all, the different classes know

their own men best, and know which of them will best represent their own interests and those of the student body. Very often mistakes have been made by the choice of a class being subverted and an inferior man elected.

After the nomination meeting, additional nominations may be made over the signatures of five active members; i. e., if at the close of the meeting, it has been found that a man who was desirable for a certain office, had been omitted owing to his absence from the meeting, his name could be placed on the list of nominees, if five active members affixed their signatures thereto.

The wisest innovation is the holding of monthly meetings of the association, in which a financial statement will be placed before the students. This will prevent the harsh and unfair criticisms that have often been made at the annual meetings. The students will be able to see how and where their money goes, and will be able to check extravagance. The executive will have the satisfaction of having their books always in order and of pleasing the student body.

Before adoption, the constitution will be placed before the association, and each clause will be discussed and voted on in the usual way. Most of the clauses are very good, and it is to be hoped the committee will have no trouble in getting the new constitution passed by the general meeting.



Weir--Goal.

Our Old Boys

A MAN of thorough culture, quiet manners and sound opinions is W. M. McCallum, B.S.A., Ph.D. Like many more, Mac after graduating went south and was quickly snatched up by the University of Chicago. He has been there for a number of years as instructor in Plant Physiology. The faculty there evidently know a good thing when they see it, and the success which he has met with is just what we would expect from one of so close application and enterprise.

W. D. Carlyle has left his farm in Chesterville and gone west. While in Ontario, he was one of the best-known breeders of Ayrshires, and his herd had gained him a leading place among the dairymen of this province. He does not intend, however, to forsake this line of work but is going to start a herd near Calgary. We can rest assured that it will not be long before his good, sound, common sense and practical knowledge will be fully appreciated in that part of the Dominion.

A. W. Partridge, '03, has found the homestead too small for his operations and has lately added 200 acres to it. He is engaged in mixed farming, specializing in heavy horses. Partridge is an active Institute worker and each winter sees him on the platform, telling the secret of his success. Letters addressed to Crown Hill will find him.

S. P. Brown '86, is Cheese Instructor in the factory at Birnam, Ont. Good work is being done at this place, due to the efforts of our enterprising graduate.

Vankleek Hill will find D. A. McPhee of the class of '97. He is proving himself a good citizen and a prominent worker in the various agricultural lines. His farm is one of the best in that part of the country, and as a director of the Agricultural Society for Prescott County he has shown remarkable ability. He has not married yet, but that is now merely a matter of time.

"Getting next to the ground," is the report sent in by W. F. Scott, of Cedar Grove. He is following a line of mixed farming, and is doing well.

D. Wooly '92, is engaged in the dairy industry at Simcoe. He has a large herd of fine dairy cows, and practically controls the milk supply of that place.

C. H. Snider '95, is also farming at Attercliff, Ont. He is making dairying his specialty, and by judicious breeding has established a herd second to none in the province.

The classmates of J. H. Nancekivell '06, will be much interested to know that he has taken the one step so essential to the happiness of every man. Tired of the vanities and transitory joys attendant on a life of single blessedness, and feeling the need of a protector, "Nancy" secured the necessary equipment and invited Miss Harriet E. Smith to take him for better or for worse. The felicitous event took place at Brownsville on St. Valentine's Day. Returning from an extended wedding tour, the happy couple will reside on the bridegroom's farm at Ingersoll.

The Review joins their many friends

in wishing them future joy and happiness.

After J. J. Fee completed his course he went to the western states for a number of years. While there he travelled considerably, gleaning practical information. Early in the nineties he returned to Canada, and on account of his wide experience and practical knowledge was taken on by a produce firm in Toronto. Since then he has filled this position with eminent success. In spite of his high achievements across the border, he still thinks there is no place like Canada and hopes to spend the remainder of his days under the Union Jack.

J. S. Wallbridge '93, is operating a creamery at Corbyville. When he accepted the position, the outlook was everything but pleasant, but under his careful and efficient management, the business took a new lease of life and at the present time prospects could not be better. His buildings are up-to-date in every respect and situated as he is in a fine dairy section, he finds plenty of work to do, it being necessary at times to employ two or three assistants.

Not finding the allurements of an agricultural life sufficiently strong, C. Ball '96, went to Toronto and engaged in business. He is now in the employ of the Gutta Percha and Rubber Mfg. Co., and is doing well.

A. B. Wilmot '86, returned east after completing his course and began the study of law. He spent a few years in a law office and then began a practice of his own. His well-known verbosity has proved very effective and has won for him a prominent place in his chosen line of work. His office is situated in Frederickton, N. B.

D. A. Ross '96, is at Marintown, Ont. He owns an exceptionally fine herd of dairy cows including several prize winners. He also raises bacon hogs and these two lines have so prospered that his success is assured. He writes that these two lines work well together and judging by his past prosperity, we are perfectly willing to believe him.

Straight farming is the line of work being followed by Geo. Westlake, of '83. His farm of 200 acres is near St. Thomas, Ont., and represents what a farm ought to be.

Determined to acquire all the knowledge available, H. Marsack, '88-'89 entered the Ontario Veterinary College after completing the Associate Course. He was no less successful in that institution than while here, and by close and persistent study, he was able to capture highest honors in Chemistry and Pathology. He went to the United States after receiving his degree. His exact address is not known at present.

Farming near Hamilton, is where we find H. L. Becket '90. He has a large dairy herd and supplies milk for the city trade. His business has been steadily growing since he took it up, and the question now presented to him for solution, is how to keep pace with this growing trade. We hope he will be able to solve the problem satisfactorily, and maintain the reputation he has established.

Like a great many more, Herbert Green '81, did not find an agricultural life in accordance with his desires, and in consequence a short time after completing his Associate Course, he entered Toronto University to study medicine. Here he found his surroundings more suited to his nature and upon his graduation in '89, he started a practice in

the city. He is kept well employed, and cannot even find time to write us occasionally.

R. N. Morgan '89, is engaged in the implement business in the southern states. "Doing well," is his report.

W. K. Farlinger '87, returned to his home in Morrisburgh after completing the Associate Course, but not finding the routine of farm life congenial to his nature, he left his native land and went to Australia. Here he bought some land and engaged in sheep raising. His flocks increased so rapidly that it became necessary for him to acquire more land. He has now a large ranch in the southern part of that country and is extensively engaged in the production of wool and of mutton for the frozen meat trade. He still has pleasant memories of the O. A. C., and his one regret is that there was no Macdonald Institute in his time.

Situated near the little town of Ridgetown, we find J. J. Sinclair, of that somewhat illustrious class of '88, engaged in horticulture and the breeding of light horses. Being near the town he does a thriving trade in vegetable products, and the proximity of the American people affords an excellent market for his horses.

J. E. Crealy '90, is at the Western Dairy School at London. Since he trod the corridors of the College, much progress has been made in all lines of agriculture, but probably in no one line as much as dairying. The Government showed wise forethought when they placed him in this responsible position to mould the opinions of our Ontario dairymen. His work has been largely instructing the students who attend the school at different times. The responsible positions occupied by these stu-

dents testify as to the quality of work being done there.

A. McDonald '93, did not follow up the agricultural life he launched upon, but returned to Toronto and took a responsible position with the well-known firm of Jno. McDonald & Co. Although engaged in a different line of work, he has nothing but pleasant memories of his Alma Mater. His work keeps him pretty closely tied down but he has dreams of a little farm and cottage not far from the city where he may rest after the day's work is over.

J. Wheatly '92, is on the homestead at Moore, Ont., putting into practice principles of scientific agriculture imbibed at the O. A. C. Jack was a strong man in all departments, taking an active interest in athletics, Y. M. C. A., and the literary society. In his final year he had the honor of winning the gold medal. In his native county he takes an intense interest in all the different agricultural societies, thus making himself a public benefactor, as well as making a success of his own chosen occupation.

Solving the science of the soil on his farm at Uptergrove, we find J. P. Thompson '78. Coming to the College when it was in its infancy and its history in the making, he received so much knowledge and inspiration that his success was but a matter of time. Our only regret is that farms such as his are so scarce throughout the province.

Far from the madding crowd, J. J. McIquohon '79, is to be found engaged in mixed ranching and farming in Wyoming. By going out west when the country was opening up, he experienced no difficulty in acquiring all

the land he desired. A few thousand acres was sufficient to supply his wants and his success has been just what we would expect from one of such energy and foresight. His home is at Philips, Wyoming.

Down on the Florida peninsula we find F. S. A. Maude '84, engaged in several lines of work. On going to Florida he was first employed managing the Florida Inland Navigation Co. The business men were not long in showing their appreciation of his many sterling qualities by electing him a director of a bank. In his spare moments his mind wandered back to the farm and finally, as a pastime, he bought a small farm on which he raised some of the tropical fruits. Not satisfied with these, he secured a few light horses and commenced breeding these. Although in so many different branches, his remarkable ability to concentrate has enabled him to make a success of all of them. He owns a very fine residence in the town of Leesburg, and on his farm he has his country house. His intentions as to the future are rather indefinite, but he expects some time to dispose of his city business and devote his time wholly to agricultural pursuits.

E. A. McCallan '93, is in Bermuda engaged in raising of onions. Last reports state that he is doing well.

Way down East in the famous Annapolis Valley, we find A. D. McFarlane quietly putting into everyday use

information received at the O. A. C. Not all his time, however, is occupied with agricultural problems, for we find him figuring prominently in the municipal council and in provincial politics.

Word has just been received announcing the death of F. G. Bergin at his home in Ormond, Ont. Bergin took the first year with the present third year, and was afterwards employed on the Poultry Department. The Review extends its sympathy to the bereaved friends and relatives.

It has been frequently asserted that the Review serves as the one medium between the ex-student and this college. We again take this opportunity of calling your attention to this fact. While on the road, in the office or on the farm, you will smile when you think of the time when you made your reputation on the athletic field, on the debating platform, or by starting the well-known cry of "Hair Cut" in the dining hall. The institution is still at the old stand doing business with a larger attendance possibly, but as to quality of that attendance, our modesty forbids. Ex-students, write to us wherever you may be. Tell us of the history you are making, have made, or are going to make. Let us know of your marriage, death, or size of your family. Write to us enclosing your subscription fee (50 cents). Again I say unto you, Write!

Macdonald

The Selection of Household Linen.

ALL things change, and the term household linen no longer stands for a hand production which was the culmination of the housewife's skill, the daily "stint" of cramped childish fingers in long seams, and a subsequent storage in dim lavender-scented presses; but instead calls up the image of whirring machinery, the retail shops, and a purchaser usually ignorant of the nature of the purchase or the later care of it.

Not all the advantage is to the later generation, and we cannot expect today to obtain linens of a quality of texture and a durability equal to that found in the old linens, descended to us as heirlooms, unless we are near centers where the handicraft movement is working towards similar results in use and beauty, and even then the advantage is usually to the older fabrics and the prices a deterrent to most housekeepers.

But we should look for these qualities in the manufactured article, and when we do, we find such widely marked differences, that the selection of linens is far harder than the selection of cottons, by which they have been so largely replaced in the household equipment.

The durability of linens is decided by two things; the general character of the flax fiber and the way it has been bleached. The flax fibers called bast, have a natural strength of their own, but they must be removed from the useless woody fiber in which they are

imbedded in the flax straw, by a process called "retting," a rotting away of all but the bast by exposure to the dew, immersion in still or running water, or by the use of chemicals. The method used will largely determine the ultimate strength of the fiber. Of the natural methods, exposure to running water secures the best results, the famous Conrai flax of Belgium being retted in the bed of the river Lys, but by any of these methods care must be taken, as over retting destroys the lustre of the flax. The use of chemicals, though quicker and cheaper, is not legitimate, as they seriously weaken the fiber of the flax, producing beguiling in price, but sure to result in disillusion.

After retting, the fiber of the flax is again endangered by the process of bleaching, which is necessary if we wish white linen, which is never as strong as unbleached linen, for the reason that bleaching consists of the removal of a certain amount of a brown gum necessary to the integrity of the fiber. According to the amount removed we have full, three-quarters, half, and one-quarter bleached linen; full bleached linen, however, not meaning the entire removal of the gum, only sufficient to produce the whiteness desired, care being taken not to go beyond this point. Now, there is no doubt that linens bleached in the grass in the old-fashioned way are the only safe linens, for when bleached by chemicals, the other alternative, as in

setting by their use, the fiber is seriously damaged. We cannot distinguish the process by which the retting has been done, but we can distinguish grass-bleached from chemically-bleached linens, by their color; grass-bleached linens having a blue white color as opposed to the dead white of chemically-bleached linens.

In buying linens, table lines especially, one who is inexperienced

thread, a close weave and smooth, soft texture. Experts with their fine discrimination of touch detect the slightest differences in this respect. Linen may be distinguished from cotton by rubbing a single thread between the thumb and finger; if it leaves a smooth, soft fuzz on the fingers, you have linen—if the rubbing leaves a firm, twisted thread, cotton. Linen may also be distinguished from cotton because it is



A Heart to Heart with the Junior Normals.

Austrian or French linens, which are made up without sizing, giving the so-called soft finish, for in buying them we can tell exactly how they will look after they are laundered, and by paying a fair price to a reliable dealer be reasonably sure of good linen. But one who is experienced can tell by the feeling and appearance the quality of linen, the finest linens having a round should buy the German, Belgian,

less absorbent, and a touch of the tongue on the surface leaves a print on the other side, the moisture not being absorbed by the fibers. Again, if cotton has been mixed with the linen, as is often the case with table linen, there will be much sizing and a peculiar musty odor of stale starch.

Of course prices vary according to the places where linens are bought, and cannot be absolutely fixed. One thing,

however, it is always well to remember when buying linens, that the higher in price you go, the better value you get for your money, so that here, the best is without question the cheapest.

Miss Tennant and Miss Card, who were sent as delegates from Macdonald Institute, to the convention recently held in Nashville, Tenn., report having had a most enjoyable and interesting trip. The convention fully met the expectations of all the delegates. A deep

Dr. Ross, who has been spending the last six weeks at Teachers' College, Columbia University, has been engaged in studying the methods pursued in the different departments of the college, especially those pertaining to Physical Education, Hospital Economics and Household Science

Miss Jean Allan, '05, is now residing in Weehawken, N. J.

Miss E. A. Sadlier has accepted a position in New York.



Homemakers '06.

religious feeling dominated the meetings. A more earnest, a more attentive and a more deeply consecrated body of young people was probably never assembled than composed this convention of the student volunteer movement. All seemed to be deeply in earnest, and to be impressed with the seriousness and the tremendous importance of their great crusade. "The Evangelization of the World in This Generation."

The Macdonald girls met the G. C. I. in a friendly game of basketball on the 7th inst., the score being 9 to 3 in favor of Macdonald.

The pots and pans and kettles,

Were standing on the table,

The knives and cups were marshalled,

The demonstrator able,

The audience was waiting,

In breathless expectation,

To find the way of living,

"Sans meat" just vegetation!

A soup was made from Lima beans,
 The demonstrator strove
 To add all known condiments—
 Except the kitchen stove.
 Then cheese and nuts and celery
 Were stirred and mixed together,
 Till e'en an epicure could eat
 The mixture—served on leather!

Then eggs were beaten frothy,
 To look like piles of snow,
 Then put into a frying pan.
 And cooked—but very slow!
 It's oh! to be a cook
 So sure! so quick! so steady!
 But oh! to be the man—
 To eat the dish when ready!!

March 8, Macdonald Hall hockey team played the city girls' team in the Royal City Rink. The game was fast and exciting, no score being made until near the close of the second half. Miss Steele took the puck the whole length of the ice, and by a beautiful shot scored the only goal for the city. A great hullabaloo was raised by the city girls, and the spirits of the Donalds sank to zero. However, just before time, Miss Holman, seizing an open chance, with a beautiful lift, evened the score; then the rink resounded with the ringing calls of the very-much relieved Macdonald supporters. The game ended with the score at 1—1.

The teams were:

City—Goal, Miss R. Cook; point, Miss M. Duff; cover-point, Miss J. Cook; center, Miss McCorkey; left wing, Miss Steele; right wing, Miss Baldwin; rover, Miss Sheppard.

Macdonald Hall—Goal, Miss H. Davidson; point, Miss Gillies; cover-point, Miss G. Holman; center, Miss J.

Murray; left wing, Miss E. Smith; right wing, Miss Morrison; rover, Miss Greening.

For the city Miss Baldwin and Miss Steele were the stars, whilst Miss Holman's lifting and Miss Morrison's rushes were the features of the Macdonald playing; the city girls seemed to be in better training, but the Macdonald team were handicapped by the recent indisposition of three of its members, Misses Davidson, Murray and Greening, and these young ladies are to be highly commended for the pluck they displayed in staying with the game.

Gee whiz, I wish I were a cook,
 To stand before a crowd,
 To manufacture fancy things,
 To talk out long and loud,
 I wouldn't do a single thing,
 And darned if I would care,
 For if they didn't like the food
 They could just go elsewhere.

I'd hail the Macaroni white,
 His sisters and his brothers,
 And in three hours the rice is right,
 To give to friends and mother.
 The muffins would be light as air,
 You bet it would be great,
 If anybody had to die,
 To have so kind a fate.

For all the things could be so light
 That nothing would they hold,
 Except the atmosphere so full
 Of microbes young and old.
 The yeast plants and bacteria
 From whence came they and whither,
 Would have the chance to grow—and
 grow,
 While men and women—wither.

Locals

A "Him" of Life.

A reply to our January "Spasm of Life," by Patricia.

Tell me not in scornful accents
 Wedded bliss is all a fake;
 'Tis the bachelor really lacks sense,
 Happy homes the dear maids make.
 Girls are shrewd, and truly plucky,
 As they climb the rounds to Fame.
 Proud is every man, and lucky,
 Finding one who'll take his name.
 Not despondent, nor outwitted,
 Does the "unclaimed treasure" stay;
 But to make herself best fitted
 For the part that she must play.
 Candies, music, flowers, come often;
 But, poor man, why waste your cash,
 When you care not hearts to soften—
 Think of girls as "po' white trash?"
 In this life's queer Chinese puzzle,
 In this world's uneven race,
 Bachelors their sneers must muzzle,
 Or some one else will win their place.
 Trust no man if he opine, a
 Maid and misery near akin.
 If the maids all went to China,
 Man would follow to Peek-in.
 Lives of sweet old maids remind us
 We can happy, single be.
 If Prince Charming does not find us,
 Life's not then all misery.
 Life in which we'll be a match for
 Man, in hoeing his own row;
 Seeing which, will tempt the bachelor
 Soon a benedict to grow.
 Let us heed not youths erratic;
 They'll soon beg us for a date.
 We know when our "No's" emphatic,
 'Tis the lads who have to wait.

Sophomore—Upon being reintroduced to a girl at the Conversat. who skipped his number last time—"Have you the last promenade taken?" Fairy—"No, I don't believe I have." Sophomore—"Well, I have."

The water tank in the tower has always stood very high in our estimation. In fact we have come to look upon it as something entirely above us—something which was restrained from descending to our own level. We felt sure that it would never descend as low as to take advantage of its position and ill-use us. But it seems as if our confidence was misplaced. The other day our old friend got "tanked up." In fact it got so full that it could no longer contain itself, and its spirits overflowed completely. Then those who had the misfortune to room immediately below, realized how completely they were at its mercy, and how it "had the drop on them." When too late they found how capable it was of "soaking" them when it got the chance. There is no advantage in "being in on the ground floor" where it is concerned, for it soaks one just the same.

Since we cannot get back at it, even by tapping it, now that we have had the chance of seeing what a volume of the uncalled for it can pour forth, we hope that someone will be deputed to look after it, and that in all of its whims it will not be allowed "a free rein."

The "finest" way to get your name up nowadays is to go into the kitchen without permission.

Jake's definition of a vacuole — a vacuum with a hole in it.

Our hockey enthusiasts declare that this has been a "mellow" winter for them.

Since the decree went forth that no sophomore should wear a moustache, it has been hinted that this illustrious bunch are becoming rather bare-faced in their display of lip.

Reed took dinner with Le Drew recently. During the course of the meal a well-dressed young man came in and sat down at a neighboring table. "Who is that fellow?" said Reed. "I see him almost every day, but I cannot remember his name." "Very likely," replied Le Drew, "that's the bartender."

Galt Sure Grip Shingles

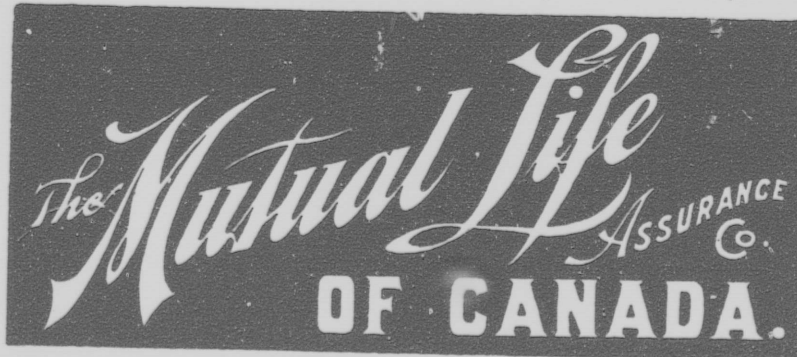


This is the Short Metal Age.
Cheaper than wooden shingles because they cannot warp, crack, burn or blow off. Made of best galvanized steel. Will not rust. Last at least a lifetime.

GALT ART METAL CO. Ltd.
GALT, ONT.

Every One Knows

Or should know that there is no "Extravagance" or "Frenzied Finance" practised by



The Company is managed with the utmost economy consistent with efficiency; its investments yield the largest income consistent with absolute safety; and there are no stockholders to absorb any of its profits. EVERY DOLLAR FOR THE POLICYHOLDERS.

BERT MELVIN,
President

GEORGE WEGENAST,
Manager

W. H. RIDDELL,
Secretary

GEO. CHAPMAN - **GENERAL AGENT**
McLean's Block, Guelph, Ont.

THE EMPIRE CREAM SEPARATOR

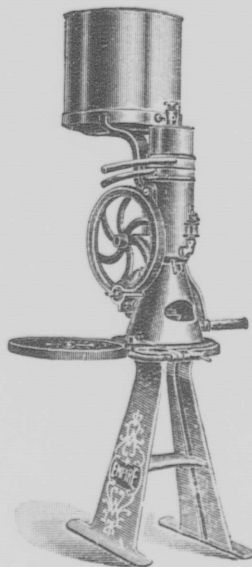
is the separator that embodies the newest ideas with the most approved methods. It is the most popular cream separator in the world—simply because it has *proved* that it does

The Best Work

Its light bowl, its simple construction, its lack of friction, its ball bearings, its great ease of cleaning, its close skimming and its durability are all explained in our

FREE DAIRY BOOK

We want you to read it and study it thoroughly then give our machine a trial which won't cost you anything but which will show you why there are so many satisfied EMPIRE users in Canada to-day.



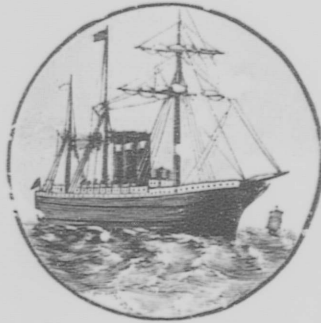
EMPIRE CREAM SEPARATOR
COMPANY OF CANADA, Limited

TORONTO, ONT.

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Ocean Steamship

Tickets



SAILED ON ALL LINES TO ALL PARTS OF THE WORLD

JOHN DAVIDSON

Market Square, Guelph, Ont.

During the college year a great many of our students devote much of their time and energy to the maintenance and improvement of the different college organizations. Some, in fact, have been fairly burning with enthusiasm. About this time of the year, however, they begin to wonder if after the spring exams they will not be in a class by themselves — a class somewhat familiarly known as "the brand plucked from the burning."

Waterloo Mutual Fire Ins. Co.

Established in 1863

HEAD OFFICE — WATERLOO, ONT.

Total Assets, 31st Dec., 1905 - - - \$514,000
Policies in force in Western Ontario, over 30,000

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WM. SNIDER,
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FRANK HAIGHT, Manager

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R. T. ORR, } Inspectors

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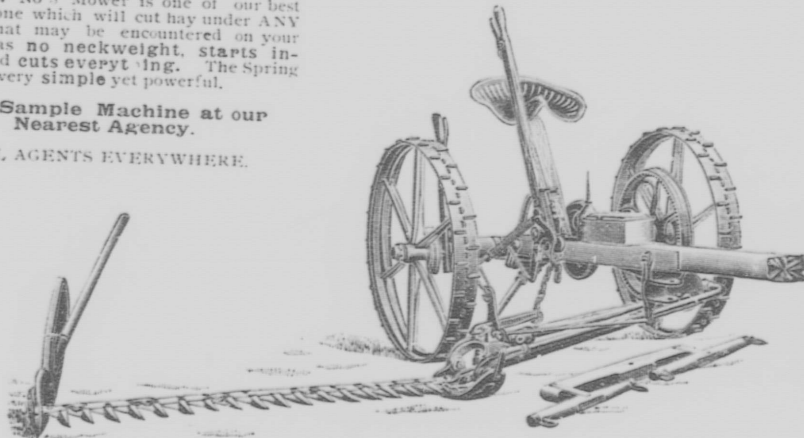
SATISFACTION

Remember that it is mighty poor economy to use Farm Machinery that is killing your horses, trying on yourself, and unsatisfactory for your work. When **SATISFACTION** is mentioned, then Frost & Wood Implements come to the front.

Our New No 8 Mower is one of our best machines; one which will cut hay under ANY condition that may be encountered on your farm. It has **no neckweight, starts instantly, and cuts every thing.** The Spring Foot Lift is very simple yet powerful.

See a Sample Machine at our Nearest Agency.

LOCAL AGENTS EVERYWHERE.



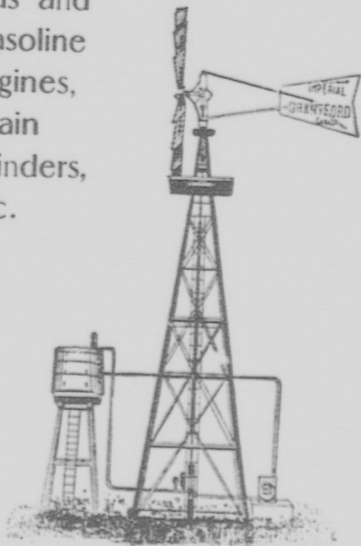
The Frost & Wood Company, Limited,

Winnipeg, Toronto, Montreal, Quebec, St. John, Truro.

Head Office and Works, SMITH'S FALLS, ONT

WINDMILLS THE DAIN Hay Loader

Gas and Gasoline Engines, Grain Grinders, etc.



GOOLD, SHAPLEY & MUIR CO. Limited.
Brantford, Canada.



The machine that does the good work. Loads out of the **swath** or **windrow**.

No weight to lift in attaching to the wagon.

Pushes the hay forward on the wagon.

The **one-man machine**.

Send for circular.

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Preston, Ontario

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Craigieburn Stock Farm

**CLYDESDALES, SHORTHORNS
and SHROPSHIRE**

Imported and Canadian Bred
Young Stock Always For Sale

FOR PARTICULARS APPLY TO

G A. BRODIE
BETHSEDA, ONTARIO

Stations:
Stouffville, G. T. R.; Claremont, C. P. R.
Telephone service from stations to residence.

CLYDESDALES

SMITH & RICHARDSON
COLUMBUS, ONT.

Importers of Clydesdale Horses

Now on hand a great number
of Stallions and Mares, among
them the Toronto Show Winners

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

LONG DISTANCE PHONE at RESIDENCE

N. DYMENT

Ayrshires

Hickory Hill Ayrshire Herd

CLAPPISON, ONTARIO

CHAS. S. AYLWIN, Freeman, Ont. Ayrshires
Stock always on hand.

P. D. EDE, Woodstock Station. Stock for
sale from Record Cows.

GEORGE RICE, Tillsonburg, Ont. Holsteins.
Young Stock for Sale.

F. MARTINDALE & SON, York, Ont. Short-
horns and Berkshires.

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PINE GROVE STOCK FARM

Rockland, Ontario, Canada

BREEDERS OF CHOICE

**SCOTCH SHORTHORNS
and SHROPSHIRE**

W. C. EDWARDS & CO., Limited

PROPRIETORS

JOSEPH W. BARNET, Manager

Alva Farm Guernseys

Awarded First Prize at Montreal
for Breeder's Young Herd

Young Animals of Merit For Sale

Pedigrees and particulars to parties
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J. DRYDEN & SON

Maple Shade Farm BROOKLIN, ONTARIO

Home of the oldest and largest herd
of Cruickshank Shorthorns in America.
Shropshire flock founded 1871.

Station—C. P. R., Myrtle, 3 miles.

G. T. R., Brooklin, 1½ miles.

W. M. SMITH, Scotland, Ont. Ayrshires.
Poland Chinas, Duroc Jerseys.

JOHN MORGAN & SONS, Kerwood, Ont.
"Cherry Grove Stock Farm." Shorthorns,
Young Bulls and Heifers on hand for sale.

Wellington Bee and Poultry Yards

Layers, Great Payers, Prizewinners. My birds
won over 200 first prizes and 4 cups at seven
shows, including Ontario. Eggs \$1.00 per 15,
or \$5.00 per 100 from Barred and White Rocks,
White and Silver Laced Wyandotts, Brown and
White Leghorns, Black Javas, Buff Orpingtons,
Black Orpingtons and Blue Andalusians. \$2.00
per 15.

F. W. Krouse, Guelph, Ont.

Oak Lodge Yorkshires

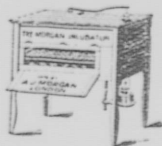


The Profitable
Type of Bacon
Hog.
Stock of all ages
for sale at all
times.
Quality Guaranteed.

Long Distance Phone at the Farm

J. E. BRETHOUR
BURFORD, ONTARIO

INCUBATORS and BROODERS



Poultry Supplies
of all kinds
Large Catalogue
Free

A. J. MORGAN
LONDON

I can't imagine why it is,
I surely cannot tell;
But every time I try a rhyme
It really sounds like—
No, that won't do.

And when again in rhythmic strain
I try to spin a yarn;
The people that are listing
Don't seem to give a—
No, that won't do.

So now I guess I'll give it up.
I'm not in my right class;
I'll hie me back to simple prose
Before I'm called an—
No, that won't do.

Why is a sheet of writing paper like
a lazy dog?
A sheet of paper is an ink-lined plane.
An inclined plane is a slope up, and a
slow pup makes a lazy dog.

Federal Life Assurance Company

HEAD OFFICE,

HAMILTON

Capital and Assets.....	\$ 3,300,000.00
Policies Issued 1905.....	\$ 3,328,177.08
Business in Force.....	\$ 17,292,776.11

DAVID DEXTER

President and Managing Director

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DUNLOP
Horseshoe
PADS

*Save a horse from falling in
slippery places — prevent
balling on the hoof in loose
snow—keep the hoof healthy*

PUT ON BY
ALL BLACKSMITHS

DUNLOP
TIRE & RUBBER
GOODS CO. LIMITED

HEAD OFFICE AND FACTORY:
Booth Ave., TORONTO

The specific gravity of the spring exams will probably depend upon the maximum density of the students.

Although Professor Jackson lost his gold-bearing quartz and his asbestos, we are glad to say that he still retains his appetite.

President Creelman: "Are you a second year man, Cutler?"

Cutler: "No, sir."

The President: "I thought not. Your moustache is too long."

Murray-Browne: "Say, Hoy! What does a fellow mean when he says he is out of sight?"

Hoy: "Oh! When answering an inquiry about his health, if he feels pretty well, he says he is 'out of sight.'"

Angle (next day): "Hello; Murray-Browne, how are you?"

Murray - Browne: "Oh!—er—You can't see me."

Men's
Goods

E. R. BOLLERT & CO.

Ladies'
Goods

THE Faculty, Students of the O. A. C. and Macdonald Institute will find this store ready to serve their wants to the best advantage. We are pre-eminently a Ladies' and Gentlemen's Outfitting and Furnishing Store. No matter what your needs this store is ready to supply them with good goods at moderate cost. We have always been favored with a large business from the personnel of the College. We shall pay special attention for its continuance and increase.

Men's Section

Fine Ordered Clothing at Moderate Prices.
Fit-the-form Ready-to-wear Clothing, very good and very cheap.
Best Styles of Hats and Caps at closest prices.
Up-to-date Shirts, Collars, Ties, Gloves, and Fancy Furnishings, not at fancy prices.
Underwear, Hosiery, Etc., grand values.

Ladies' Section

Dressmaking at very reasonable rates.
Ready to wear Coats, Skirts, Blouses, Etc., in great variety of new things.
MILLINERY—All the Novelties of a first-class Millinery Business constantly received
The Underwear and Furnishing Stocks are crowded with good goods at low prices.
Belts, Collars, Gloves, Hosiery, Handkerchiefs, Etc., Etc.

25 and 27
Wyndham St.

E. R. Bollert & Co.

25 and 27
Wyndham St.

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An Invitation

FOR ICE CREAM OR ICE CREAM SODA



may be modestly accepted, but the soda itself will be none the less enjoyable. The

Ice Cream Soda



we serve is by far beyond the ordinary. The soda itself is the best that can be made and we make it still better by using Ice Cream of a quality seldom used in soda.

The Kandy Kitchen

Lower Wyndham Street

GUELPH, ONT.

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ZENOLEUM DISINFECTANT AND DIP

USED AND ENDORSED BY

ONTARIO AGRICULTURAL COLLEGE
IN ITS SEVERAL DEPARTMENTS

THE CANADIAN GOVERNMENT
AT ITS ARMY BARRACKS

CANADIAN PACIFIC RAILWAY CO.
THROUGHOUT ITS SYSTEM

PROMINENT VETERINARY SURGEONS
IN THEIR DAILY PRACTICE

LEADING LIVE STOCK MEN
ALL OVER THE WORLD

ON SALE AT EVERY DRUG STORE

In Tins 25c. - 50c. - 90c. - \$1.50 - \$6.25

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Zenner Disinfectant Co.

WINDSOR, ONT.

DETROIT, MICH.

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ARE
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G. B.—CHOCOLATES—G. B.

are put up in $\frac{1}{2}$ lb., 1, 2, 3, or 5 lb.
packages. Each box contains full weight
of chocolates without including weight
of box, paper or packing material.

*The new "EVANGELINE" box
is a dainty package*

GANONG BROS., St. Stephen, N.B.
Limited

A. B. PETRIE
SOLE AGENT IN GUELPH

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Vice-President:
W. GEO. BOND

2nd Vice President:
T. A. KEATING

Sec'y-Treasurer:
J. S. MILLAR

Our Prices Are Always Right

*If
You
Require
Anything
in
Hardware
or
Sporting
Goods
Let
Us
Serve
You*

Men's Furnishings

JUST TO REMIND YOU

That I carry one of the largest and most select stocks of **Hats, Shirts, Ties, Socks, Collars, Underwear and Men's Furnishing Goods** in the city.

ORDERED CLOTHING

I have a select stock of **Suitings, Overcoatings and Trouserings** to select from. Styles, Trimmings, Fit and Workmanship the very best, and prices as low as any in the trade. Our motto is: "The best possible value for the least money." All goods marked in **PLAIN** figures and **ONE PRICE TO ALL**. Be sure you come to **73 Wyndham Street** for your Furnishings and Clothing.

R. E. NELSON

Next Traders Bank.

Men's Furnisher, Hatter and Fine Tailoring

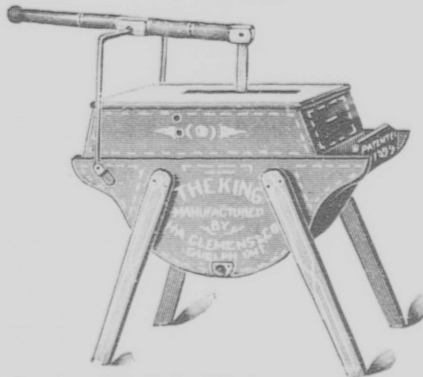
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**LUMBER,
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SHINGLES**

All Kinds of

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Manufacturers of

**DOORS,
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**BUILDING
MATERIAL.**

THE H. A. CLEMENS CO., LIMITED

MANUFACTURERS OF

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Phone 50.

GUELPH, CANADA

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Go to Petrie's Drug Store

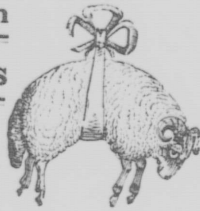
for your
**Photograph Supplies,
Films, Papers,
Plates, Mounts, etc**

Developing and Printing done. Only expert workers employed in Photo Department. LET US DO YOUR PRINTING FOR YOU.

Remember the Place.

**PETRIE'S DRUG
STORE**
Guelph, Ont.

Advance in Fine Furs



Is the latest report from the big Fur Centres. This will make no difference

this season with us. We have an immense stock bought and paid for ; so it is up to you to get your money's worth this fall.

Our experience and guarantee should be worth something. We take the responsibility if everything should not prove satisfactory.

In FINE TAILORING we are in the First Division in Canada.

Keleher & Hendley

STUDENTS

THE PLACE
TO BUY

**Drugs,
Toilet Articles,
Fine Perfumes,
College
Supplies, etc.**

IS AT



STEWART'S DRUG STORE

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**A SQUARE DEAL FOR
EVERY MAN**

THE NEW STORE FOR
MEN'S AND BOYS'
CLOTHING
AND FURNISHINGS

EVERYTHING NEW
EVERYTHING RIGHT

**THE STORE FOR STYLE
AND QUALITY**

EVERYTHING THAT
WOMEN, GIRLS AND
CHILDREN WANT
TO WEAR

Also Carpets, Curtains, Draperies and
Furnishings for the House

Earliest with the Latest Things.
Fairest Price on all Things.

Nothing that is not Good.
'Most Everything that is Good.

G. B. RYAN & CO.

UPPER WYNDHAM STREET. We Do What We Say.

**The Canadian Bank
of Commerce**

Established 1867. Head Office, Toronto
B. E. WALKER, General Manager

Capital (paid-up) \$10,000,000
Rest - - - 4,500,000

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A general banking business is transacted.
Banks for the Dominion Live Stock Association.
Farmers' notes discounted.
Drafts issued payable at all points in Canada, and the
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Deposits of \$1.00 and upwards received and current
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Interest added to the principal at the end of May
and November in each year.

Special attention given to Collection of Commercial
Papers and Farmers sale notes.

J. M. DUFF, - Manager

R. B. Kennedy



PHOTOGRAPHER



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

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ONLY
ARTISTIC
CLOTHING

IN OUR READY-TO
WEAR CLOTHING
AND FURNISHING
DEPARTMENT

THE
DOWLER CO.

**Burr &
Ainsworth**

FURNITURE
DEALERS

Guelph, - Ontario

**One
for
the
Boys**

94 SUIT ENDS
worth \$24 to \$30
WHILE THEY
LAST
\$18.00 to \$22.00

Work:
High Class

J. A. SCOTT

Maker of Men's Clothes

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GRANT & ARMSTRONG

Furniture Dealers
and Upholsterers

WE MAKE A SPECIALTY OF

**Repairing
Upholstered
Goods. . .**

COSY CORNERS AND SKIRT
BOXES MADE TO ORDER. **TRY
US**

Quebec Street phone 488

BELL *HIGH CLASS*
PIANOS
PIANO-PLAYERS, ORGANS
 MANUFACTURED BY
Bell Piano & Organ Co., Limited
 CATALOGUE FREE. GUELPH, ONTARIO

MEN'S CLOTHING
PAR EXCELLENCE

There is no reason in the world why you should not wear the best clothing made—we sell it, and at a price no greater than some inferior kinds are sold at. There is style to our clothing—there's wear and there's value—what more can you ask? You cannot get more than we give for the money—anywhere.

Do you realize that we also sell the best lines of furnishings you have access to? This is news to scores of men in this vicinity—good news, and if they will, they can profit by it. Just come and see.

D. E. Macdonald & Bros.

5 and 7 Lower Wyndham. 56 McDonnell St.
 3 Entrances

**Lowney's
 Chocolates**

When you eat Chocolates you want to enjoy the best obtainable. Lowney's goods have a world-wide reputation, and are always to be relied upon. J. A. McCREA & SON can supply you. Let us have your order when getting up those little "Suppers."

J. A. McCrea & Son

Two Stores :
 Wyndham St. and Elora Road

STALL No. 3, GUELPH MARKET

ALFRED HALES

Wholesale and Retail Dealers in

**Fresh Meats, Pickled Beef and Tongues,
 Poultry for the Students a Specialty,
 Fresh Pork, Hams, Bacon, Lard,
 Sausages and Bologna**

Shop—Telephone 191

Residence—Telephone 405

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UNDERWOOD
VISIBLE TYPEWRITERS



Used by the Ontario Agricultural College
All Makes of Rebuilt Typewriters
Write for Price List.

UNITED TYPEWRITER CO., LIMITED
TORONTO, ONT.

New Oak Hall Store

MR. O. A. C. MAN!

We keep a Practical Tailor to do your Pressing and repairing. Monthly contracts taken. All goods called for and delivered. A post card to Box 807 will bring our boy for your parcel.

CUMMING'S
OAK HALL STORE

Guelph's Leading House

For Stoves of every Description.
Sheet Metal Workers, Kitchen
and Dairy Supplies. Expert
Heating Contractors.

H. OCCOMORE & CO.
86 Upper Wyndham St., Guelph

THE
**Electric Boiler
Compound Co., Ltd.**

PHONE 396, BOX 409, GUELPH, ONTARIO

**Walker's Electric
Boiler Compound**

High Grade Lubricating Oils, Greases Pack-
ings, Belt Lacings, Flue Scrapers, Etc.

Crystal Cream Separator Oil
A SPECIALTY

PRINGLE THE JEWELER

Entomological Supplies,
Magnifying Glasses, all qualities,
Fountain Pens,
Rubber Stamps,

O. A. C. and Macdonald Institute
College Pins

Horse-Power Spramotor

Will pay for itself the first season in removing wild mustard from your fields.

Automatic in action throughout; everything under control of driver without stopping.

Machine automatically stops at 125 lbs. pressure, starting again at 100 lbs.

Tell us your needs. You will get expert advice.

Our 86-page Treatise D free. Agents wanted.

SPRAMOTOR CO.,
BUFFALO, N.Y. LONDON, CAN.

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

Thornton & Douglas

LIMITED

Makers and Importers of Wearing Apparel for Men and Boys

**Dairy Suits
a Specialty**

Stratford, Chatham,
Guelph

HEADQUARTERS

FOR HARDWARE AND
SPORTING GOODS
AT LOWEST PRICES

G. A. RICHARDSON

Upper Wyndham Street. - GUELPH

GUELPH AND ONTARIO INVESTMENT AND SAVINGS SOCIETY

SAVINGS BANK DEPARTMENT
Deposits of \$1.00 and upwards taken.
Highest current rates allowed.

J. E. McELDERRY, Sec - Treas

EYES TESTED

BY AN EXPERT OPTICIAN
(No Charge)

SAVAGE & CO.
OPTICIANS

JAMES LAW
UPPER WYNDHAM STREET

Manufacturer of all kinds of
UNDERWEAR, JERSEYS, HOSE, ETC.
NEAR GEMMELL'S DYE WORKS
FOOTBALL and HOCKEY GOODS
Made to Order in College Colors
Bicycle Stockings

STUDENTS

When You Want Material to
Smoke or Chew, Call at the
Senate Cigar Store
You find everything you want there
McHUGH BROS. 26 Lower Wyndham

GEO. HARPER

Picture Frames
QUEBEC STREET
NEAR CHALMERS' CHURCH

T. H. GEMMELL and CO.

Steam Dyers and Cleaners
No. 70 Wyndham St., West Side
Suits Cleaned, Dyed and Pressed.
Pressing Done on Shortest Notice.
Also Agents for Parisian Laundry. PHONE 69

—TRY—
BURGESS
FOR
GROUPS

There's as much difference in Barbers
as in any other Tradesmen.

The Royal Opera House Barber Shop
Is the place to get the finest work in Guelph,
and when the best can be had at the same price
as inferior—Why not have the best?

DR. COGHLAN
DENTIST

Cor. Cardigan and Woolwich Streets
TELEPHONE 223

A CHOICE STOCK OF
FOOTWEAR
FOR LADIES AND GENTLEMEN
And a RELIABLE
Repair Department

W. C. GOETZ, UPPER WYNDHAM STREET
Opposite G. B. Ryan & Co.

W. A. CLARK

Watchmaker
Jeweler and Optician
79 Upper Wyndham St., Guelph
Issuer of Marriage Licenses

WATERS BROS.

Wyndham Street

O. A. C.
SUPPLIES

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

Better Cheese

At Less Cost By Using
WINDSOR SALT.

Windsor Cheese Salt is especially for cheese making. Dissolves slowly and evenly — improves the flavor—insures a firm, solid, smooth, rich cheese—that will keep.

Because it IS pure, Windsor Cheese Salt will salt more cheese than any other.

Have your dealer send a barrel.

CANADIAN OFFICE & SCHOOL FURNITURE CO. LIMITED
PRESTON, ONT.



OFFICE, SCHOOL, CHURCH & LODGE FURNITURE

FINE BANK, OFFICE, COURT HOUSE AND DRUG STORE FITTINGS A SPECIALTY

SEND FOR CATALOGUE

Dominion Bank

GUELPH



Capital Paid Up - - \$3,000,000

Reserve Fund and Undivided Profits \$3,565,000

A General Banking Business Transacted.

Savings Bank Department in connection with all Offices of the Bank.

Deposits of \$1.00 and upwards received.

BANKERS FOR THE O. A. C.



Manager Guelph Branch

H. C. SCHOLFIELD

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The Busy Bookstore

26 Lower Wyndham Street

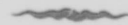


City Headquarters for
O. A. C. Students' Supplies

College Text Books

Fine Stationery, Etc.

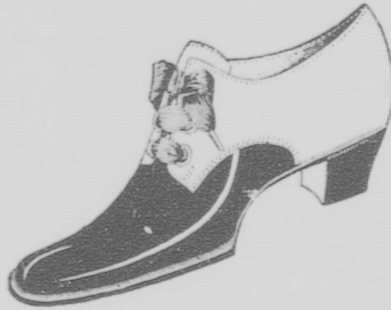
And for those who are planning for a gift for the folks at home, we are opening up and showing the finest range of goods in the city.



Scott & Tierney

A Present

will be given with their purchase to any student of the O. A. C. or Macdonald Institute by letting us know they are from the College.



We Sell the Geo. A.

Slater, Beresford, Astoria, Miss Canada

Our goods are right, and our prices are as low as the lowest. Look us up, we do business on the square, opposite the Market Square.

Repairing Neatly Done.

The Art Shoe.

G. Knechtel.

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

The Orchard and Fruit Garden

BY E. P. POWELL

A thoroughly practical book. It will be a welcome volume and almost indispensable addition to the library of any person interested at all in fruit raising, from the suburbanite with but a few trees and vines on his land, to the experienced nurseryman. It is the only book that deals in at all a popular way with the selection and cultivation of fruits. It tells what are the favorite varieties of each fruit, what varieties are likely to thrive best in any locality, and gives much valuable information on methods of cultivation and ways of protecting each from the pests and diseases likely to attack it.

The author is one of New York's prize fruit-growers, and has made his own orchard a model of correct cultivation and productiveness, as well as a remarkable success from a financial point of view.

Cloth, Illustrated, \$1.50 Postpaid.

WILLIAM BRIGGS

PUBLISHER

29-33 RICHMOND ST. WEST

TORONTO.

Education Department Calendar for 1905

(IN PART.)

APRIL:

14. Examinations in School of Practical Science begin.
20. High Schools, second term, and Public and Separate Schools close.
21. GOOD FRIDAY.
Annual examination in Applied Science begins.
24. EASTER MONDAY.
25. Annual Meeting of the Ontario Educational Association at Toronto.
30. Notice by candidates for the High School Entrance Examination, to Inspectors, due.

MAY:

1. High Schools, third term, and Public and Separate Schools open after Easter Holidays.
1. Toronto University Examinations

in Arts, Law, Medicine and Agriculture begin.

5. ARBOR DAY.
23. EMPIRE DAY.
Notice by candidates for the District Certificate, Junior and Senior Teachers' Examinations, University Matriculation and Commercial Specialist examinations to Inspectors due.
34. VICTORIA DAY.
26. Inspectors to report number of candidates for District Certificate, Junior and Senior Teachers', University Matriculation and Commercial Specialist Examinations.
31. Close of Session of Ontario Normal College.
Assessors to settle basis of taxation in Union School Sections.

For Examination Papers of the Education Department address orders direct to the Carswell Co., Limited, Law Publishers, etc., 30 Adelaide St. East, Toronto.

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

PLUCK WINS

This is how the
Frost & Wood Co.

view the situation in
their recent pamphlet

**"Fire Away, Every
Knock is a Boost"**

"Pluck wins. It always wins, tho'
days be slow,
And nights be dark 'twixt days that
come and go.
Still pluck will win. Its average is
sure,
He gains the prize who can the most
endure,
Who faces issues — he who never
shirks,
Who waits and watches and who always
WORKS."



EVERY READER

—OF THE—

REVIEW

Should take care of his numbers and
have them made in a bound volume at
the end of the College year.

The Gaelph Bookbindery

does the work in a neat and attractive
form for \$1.00 per volume.

F. Nunan's Bookbindery

GUELPH, - - - - - ONTARIO

Sign of the Big Book Telephone 371

ALL O. A. C. Graduates

Should Subscribe for
Guelph's Leading Paper,

The Weekly Mercury

It will keep them in touch with important matters pertaining
to their Alma Mater; will furnish them with full information
concerning the Ontario Winter Fair; will give them the news
of the Royal City, and the Farm and Live Stock News of the
District

Daily, \$4.00; Weekly, \$1.00 in advance.

McINTOSH & GALBRAITH

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



**Knapsack
Spramotor**

destroys all insects or fungi on
potatoes, berry bushes, trees
plants or vegetables.
Copper tank \$15, galvanized
\$12. Agents wanted.
Ask for 86-page treatise K.
SPRAMOTOR CO.,
BUFFALO, N. Y. LONDON, ONT.

IF YOU WANT

S

SCHOOL APPARATUS
AND
SUPPLIES

WRITE

The Steinberger Hendry Co.

37 Richmond St. West
TORONTO, ONTARIO

GET A FARM

In Western Canada

Only One Dollar per acre required in cash. Beautiful lands, well situated, in settled portions of Western Canada. Payments spread over five to ten years. These lands will be without doubt worth three times what they are now selling at within the next eight years. All our lands carefully selected. Address

The Western Canada

Settlers' Mutual Land Co.

23 Canada Life Building, - Winnipeg, Man

THE GUELPH
HERALDJob DepartmentFOR FINE
PRINTING

The Daily Herald delivered to all parts
of the city for 35 cents per month.

H. GUMMER, - - - Proprietor.

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

AMERICAN-ABELL
Engine and Thresher Co.
LIMITED

MANUFACTURERS OF THE
"COCK O' THE NORTH" LINE
OF THRESHING MACHINERY

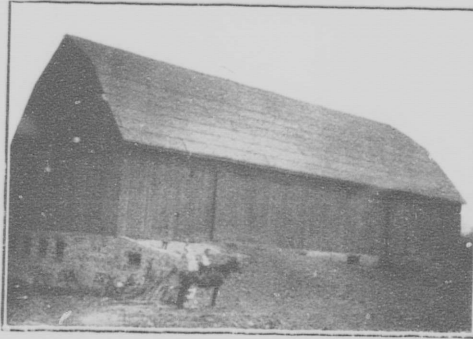


FACTORY:
TORONTO - CANADA



BRANCH SALE HOUSES AT
WINNIPEG and REGINA

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Reproduced Photograph of J. W. Young's Barn,
Ryckman's Corners, Ont.

A Paroid Roof

The roof that lasts and anybody can lay. Thousands of the most progressive farmers, dairymen and poultrymen, as well as railroad companies and the U. S. Government are using Paroid for roofing and siding in preference to all others, because they have PROVED that Paroid is

**The Most Economical }
The Most Durable } of all Ready Roofings
The Most Satisfactory }**

This is why : It is made of extra strong felt, with an extra good saturation which makes it proof against sparks, cinders, water, heat, cold, acids and gases. Light slate color; contains no tar; does not run nor crack and does not taint rain water. Don't be put off with a cheap imitation. Get the economical Paroid—the roof that lasts. **SEND FOR FREE SAMPLE** and name of nearest dealer. Investigate for yourself. For a 2 cent stamp we'll send new book of complete plans for poultry and farm buildings.

F. W. Bird & Son,

Makers

Hamilton, Ontario

(Originators of the free Roofing Kit—fixtures for applying in every roll).
Established 1817 in U. S.



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

The Up-to-Date Oxford Cream Separator

You no doubt are satisfied it will pay you to buy a CREAM SEPARATOR. To satisfy yourself which is the best one to buy is the next question. We can assist you by having you try the Up-to-Date "OXFORD." It is a perfect skimmer, easy to wash and turn, interchangeable ball-bearings throughout, is low down and a beauty in appearance.

SOME GOOD LIVE AGENTS WANTED.

Write for Catalogue.

Farmers' Mfg. and Supply Co.
Limited.

DURHAM, ONT.

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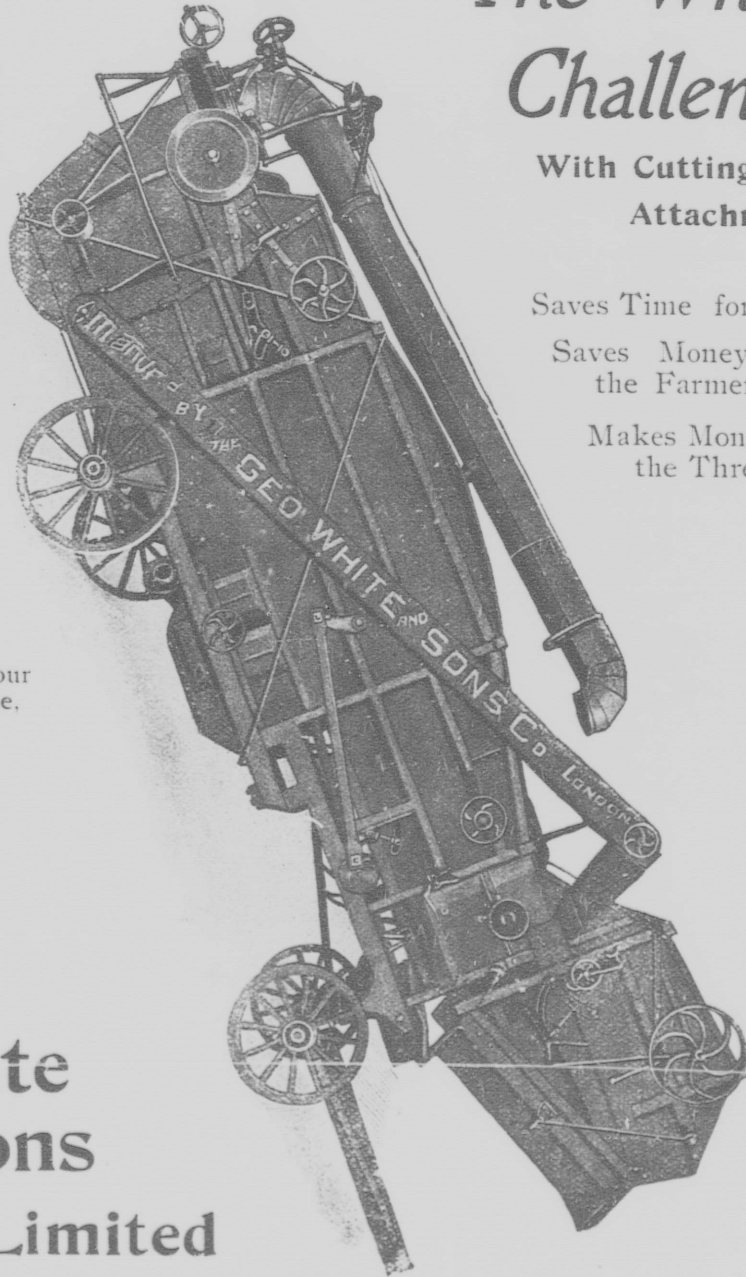
The White Challenge

With Cutting Box
Attachment

Saves Time for All.

Saves Money for
the Farmer.

Makes Money for
the Thresher.



If you have
not received our
1906 catalogue,
write us.

The
Geo.
White
& Sons
Co., Limited

LONDON, ONTARIO

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United States Separator

Continues To Lead



At Maine State Dairymen's Convention, December, 1905, there were 91 entries of butter in all classes.

42 per cent	of all the entries made from	U. S. Separator Cream
20 per cent	" " " "	DeLaval " "
38 per cent	" " " "	5 or 6 other methods

9 Entries	of the Creamery Class	the U. S. average score was	94.8
9 Entries	" " " "	De Laval " "	94.3

30 Entries	of the Dairy Class	the U. S. average score was	93.9
9 Entries	" " " "	De Laval " "	93.5

The average score of all entries in all Classes was 94.

Dairy Sweepstakes, United States Score - 97 3-4

Out of 15 prizes awarded, 7 went to **United States Butter** and only 2 to the **DeLaval**.

The **United States Separator** averages to lead in quality of product as well as in the **thoroughness of separation**.

Send for pamphlets describing **UNITED STATES CREAM SEPARATORS**.

Vermont Farm Machine Company

Bellows Falls, Vt

World's Best Butter

De Laval Separator Triumph At National Dairy Show

The great DAIRY SHOW and NATIONAL BUTTERMAKERS' CONVENTION held at CHICAGO, February 15th to 24th, awarded ALL HIGHEST BUTTER PRIZES to entries made from DE LAVAL SEPARATOR CREAM, the prizes and the scores being as follows :

GRAND PRIZE--GOLD MEDAL

A. CARLSON, Rush City, Minn.....Score 97

SILVER MEDAL

J. E. HOWE, Oakland, Minn.....Score 96½

SILVER CUPS

E. J. SIMONSON, Milton, Wis.....Score 96

W. H. BECHTEL, Caro, Mich.....Score 96

LOUIS NELSON, Camp Point, Ill.....Score 96

F. L. ODELL, Greenfield, Iowa.....Score 95½

Out of the total 610 butter entries 559 were DE LAVAL users, the other 51 representing the users of all other Separators combined, while of the 496 entries scoring 90 and over, 463 were DE LAVAL made, the other 33 covering all competitive users together.

All this is in keeping with what has happened at every previous Convention Contest of the National Buttermakers' Association since its organization in 1892, all highest awards having been made, without exception, to DE LAVAL users.

While in evidence of the recognition of DE LAVAL superiority by the best buttermakers everywhere, it is important to note that the proportion of DE LAVAL made entries has never been less than 85 per cent, and at the present Great Show was over 91 per cent of the total number.

A DE LAVAL catalogue, gladly sent for the asking, will help to make plain WHY under like conditions DE LAVAL cream produces butter superior to that which can be made in any other way. Write for it to-day.

The DeLaval Separator Co.
Winnipeg 77 YORK ST., TORONTO Montreal