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THE DIGNITY OF A CALLING IS ITS UTILITY.

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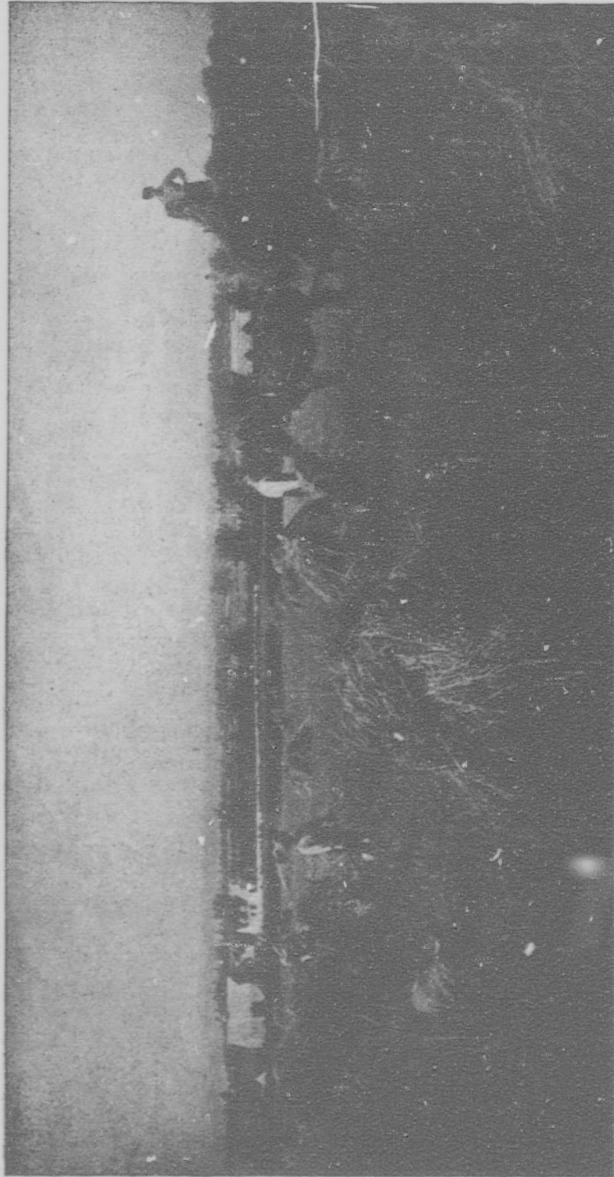
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"THE GARDEN OF THE GULF."

On approaching Prince Edward Island the traveller's attention is usually first attracted by a fringe of low lying red sandstone cliffs, which line the shore, standing out in bold contrast to the green meadows and patches of dark woods beyond. Upon landing, one will find that the soil is of the same red color, having been formed by the disintegration of the underlying rocks. It consists, for the greater part, of a sandy loam, with here and there a portion somewhat richer in clay. The herbage is of a rich deep green, which rivals in beauty that of the Emerald Isle. Although generally level, in some parts the sur-

face is beautifully undulating. The primeval forest has been cleared away, and, where once it stood, now appear broad tracts of well tilled lands, dotted with many comfortable homesteads. It is true, some small areas of woodland still remain, but they are widely scattered and are diminishing year by year.

The Island is much indented with bays, and intersected by numerous rivers, fed by streams whose waters flow down pure as the raindrop, over their beds of sandstone rocks. These waters are the home of many fish, chief among which are the trout, and to their banks in the summer season



Harvest Scene,—Prince Edward Island.

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come numbers of sportsmen eager to capture a share of the finny treasures. The sea trout which find their way up the rivers are particularly fine, and are in consequence much sought. So great is the interest taken in trout fishing that men pay considerable sums of money in order to secure for themselves the exclusive rights to catch fish in certain waters. There

to fifty years ago the mackerel fishing on these grounds was the best on the Atlantic coast. At the height of the fishing season, which extends from June to October, several hundred vessels, chiefly from the United States, might be seen in these waters catching fish. The business has not been carried on so extensively in late years, owing largely to a falling off in the



Entrance to Charlottetown Harbor, P. E. I.

are numerous fishing places, however, where anyone may go and indulge in this popular pastime at will.

Deep sea fishing may be had at almost any point along the shore, but the north side of the island is the best place for this purpose. Here cod, mackerel and other kinds of fish are taken in large quantities. From forty

supply obtainable, but numbers of fishermen living by the shore still find it a profitable vocation. To the amateur, mackerel fishing is a most excellent experience. The fish pass in schools, and the fisherman may wait until his patience is well nigh exhausted without feeling a tug at the hook. Suddenly a school comes along

and then the sport begins. The experienced fisherman uses three or four lines, hauling them very rapidly while the beginner generally finds one, or at most two, sufficient to tax his powers to the utmost. A large number of fish are often caught in a very short space of time. Such spurts do not last for more than a fraction of an hour, and he who would do best cannot afford to lose a minute of time.

Fishing for cod requires strength as well as skill, owing to the large size

bathing grounds in the world. Numbers of people frequent portions of this beach on warm summer days, and spend hours in pure enjoyment. At low tide great stretches of firm, smooth sand are laid bare, which afford excellent ground for racing, driving, bicycle riding and other pastimes. Bays are numerous along the coast, and, sheltered from the sea by the barriers of sand, their waters placid as those of an inland lake, afford safe boating for any too timid to



Trout Fishing—Winter River, P. E. I.

of the fish and the fact that they are hooked near the bottom of the sea, but in common with the taking of mackerel it affords an exhilarating pastime to those who are not disturbed by the rocking of the small boat on the restless deep.

On the north shore, facing the Gulf, are fifty miles of sand dunes, washed by the cool waters of the sea, and forming one of the finest beaches and

venture beyond the bar.

In the country many pleasant drives may be had, with beautiful passing glimpses of river, field and woodland, and occasionally from some higher point a sight of the blue waters of the Gulf. The well kept homesteads, and fruitful fields and orchards, surrounded by neat hedgerows, all lend interest and charm to an experience not soon forgotten by the visitor.

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The people are noted for their hospitality, which, by reason of the large number of visitors, they have ample opportunity to prove.

Hotels for the accommodation of summer tourists have been erected at many points on the coast, and hither during July and August of each year come numbers of weary workers from heated and crowded cities, that they may enjoy a rest and restore their wasted energies by the side of the refreshing sea. The hotels are reached by team from the nearest railway station or seaport. The distance from Charlottetown across the Island to the north shore, where, within a short space are located four hotels, is fifteen miles, and within a radius of twenty miles there are six well appointed hotels, situated at different points by the sea.

The number of people who visit the

Island in summer in pursuit of rest and pleasure is yearly increasing, and the prospects seem good for the development of a large tourist travel business. The summer climate is excellent. The extremes of heat and cold are not so great, and sudden changes are not so likely to occur as on the mainland. The heat is never oppressive, being tempered by the breezes from the sea. In June and July the whole country is a paradise of verdure and bloom. Farm and orchard and garden are visible on all sides. The entire surface is capable of being cultivated. On this account, and also because of its small size, the Province has been called "A million-acre farm." The work of the husbandman is in evidence everywhere, and Prince Edward Island is truly the most agricultural province of Canada—"The Garden of the Gulf."

E. J. MACMILLAN.

THE FUNDAMENTAL DEFECTS OF MODERN SOCIETY.

Oration Delivered before the Literary Society of the Ontario Agricultural College, March 13th, 1903.

MR. PRESIDENT,

LADIES AND GENTLEMEN:

Questions of political and social perplexity are increasing constantly as civilization advances, and as the inhabitants multiply difficulties are developing which concern every person in existence, and hence such questions are common to all, and the discovery of an effectual remedy is the disturbing element in the minds of many. The possibility of preventing an anticipated evil is known to all,

while the efforts to realize the effects can not be ascertained.

The struggle of the civilized people has been to modify social conditions, constitute a legislation of a reformatory character, and form a constitutional and representative government with the view of securing the rights of the common people, educating them in order to exterminate the ignorance of the public, to enfranchise them all, and to relieve them from the oppression of poverty and suffering.

In ancient times the people were subject to cruel slavery; in the middle ages they were suffering from an equally cruel tyranny; and in modern times they have been crushed beneath the merciless absolutism of capital.

In order to comprehend fully the social and political situation of the present, it is necessary that we should understand the relation of the individual to society. An individual is the unit of the community, whose qualifications are apparent evidences of the characteristic progress of that community; and according to the percentage of units in the acquired standard of intellectual refinement, educational deportment, and economic attitude we classify them as being civilized, semi-civilized, or barbarous. But still it remains a question whether the attainment of such qualifications will be sufficient to confront the difficulty, or reduce the intensity or the number of such social and economic problems as are perplexing the minds of the statesmen and legislators of the day.

From the conditions already alluded to, you can easily understand that the transition from ancient to modern times has not accomplished much, thus showing that there are still a few fundamental defects which prevent the attainment of the object in view. And, Mr. President, it is the very same defects which constitute the basis of my subject.

Civilization consists of the development and amelioration of the intellectual, physical, and moral faculties of man, and the social and judicial system under which he lives. If, upon examination, we find our conditions approaching to the conditions of the

preceding statement, then we can feel proud of our century and congratulate ourselves on our progress. But if you kindly allow me to direct your attention for a few moments outside of the city of Guelph, and visit the so-called industrial centres, where the inspiration of modern life seems to be concentrated, and observe the appalling degeneration of moral sentiments, and then compare these conditions with the atrocities committed during the reign of Emperor Nero of Rome. If civilization consists of the increased activity of life, the invention of labor-saving machinery, enormous accumulation of wealth, together with the substitution of lower for higher principles, the predominance of vice over virtue and the subjugation of duty under passion, then we cannot be proud of the conditions of civilization. So long as the ultimate object is perfection, the acquirement of a little progress should not make us indifferent. Civilization, as it advances, requires an acute and more sensitive conscience, a keener sense of duty and justice, a loftier and truer public spirit. If the disrespect of young to old, and of old to their sense of duty has increased, then it is time that the question should be of public moment. The mighty nations of ancient Greece and Rome lost their prestige through moral degeneration, which commenced with individual indifference. True, a person seems to be of no account as compared with the majority, whereas he is the type of the active element of that combination, and its benefit and injury are influenced by his conduct. I cannot, therefore, under any consideration, over-exaggerate the value of individual duty.

Duty of a student, duty of a teacher, duty of a citizen, duty of a ruler, duty of a soldier, and duty of a commander all bow to the same principle, a principle of the highest consequence, pervading human life.

We cannot rely upon our intentions, as they mean only what we propose to do; neither can we depend upon ambition, as it means what we covet to do; nor yet upon sentiments, that which we please to do; but to accomplish our purpose consult with duty that which we must do. The superiority of intellect, financial strength, military or civil positions cannot justify us in neglecting our duty. Study the biography of the most illustrious men, and trace the cause of their success and happiness in life. A Socrates can even refuse the offer of his pupil for his safety, rather than to disobey the laws of his country; a Gladstone who even for his belief in justice can sacrifice the highest position that British Empire can offer; and a Nelson, who, in spite of his naval genius, can declare his conviction that the victory of Trafalgar was dependent upon individual effort and duty, and inspire his sailors with that memorial sentence, "England expects that every man will do his duty." Should we not modify this, therefore, and make it to read: Society expects that every man will do his duty whether on the field, or at the desk, or in the shrewd conflict of bargain. How many of those busily engaged in commercial life ever think of their duty to their country and humanity? The age in which we live has reached the point of culmination in industrial progress, and we feel proud of such

material advancement; but what is the consequence? Every spare effort is spent in discovering secure methods of establishing industrial tyranny. Who ever thinks, whether by enlarging certain branch of profession will deteriorate the interest of others? So long as the increase of wealth is secured it makes no difference who suffers! The motto of the present age is: Mind your own business and leave others to take care of their own. We frequently read and hear democratic organs denouncing all forms of monarchial government, condemning the amount of authority vested in a sovereign; thirsty with the sentiments of equal rights and equal protection to all, and on the contrary, behold the prevailing influence of industrial despotism! Destroy the existence of an autocratic government, and substitute a still more forcible tyranny of a material object, and let that govern the hearts, the minds, the thoughts, the actions of the members of the community. Let the sugar, oil, and coal trusts, after destroying the living of many intermediate dealers, control articles necessary to public comfort, and after putting their gains on sound basis, reduce the prices, making the common people think that combination of capital has increased production, and has decreased the cost of living, while the principal object of trusts, syndicates and similar associations is to procure a universal control of production and establish the sovereign rule of monetary tyranny. Can a keen observer believe that they are endeavoring to promote public welfare, while some of them are making most extortionate profits on commodities pro-

duced, and torturing so many homes under the desperate claws of necessity? And, on the other hand, these few tyrants, thinking that it is their duty to help the human cause by establishing hospitals, educational institutions, or donating thousands and millions of dollars to charitable causes simply to build fame for themselves and show that they are the benefactors of society. How contradictory an attitude! If they were so kind-hearted, or really anxious to assist the general welfare of the public, they could easily satisfy themselves with sufficient to provide the necessities of life and secure the future of their family, and let the thousands of destitutes enjoy the same comforts of life.

Genius is allotted but to the few; fortune favors only the minority; but the gates of duty are wide open to all.

I have no reflections on Andrew Carnegie, neither do I object to his method of distributing his wealth; but in one of the recent articles that appeared, the total amount donated by him to libraries and other charitable institutions was in the neighborhood of \$68,000,000. Now, if we allow, on an average, \$800.00 for annual comfort of a family of four, then this amount would be sufficient to support 340,000 people, fully over half as much more than the total population of the city of Toronto. But this amount comes out only of Mr. Carnegie. How many Carnegies there are yet! Let John D. Rockefeller endeavor to enrich the University of Chicago; or J. Pierpont Morgan invest his money in steamship combines, and thus extend his influence

beyond the sea, and interfere with the maintenance of thousands on the other side of the Atlantic. Yet, is this all! They are not contented with their industrial sovereignty, but proceed even farther and dictate to the civil government, either directly or indirectly, through the instrumentality of an influential lobby. Let democracy claim freedom from corruption of all description, but still the influence of such tyrants will molest the purity of the principal and the last resort of citizens in case of injustice.

The vital principle of the democratic government is that all the voters shall be equally represented in the legislative assembly; that the opinions, interests and views of public policy of each individual, as well as of every class of individuals, shall be also equally respected. But to give a majority the whole representation and disfranchise the minority means to foster party spirit, faction and corruption; to encourage political combinations and political intrigues; to increase the authority and influence of party leaders, and to depress individual talent, individual effort and duty and integrity of purpose. If any man who is connected in any way with political parties, manifests his views independent of any partyism, he is considered as guilty of treason, and denounced as a political heretic by the leaders of the party. Adhesion to the party is considered a substitute for patriotism. The principal object of party leaders, apparently, is not to promote the interest and welfare of the nation, but of the party; they appeal constantly to party prejudice and party creeds, in-

stead of making their policy coincide with reason or be approved by public opinion; and hence the principal question is, what will be popular and strengthen the party, and not what will benefit the country. How many people during the election period are masters of their own will? How many can stand face to face, and declare their conviction and support their belief? Or what politician can boast that he is elected to his seat through the appreciation of his good services by the public instead of through bribery? Perhaps I cannot prove these statements by documentary evidences, as it is even more a disgrace to keep the frauds of nations in reserved documents; but all those who are aware of the political affairs of their country are sure of the fact that frauds of a most flagrant character are unblushingly perpetrated.

I have no reflections on any particular country, as such conditions almost exist in any country so long as governments and elections exist. But let me say this, that persons who humiliate themselves so low as to buy their position are entirely devoid of their personal respect and duty, and should not be entrusted with the affairs of the people. How can he who cannot serve faithfully, be expected to rule wisely? Should I not repeat, then, that it is time to realize the gravity of the situation, and seek to discover a remedy, or else the fate

of this or any other country, no matter how much they boast of their civilization, will finally reach the same goal as ancient Greece and Rome.

It is easy, however, to criticize and apologize; but criticism and apology alone do not relieve us; knowing a thing does not necessarily mean also practising. These things are facts, and how can we remedy them; there is the question!

The man who can transform the impassable ocean into his highway; who can travel with machinery, the production of his own genius, at a speed higher than that of a swallow; who can cancel space in the communication of his thoughts; who can discover nature's most profound secrets, measure the distances of heavenly bodies, determine the weight of the stars and analyze the sun, can, surely, overcome social difficulties if he only purposes to do so.

A united effort can raise the level of public opinion, elevate the standard, and increase the demand for honesty and manliness, and the supply will necessarily follow. The future of this, or any other country, depends upon the rising generation, who are responsible for the welfare of their country, government, and society, and the successful achievements can only be derived when each person acknowledges and performs his own duty, a principle imperative in its requirements and life-long in its duration.

B. M. EFTYHITHES.

Agricultural Department.

EDITED BY A. P. KETCHEN.

Third Letter from Richard Gibson.

The Editor O. A. C. Review.

In reading over my last there are two items I wish to explain; the one is the handling of hunters. We were in the centre of the best hunting district of all Britain, and many a farmer paid his rent out of his hunters; buying right and with judgment, and then educating them.

The other item is the actual necessity of learning how to do all farm work properly. I have often since thanked my father for insisting that I should learn the manual part, though at the time I could not see the necessity, I reasoning, "the Governor does not work, and he has a foreman that knows it all, why should I work? I'll have a foreman, too."

When, on my own resources, I had charge of a large farm in New York State, I was only 25, and had some thirty or forty men under me, all much older, the resentment was great, especially as I was a Canadian, and my row a hard one to hoe. They were mostly Irish, and at that time very bitter against England or anything English. It was just before the Fenian raid. One of the plowmen got laid off. I took his team and did such work that it was the curiosity of the neighborhood. Parties drove from far and near to see it, even the Presbyterian minister preached a sermon; his text was, "Go Straight," illustrating it by that piece of plow-

ing. Never could be a better field for the purpose. The much frequented road ran along the top, and the field sloped down to the flats below. I took advantage of the opportunity, and astonished myself. That victory more than paid for all the years of labor, and the generous Irish heart gradually softened, and my lines were in pleasant places afterwards. So, I would advise all, no matter what rosey prospects may be in view, not to disdain the manual part: more especially is that necessary in Canada, where skilled labor is scarce.

The farm in England, of which I formerly wrote, contained some 500 acres, about half arable. On referring to my diary for 1858, I find that there was grown and sold for that year:

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| 66½ acres wheat produced 3,519 bush., | |
| averaged 44 bush. per acre, and | |
| sold for..... | \$ 3,519 |
| 65½ acres barley, averaged 45½ bush., | |
| realized..... | 2,356 |
| Sold 136 head of cattle, aver. £22, 1,2 | 14,300 |
| " 527 sheep at 37½..... | 4,280 |
| " 15 horses, average £85..... | 6,000 |
| " 3,500 lbs. wool..... | 925 |
| | \$39,684 |

These figures are quoted to show the rotation usually adopted in the Midland counties on sheep or barley soils, viz.: the four course, 1, wheat; 2 roots; 3, barley and oats; 4, seeded down, one-half with rye grass and Dutch clover, for the ewes and lambs; one-half red clover and rye grass for hay. Note, no grain sold but wheat and barley, and they were usually replaced by the purchase of linseed and

cotton cakes, as much as 80 tons a year having been purchased, so that practically nothing was sold except live stock, for sometimes the purchased food amounted to more than what the sold grain realized.

The item for horses seems high, but we were then just recovering from a sad attack of pleuro-pneumonia, which entailed the sacrifice of the entire herd, and only by way of a feeler was the number of cattle reduced, the usual output being some 300 head, about 100 winter stall fed.

When cattle could no longer be fed with safety, horses were substituted, and from 10 to 12 young hunters, 4 to 5 years old, were in the nursery getting their education. It was in this school what I know of horses was obtained. Within reach of three packs of hounds, a fox cover on the farm, such a change from ordinary stock feeding was embraced. Though we always had one good hunter on the place, sometimes two, no effort had been made to develop them commercially. This was a feature that paid well; getting well placed and riding successfully to a kill in a fast run simply meant a cheque for 300 guineas, or \$1,500. Many a Lincolnshire farmer in those days made his rent out of his hunters, and had the sport thrown in.

The sheep flock usually consisted of 200 Shrop ewes, bought at Shrewsbury Fair, put to a fat-backed Leicester ram; lambs all off by end of April; ewes sold fat, and a lean flock purchased again in August. In addition, sufficient Lincoln wether lambs were purchased to feed off what turnips were not required for the stall fed cattle. Labor mostly day men, but one man in the house, groom, gardener, etc. Wages 16s to £1 a week.

Building the New Barn.

(Continued.)

DOORS AND WINDOWS.

While the walls are in course of erection, the owner should be careful to see that the doors and windows are properly set and in their right places. A mistake of a foot or more in the placing of a door or window, is a source of annoyance not easily remedied. Be careful, also, to see that stiff spreaders are kept between the jambs of doors and windows while the mason work is in progress. Without this precaution the frames will be crowded out of square by the pressure of the green wall.

Sunlight is not only the cheapest, but also one of the most efficient, agents known for the destruction of disease germs. It follows, then, that the windows should be of good size and numerous. In a wall twelve inches thick, with the rays of the sun striking it at an angle of forty degrees, a window sixty inches wide will admit nearly three times as wide a stream of sunlight as another that is only thirty inches wide; and if the wall be twenty inches thick, the one will admit, under the same conditions more than four times as great a stream of sunshine as the other. Hence the economy of large windows and thin walls.

The doors should be wide enough to prevent undue crowding of stock while going in and out. Three and a half to four feet is about right for cattle. One of the horse-stable doors should be seven feet wide, in order that a team may be driven into or out of the stable without separating

them. The door should always be in two pieces, so that the upper half may be left open if desired.

FLOORS.

Whatever may be said in favor of other materials for walls, there is nothing else in common use in Canada that at all compares with cement concrete for stable floors. When well put in, it is there for all time; it presents a smooth surface for cleaning without being unduly slippery; it is water-

The first thing to be done is to grade the bottom carefully. To facilitate accuracy, stretch a line level with the proposed surface of the finished floor, and grade the clay to four inches below the line. Use a linen line for this purpose, as a cotton line will sag too much from its own weight. The floor should be perfectly level lengthwise of the rows of stock. Some men grade the gutter two or three inches lower at the door. This

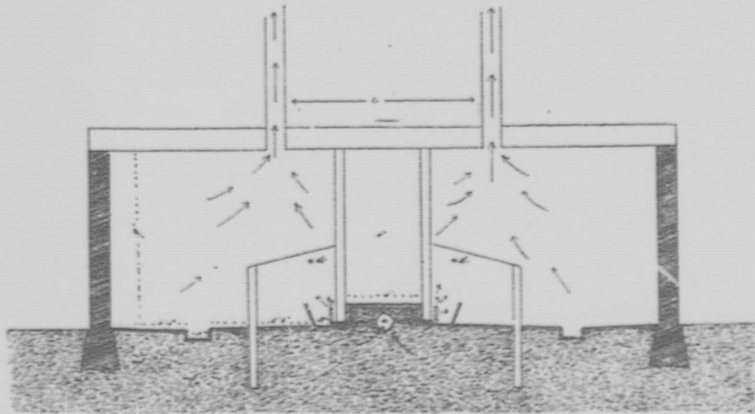


Fig. 3—End section of a cattle stable, showing floor, elevated feeding alley, and system of ventilation.

- (a) Fresh air conduit.
- (b) Distributing pipes.
- (c) Foul air shafts.
- (d) Scantling 4 x 4, to prevent cattle getting into mangers. This is the only obstruction necessary between the cattle and the feeding alley.

tight, thus preventing the loss of the most valuable constituents of the manure; it is sweet, clean and sanitary; and it can be put in at a moderate cost, not exceeding that of a wooden floor with lumber at \$15.00 per M.

For the convenience of those who may wish to lay their own cement floors, I shall endeavor to describe briefly the method.

is a mistake, because all the liquid runs to the lower end of the gutter, and accumulates in greater quantities than can be readily absorbed by the litter. The alley behind the cattle should slope towards the gutter with a fall of not more than one-half of an inch in six feet. If it is given a greater fall than this, the cattle are apt to slip on it, and serious injury may occur. For cows, the stalls should be given

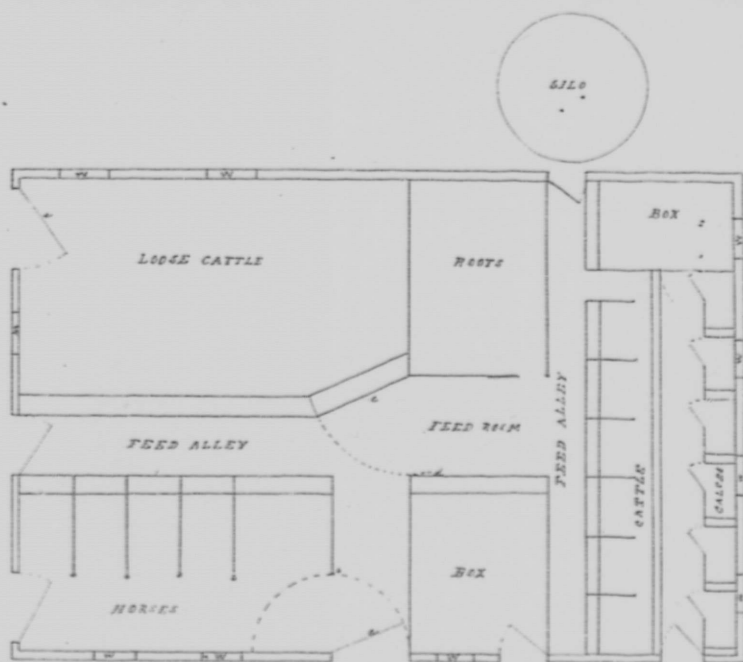
about the same grade as that named for the alley; for steers, the fall should be about one and one-quarter inches.

If, in grading, it is necessary to fill up any low places, gravel, broken stone or clay may be used; the only precaution necessary is to ram the filling solid, in order that it may not afterwards settle away from the floor.

After grading, the posts should be put in. The tail posts should be set

and straight before commencing to lay the floor.

If it is intended to use the system of ventilation recommended in this paper, the next operation is to build the retaining walls for the elevated feeding alley. (See Fig. 3.) To build these walls, set two straight planks, twelve inches wide, on edge, six inches apart; stake them firmly to place, and fill with concrete, taking care to



Plan No. 1—Barn 50 x 75, adapted to the requirements of mixed farming on a farm of 100 to 150 acres.

Note the location of the feed-room, and convenience for feeding. To clean out the loose cattle, the door (a) is fastened with hook to tail-post (b). The gate (c) with manger attached, is swung across the feed-room and attached at (d). A team can then be readily driven through this alley, and out at (e).

about three feet in the ground and extend about the same length above the finished floor. (See Fig. 3.) The posts supporting the weight of the super-structure should be set on large flat stones, or on concrete bases; and all timbers should be lined up plumb

tamp the concrete well as it is being put in.

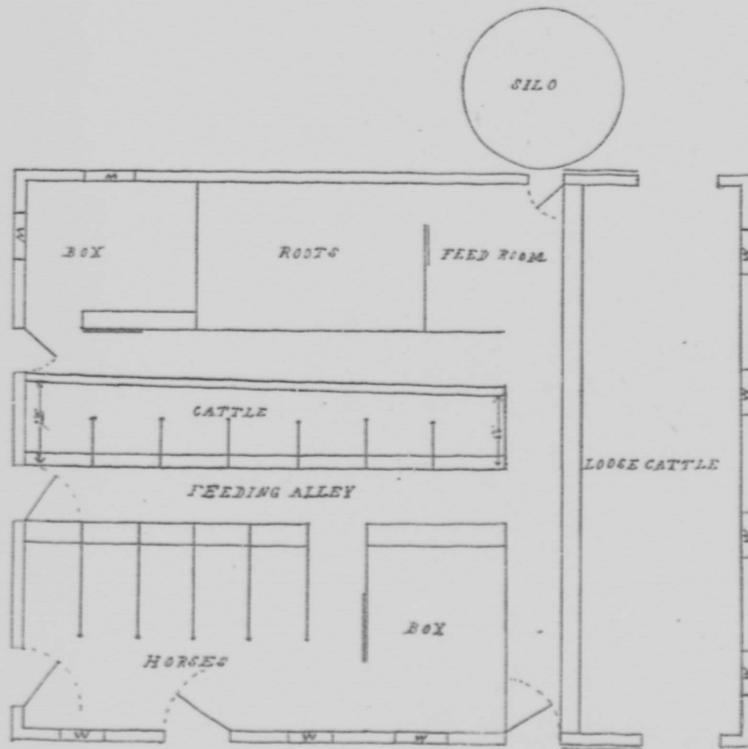
For mixing the concrete, make a mortar board about twelve feet square, using planks, or, better still, double inch lumber, breaking the joints. It is important that the mor-

tar board be solid and present a smooth, level surface. Mixing concrete is no light work at the best; and, on a loose uneven mortar board, this labor is unnecessarily increased.

We now require a guage for the gravel. This consists of the sides and ends of a box, without the bottom. Handles are nailed on the sides, so that when measured full of gravel the guage may be readily lifted off and

time, in the ratio of four to one, our gravel guage must measure eight cubic feet of gravel.

The ratio of cement to gravel will depend upon the material used. If pure, clean, sharp gravel is used with a good brand of rock cement, a concrete mixed about 4 to 1 will be found suitable for cattle stable floors. If Portland cement is used with the same gravel, it may be mixed six or



Plan No. 2—Barn 50 x 65. This also is a very convenient barn for 100 acres devoted to mixed farming.

laid to one side. The dimensions of the guage will be determined by the relative proportion of cement and gravel, and by the size of the batch to be mixed at a time. A barrel of cement contains approximately four cubic feet. If, therefore, we wish to mix one-half barrel of cement at a

seven to one, to give equally good results. It is bad, very bad, economy to attempt to make two barrels of cement do the work of three. Some dealers, in their over-anxiety for trade, are willing to assure a prospective customer that their particular brand of cement may be mixed in the

proportion of ten or twelve to one, and produce a floor as hard as steel, and as durable as the everlasting hills. It cannot be done. Enough cement must be used to fill up the interstices of the gravel, and make a close, compact, impervious concrete. If the floor is open enough to allow the liquid portions of the manure to percolate through it, fermentation soon destroys the bond,* and the floor is ruined.

Having made a gravel gauge of the desired dimensions, place it on the mortar board near one side, fill it half full of gravel, put on half the amount of cement, fill the gauge with gravel, and put the balance of the cement on top. Now, lift off the gauge, and, with a square-mouthed shovel, shovel the pile over twice, throwing it up into a cone-shaped pile each time, so that each shovelful, as it is added, rolls down evenly on all sides of the cone. If this is carefully done, the cement and gravel will be evenly incorporated. If it is carelessly done, it will be necessary to turn the pile again to secure an even admixture, which is a prime essential to good concrete.

When the cement and gravel have been well mixed dry, spread the pile out evenly on the mortar board, about four inches thick; add water in small quantities; turn with shovel until evenly moistened, when the concrete will be ready for use. Take care to avoid getting the mortar too wet. It should be of such a consistency that it will not puddle when rammed, but will admit of being tamped down into a solid, compact mass. If the mortar has been properly tempered, ramming will bring just enough

moisture to the surface to make it trowel readily to a finish.

The bottom of the gutter should be laid first. To find the depth to dig the trench, stretch the line on a level with the finished floor, and in line with the side of the gutter next to the cattle, and grade the bottom of the trench ten inches below the line and six inches wider than the finished gutter is to be, so that when the mould for the gutter is placed in position, the floor of the gutter will extend three inches on each side of the mould. Now spread an inch of sand or gravel on the bottom, and on the top of this a three-inch floor of concrete, rammed well to place, and trowelled to a smooth surface. The bottom of the gutter should be as smooth as possible, to facilitate cleaning. Now, lay on the mould for the gutter. A convenient mould is made by using a 2x6-in. plank for the side next to the stall, and a 2x4-in. for the side next to the alley; set these planks on edge, putting a ten-inch spreader between them every three or four feet. These spreaders should not be nailed, or it will be hard to get the mould out without breaking the edges off the gutter. After placing the gutter-mould in position, set a 2x4-in. scantling on edge parallel with the wall, and separated from it by small wedges, to enable you to get these scantling out again without damaging the floor. Set another scantling in the same way next to the retaining wall of the feeding alley. The upper edge of these scantlings must be levelled to the proposed surface of the floor.

We are now ready to lay the floor. First, place an inch of sand or gravel

all over the stable; then fill with concrete a block about four feet wide in the alley and another in the stall immediately opposite; ram down solid with an iron rammer; screed with a straight-edge resting on the gutter mould, and on the scantling next to the wall. Pass the screed over it two or three times, with a sawing motion, until a perfectly true and even surface is obtained; cut off the edges next to the gutter, and finish with a wooden float. A steel float should not be used on stable floors; it makes too smooth a surface, on which the stock are liable to slip and injure themselves. Proceed in this way with alternate blocks on each side of the gutter until the stable is completed. The reason for concreting both sides concurrently is to avoid crowding the gutter-mould out of line by the ramming of the concrete on one side only. After the floor has hardened for a day or so, fill up the spaces left by the removal of the scantlings used in screeding, and the floor will be completed.

The same principles apply to the laying of horse-stable floors. They require, however, to be a little heavier than cattle stable floors, and are better laid in two coats, a bottom layer three inches thick of concrete gauged about six to one, and a surface coat an inch thick of concrete gauged two to one. These two coats must be put down at the same time, and rammed well together, to ensure a bond. If the bottom layer is allowed to set for even an hour, before the surface layer is put on, it is very hard to make them unite, and the latter will be very apt to peel off. Plank should be bedded on top of the concrete in the

stalls. Horsemen do not like to let their horses stand on the bare concrete, believing it to have a drying effect on the feet.

The important principles to be observed in all concrete work are:

1. *Perfectly clean gravel.*—If the gravel contains either loam or fine, soft, dead sand, it is worse than useless for concrete work. Ideal gravel consists of clean, sharp, gritty particles of various sizes, ranging from that of a marble down to a clover seed. Gravel of this description will not require screening, even for a surface coat, because in the process of ramming the coarser particles are driven down, and enough of the finer material forced to the surface to take a finish.

2. *Mixing.*—The cement and gravel must be thoroughly incorporated before the addition of the water.

3. *Tempering.*—The water must not be flushed on in large quantities, so as to wash portions of the gravel free of cement. The mortar must be moistened evenly to such a consistency as will admit of ramming to a solid mass.

4. *Ramming.*—The strength of the finished work can be nearly trebled by ramming.

5. *Ripening.*—If concrete work is allowed to harden too rapidly it will be brittle and crumbly. Keep all finished work moist for at least two weeks.

(NOTE.—Owing to a lack of space the general discussion of Plans 1 and 2 is held over until our next issue.—
ED.

Corn Growing for Grain and for the Silo.

The corn crop is one of the most important crops to farmers of Canada. A few years ago it was thought that corn could only be grown in parts of Ontario. Now it is found, by the experimental farms introducing new varieties, that corn can be profitably grown in nearly every province in Canada. The increasing importance of the dairy industry, combined with hog raising, makes corn growing a necessity to successful farming. Corn can be grown in nearly all soils that are fairly well drained, but does best on a warm, sandy loam that has a free, deep subsoil. Being a heavy root growing plant, it requires the soil to be well worked.

Place in rotation.—Corn should follow first, or not later than second year, meadow or pasture fields; neither should be down over two years. If you cannot choose the former, select a field that has had a heavy seeding of clover sown with the grain the previous spring, and allow the clover to get all the growth possible before plowing under. This will act as a hot bed to the young growing corn.

Manure.—All manure made on the farm should be put on the cultivated or hoed crops. If the field is prepared, the manure should be put out fresh, and, if there is not too much snow, or no fear of washing down big ravines, it should be spread. Where the snow is very deep it is best to put the manure in small piles of about one-third of a cartload each, to be spread when the snow is gone. I would advise manuring on both the

prepared field and the one that had been clover seeded the previous spring.

Cultivation.—Should the two-year-old meadow be selected, and you have foul weeds of any kind and want to kill all such, instead of shallow plowing, as is the usual plan, just after you have your crop harvested, take a strong cultivator on the sod, cultivate very shallow at first, then harrow the opposite direction. Keep this up alternately until you have everything cut and dried out on the surface. This work must be done on very dry, warm days, when about four cultivatings and the same with harrows will make a perfect job. The last cultivating should be very deep. After the manure is put on it may then be plowed under, shallow. If you select the clover field that had just been seeded, and no clover crop taken off, allow the clover to grow as long as possible before corn planting time. Plow this growth under along with a light coating of manure, both fermenting together, will act as a hot bed under the corn and force its growth.

Varieties for Ontario and Quebec.—For ensilage, Early Mastodon, Selected Leaming, Mammoth Cuban; for grain and fodder, Longfellow, Compton's Early, Canada White Flint. There are several other sorts equally as good. I would advise every farmer to be an experimenter, and the variety that you find that will grow the largest and give the greatest yield of grain, and mature best in your own locality, is the variety to grow. Test your seed as to vitality before planting.

Planting.—Corn is a plant that requires a great amount of sunlight to

force the ripening process. There are two excellent ways of planting in common use. First, mark the land with a corn marker both ways, plant in hills three feet each way, and four to five kernels to the hill. The planting may be done with planters that are now made. One man can use two at once about as easily as one of the old kind could be used. Second, drill in from 20 to 24 lbs. of seed to the acre, closing all tubes that are not required; sow in drills 35 to 42 inches apart.

Cultivating.—Three or four days after the corn is planted harrow thoroughly to level the land, to kill all weeds and to warm up the soil. Then the corn will germinate and grow much quicker. After your corn is well up it may again be well harrowed. Cultivate close and deep the first cultivation, and, as your corn grows, cultivate shallower, and keep getting further away as you find the root

growth. Cultivate as often as possible when dry, to kill weeds and keep up moisture in the soil. The hoe should be used about twice during the season. Should the corn be sown thick, a few stocks may be cut out at the first hoeing. Do not spare the cultivator and hoe. A good crop will be assured, and you will have a clear field for future crops.

The Silo.—No farmer with 50 acres of land can well afford to be without a silo, as the greatest amount of food with the least cost of any crop grown on the farm can be stored in them, and, as to the value of ensilage, it is well known.

I would advise building the round silo every time, either of wood or cement.

JOHN FIXTER,
Central Experimental Farm,
Ottawa.

Live Stock Department.

EDITED BY PROF. M. CUMMING.

A Visit to Aberdeenshire.

The British Isles will ever prove to lovers of the historic and picturesque a mecca in which travellers of every class will find their shrines of worship. Where are there such peaceful rural scenes, such green grass, such shapely hedges extending wherever the eye may rest, such stately wide-spreading trees of ancient birth, such fragrant, winding country lanes, such picturesque ivy and rose-covered cottages with their well kept gardens, such lordly manors, with their castel-

lated towers, solid as the ages—aye, all that fills one's vision of an enchanted rural life—as in old England? Where in all the world has nature come so close to man as at Windermere or Keswick in England, or Lochs Lomond and Katund, among the highlands of Scotland, whose subtle and inspiring beauties have, through their poets, become the history of the world forever? Where can the reader feel such thrills touching his inmost soul as at Hastings, Bannockburn, Culloden—yes, and

many another battle field on which British rights and liberties were so dearly won? Or, if his love is more for art and romance, what more inviting scenes than the cathedrals of Durham, Canterbury and Westminster? or, still grander in their ruins, the old abbeys of Melrose, Dryburgh, Iedburgh and lonely Iona, or the imposing castles, and their surrounding moats, which here and there tell of some baron, who, in days gone by, was the mighty monarch of all the surrounding country? And what of Edinburgh, with its castle, its Holyrood and its Princess street, or of London, the hub of the British world, with its busy streets, stately mansions and dingy shows, its Tower, Westminster, St. Paul's, its art galleries, theatres, its churches and its Thames? Is it to be wondered that almost every boat that crosses the ocean, during the travelling season, is filled with tourists, all intent on viewing some of these impressive scenes?

But yet, whether it is due to environment or heredity, a conscious selection, or a pure an unaccountable love, the fact of the matter is that the writer of this column was attracted to England's shores by still another consideration than any of the above, and, when, in company with Prof. Gamble, of the chemical department of the college, we spent some weeks in England and Scotland, it was the shrines of animal and agricultural excellence that guided us in the selection of our routes, and formed the centres of our pilgrimages. We visited the English Lake region, but it was on our way to the Royal Agricultural Show in Carlisle; Melrose, but on our way to Kelso and Dunbar,

Aberdeen, when the Highland Agricultural Show was held, and on our way to Collynie and Uppermill, and so on Balbidolloch, Pickston Hill, Chapleton, Netherhall, Bapford Manor, Berkeley and the farm at Windsor itself, were all visited, whilst other tourists were wending their way up cathedral aisles, city streets and through galleries of art.

Those, the votaries of history, literature, art and science, to whom a cow is but a cow, can scarcely understand the feelings that were ours as we boarded the north-bound train at Aberdeen and were slowly, it seemed, transported to the little station at Udney, from which a six-mile drive brought us to Tarves, the home of William Duthie. But to one, whose good fortune it has been to listen to many a fireside tale of victories won in the show ring, and of cows whose progeny are now a veritable source of pride to their owners, to one whose eye has always caught with interest every written line that told of Shorthorn excellence, the product of the skilled breeders of England and Scotland, it was the realization of many a cherished vision to gaze upon scenes redolent with memories of Amos Cruickshank and his cattle, and to walk through pastures in which the very aristocracy of Shorthorns, owned by Messrs. Duthie and Marr, were grazing.

A grand type of man is William Duthie. We met him first near the Shorthorn ring at the Royal Agricultural Show, and his hearty handshake and kindly inquiry about Dr. Mills and Mr. Dryden, from whom we had letters of introduction, rendered his subsequent invitation to

spend a few days at his home in Aberdeenshire, superfluous. He is a busy man. Representing Lord Aberdeen in many matters relating to his estates, often chosen, against his will, as executor of much property, and managing a local bank, one would think him sufficiently occupied, but, despite his many other interests, he still finds time to manage, and that most efficiently, a large herd of Shorthorns of such individual excellence and breeding as can be found nowhere else in cattledom. It took us the greater part of the day—it was the last of the week, as we well remembered from the associations of the following day—to go over his and Mr. Marr's herd, and, such was the field for study and admiration, we could have wished that every hour of that day were a week. A few of the cattle graze the pastures near Mr. Duthie's home, in the little village of Tarves; a considerable number are to be found at Tillycairn, about two miles distant and adjoining the Uppermill farm of Mr. Marr; but the greater part of the herd graze the more exposed and seemingly less favorably situated fields of Collynie. There was a party of seven, including Mr. Goodwin, the associate editor of the Breeder's Gazette, Mr. Malcolm of Clackmananshire, a well-known breeder and judge of Shorthorns, a gentleman from the Argentine Republic, Mr. Adam Duthie, Mr. Gamble and the writer, but always to the front that man of indomitable energy, "the laird of the herd." We walked through pasture after pasture, knee-deep in clover, and wondered if it could be possible for those cattle, despite their deep-ribbed bodies, to ever

consume the share of grass that was allotted to them. A suspicious mist kept drifting over from the east from time to time throughout the day, but we had already learned that we could scarcely keep up our claim to being of Scotch descent unless we regarded this with about as much indifference as a porpoise. It was grand to see Mr. Duthie's intimacy with every individual in his large herd. He did not walk up to an animal and say, while looking over the rest to make sure, I think this is so and so. No matter where a cow was, he knew her, and without a moment's hesitation, would pick out her calf and answer any question one might ask about their breeding. This very intimacy is, no doubt, one of the great secrets of his success, enabling him, as it does, to unite blood lines and produce results utterly beyond those which many another man, who might be in possession of the very same herd, could produce.

In all, the herd, at the time of our visit, numbered over 200 head, about one-fourth of which belonged to Sittyton tribes. A few of the original Cruickshank cows remain in the herd, but one could scarcely judge much about them in their very aged form, although, if they are true representatives one must attribute to the successors of the sage of Sittyton the credit of having somewhat smoothed the flesh and improved the sirloins of the progeny of those cattle. The rest of the herd have been brought from various sources at high prices, and all make up a truly great collection. Mr. Duthie demands scale, substance and a wealth of natural flesh, but he equally em-

phasizes the importance of a capacious udder. Especially were we struck with the udder development of a large number of the cows, a matter to which many of our own breeders need to give more attention. Big, lusty, rich-coated calves everywhere attested their appreciation of this, to Mr. Duthie, indispensable equipment of his breeding cows.

All the Aberdeenshire breeders aim to have their calves dropped before the first of March and allow them to run all summer with their dams, which are put to pasture about the middle of May and remain there until the middle of October. Great fields of turnips and straw tell their tale of the winter feeding.

At the stables, which, by the by, were no such elaborate structures as are found in our country, we saw some magnificent specimens of bulls, six or more in number. The pride of them all was Bapton Champion, a two-year-old roan, bred by J. Deane Willis. He is a pure Cruickshank Cicely, and was sired by Silver Plate. It would take an artist to pick many flaws in him, and it took a large purse to bring him to Collynie, where Mr. Duthie feels sure he will give a good account of himself. The question of securing really first-class sires seems as equally a harassing one in these famous herds as in Canada, and these breeders are constantly on the alert to keep up this the most important end of their herds.

At Mr. Marr's we could, unfortunately, spend but two or three hours. The cares of life do not seem to sit so heavily on his shoulders as upon those of his famous neighbor. We found him at breakfast at least a

good hour after we had arisen from the table at Tarves. An air of solid luxury pervades his spacious old-fashioned house, which, despite its fashion, is fitted with all the conveniences of an up-to-date American house, and his table, too, bespeaks the tastes of an epicure. Ten or fifteen minutes' drive brought us from Tarves to Uppermill, Mr. Marr's holding, so called from the quaint old mill that is there, and a delightful hour or two did we spend walking through the equally luxurious clover pastures, in which were feeding richly-fleshed, deep-bodied cows, side by side with their furry calves. Once among his cattle, we found Mr. Marr to be a man of the highest ideals in regard to the breeding of live stock. Nowhere did we see such a homogeneous herd of such uniform straight breeding. In numbers it is much smaller than the Collynie herd, but in breeding and individuality it takes a back seat to none. His appreciation of a real good bull was well evidenced by his discomfort as we asked the breeding of some of the most promising calves in the pasture and found that, almost without exception, they were by Bapton Diamond, a bull which Mr. Marr says he ought to be "kicked all over the place" for allowing to go to America for the paltry sum of 1,000 guineas. We were especially struck with one extra rich roan calf of this breeding, called Royal Diamond, which afterwards topped the Duthie-Marr bull sale, going to South America for 350 guineas.

Among the "lords of the harem" we could spend but a few minutes, but we will not soon forget the quality of

a red yearling bull of Lord Lovatt's breeding, from which Marr expects great things. His dam is one of Lord Lovatt's Broadhooks cows, and his sire Royal Star.

We left Uppermill with a rather dissatisfied feeling. We had spent minutes where we should have spent hours, and as we bade Mr. Marr good-bye we inwardly determined to accept his invitation just as soon as we could return to and study more closely the breeding operations that are making Uppermill famous the world over.

That was indeed a Saturday in our trip never to be forgotten. On our way from Uppermill to Collynie we drove through the Haddo House grounds and viewed from the exterior the residence of Lord Aberdeen. However, we were too interested in the Shorthorns to remain there long, and though enjoying the stories told, as we drove through the extensive estate, we could not feel contented until once more in the clover pastures of Aberdeenshire we were revelling among the Duthie Shorthorns. We could go on writing for pages of all that we saw there, but, of course, would not think of that. But we can scarcely complete our sketch without a brief reference to the next day—the first of the week spent with Mr. Duthie.

There is something impressive in the quiet Scottish observance of the Sabbath day, and it was just this quiet impressiveness that will always remain a pleasant memory of Tarves. We did not talk of cattle, though it was a great denial on our part. Even Mr. Duthie's stories, and, by the by, few can excel him in the art, were largely omitted. All went to church in the morning. We have forgotten the text, a slight recollection remains of the length and the weighty theology of the sermon, but vivid will ever remain our memory of the singing of the Scottish psalms, in which none joined more heartily than our good host or more sweetly than his good brother by his side. One only recreation was there and that just such as was needed by our ever busy host—a little afternoon nap and a quiet walk. Family prayers, in which singing was heartily joined in by all, brought to a close one of the most restful Sabbaths of our life. As we bade Mr. Duthie farewell early the next morning we felt that we had enjoyed a privilege to have lived so intimately with him for we learned to appreciate, not only his abilities as one of the foremost breeders of live stock in the world, but his solid worth as the "highest style of man."

M. C—g.

Horticultural Department.

EDITED BY A. B. CUTTING.

Naturalizing Bulbs.

Many of the varieties of winter flowering bulbs that have given their beautiful colored and sweetly perfumed flowers when grown in the window, are also suitable for growing permanently in beds or borders outside. Amongst the best of these for naturalization purposes are the hardy varieties of Narcissi. Possibly

dil, with their beautiful star-like flowers, also adapt themselves very readily to out of door conditions, and give year after year, when once well established, a wealth of their sweetly perfumed flowers in early spring time.

The beautiful little dwarf growing Chionodoxas are also delightful little bulbs for edgings of borders or rockeries, flowering very early in spring,



Narcissus Poeticus.

N. Incomparabilis Fl. Pl.

N. Trumpet Major.

the hardiest and showiest of these is the Von Sion Narcissus, better known perhaps as the English Daffodil. The double Incomparabilis (see cut) is another variety that succeeds well when planted outside in the bed or border. Most of the Trumpet Daffodils also naturalize well, more especially such varieties as Trumpet Major (see cut), Princeps, Golden Spur, Horsfieldii, and many others. The Poets Daffo-

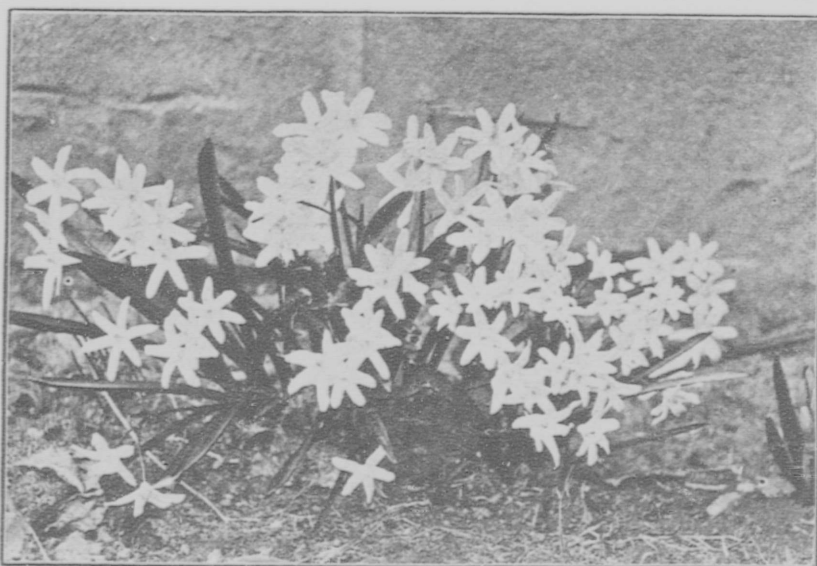
in fact the word "Chionodoxa" is taken from two Greek words, that, transposed, mean: "Snow" and "Glory," and they are often called "Glory of the Snow," being closely allied also to the more common Snowdrop (*Galanthus nivalis*). *Chionodoxa Lucillæ*, C.L. Alba and C.L. Rosea are three of the best and hardiest varieties. These are also closely allied to the Scilla, of which Scilla

Siberica is the hardiest for out of door planting, and very pretty.

All of the bulbs before mentioned can be grown successfully in pots in windows. It often happens at this season of the year that plant lovers are at a loss to know what to do with pots of these bulbs that have flowered in winter, as they are of no use to force for winter flowering again. The soil in the pots should be

undisturbed when the ground is dug, usually give, the second season, a good few blossoms, and will improve in this respect every succeeding year if not disturbed.

The Narcissus should be planted from two to three inches under the surface of the soil, whilst the Chionodoxas, Scillas and Snowdrops should be planted about an inch deep. Bulbs that have not been forced during win-



Chionodoxa.

allowed to dry off gradually, until the top growth of the bulbs have turned yellow, and the bulbs kept dry all the summer by laying the pots on their side out of doors in a shaded place, until July, when they can be shaken out of the soil and kept in a dry place until the end of September. Early in the fall the bulbs can be planted in the open ground, and although they may not give very good flowering results the first season, they will, if left

ter give the best results for naturalization purposes, but forced bulbs oftentimes give good returns for the little trouble and care they require when once established. September or early in October is the best time for planting all spring flowering bulbs in the garden, either for permanent or temporary flower beds or borders.

W. HUNT.

Some People Want the Earth.

Among the many letters that are received daily by the various departments of the O. A. C., there are always some rare and interesting specimens. The following epistles recently received by the Horticultural Department

tend on thoes slips of paper or eney other kind of frutes or flowers or bulbs I will Endeavor to do Justas to eney that is sent to me for a experiment

also som Cranberry plants and som slips of the Basket ousa as I have a nice place to grow eather of the a bove meantiond plants

(A WOMAN).

Dear Sir,

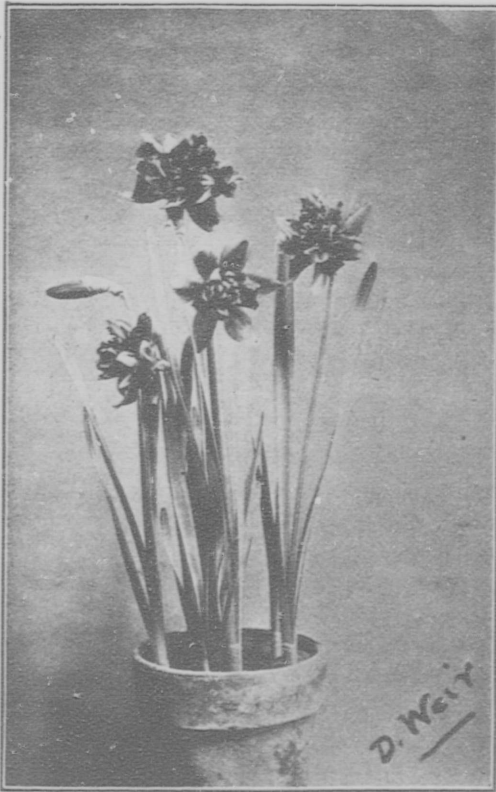
please send to the above address Litterture on growing small fruit and the trimming and pruning of the same, the triming of apple trees and scrapeing of the bark the time of year on setting out of small fruit ant the time to set them out and whether an apple orchard ought to be ploughed or not and what is to be sowed on the land please send it *free* to this address *weekly*, and Oblige

Yours Rectfillly

Dear Sir in reply to your Letter about the Strawberrys Plants i will Set out all i can know and i hope to give you a good report in the fall and i ham very much oblige to you for your kind offer for to give me any Emformation about the Plants but i ham Happy to Tell you that i ham a Perfusenal gardner i lerned the Buisness in England and have had a gradel of Experence with Strawberys groweing i have some that i brought from the States last fall i work for a gentleman in the States this last 3 Summers but i ham goin to stay home this summer and if you have any Early sorts of Potatoes or Early Sweet Corn i would like to try them if you could spare me the same as i run a market garden when i ham Home

I remain your Truly

GARDNER.



Von Sion Nancissus.

ment, speak for themselves in words peculiarly peculiar:

Dear Sir

please forward to my address the most sutebal plants mentend on paper clipping hearin closed (24 varieties of various kinds of small fruits—136 plants in all). What ever kinds you wold thenk it Best for me to try if it woldent be wonting to much you might send me all thoes samples men-

The O. A. C. Review.

BUSINESS MANAGERS:

S. M. PEARCE, Secretary.

F. H. REED, Treasurer.

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Ex-Students are requested to contribute to our columns.

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

APRIL, 1903.

Editorial.

Once again a college year has come and gone and nearly two hundred students have left for their respective homes, where this issue of the REVIEW goes to them. Some have said good-bye to their alma mater for good, others have gone to return again next year. To the latter we extend sincere wishes for a pleasant vacation, and hope that they will come back with an increased love for the old college and an increased determination to continue their good work of the past year. To the former we extend the same earnest hope that they may make a successful beginning in their chosen field of work; to all, we hope that you will keep the associations of your alma mater fresh in your memory, and by faithful work uphold her hard-earned, but grand prestige. Remember that she has done her best by you and it is now your turn to repay her in like coin. She has given you shelter and an opportunity; it is only the sluggard that looks for more. The question should not be "What is the O. A. C. doing

for her ex-students?" but "What are the ex-students doing for their alma mater?" With these facts in mind, we appeal to you to always keep in mind that a great part of the future success of this college depends upon the impression you make on the hard heads of the farmers of this Province and the others of our broad Dominion. These men are looking for results and only through the agency of the concrete facts can they be induced to believe in the equal importance of the theoretical with the practical. Through the hard work of the President and Officers of this Institution and the successful endeavors of ex-students our college has gained an enviable reputation; let the class of '05, who are scattered throughout the Province and Dominion, add a quota of still greater enthusiasts to the forward movement.

* * *

It is only in times of parting with comrades, like many of us have done in the past few days, that one can realize the depth and sweetness of

true friendship. This parting is perhaps the saddest feature of our college life. It should also be the most ennobling, for from it we gain some idea of the inevitable demands of time. That "Time waits for no man" is a trite but always new adage. It is new every year, every hour and every minute of our lives, but never comes home to a person more forcibly than at a time when he has to part with some comrade. Their minds must go back to their first meeting, to the happy hours that they have spent together, until Old Time, the inexorable, says "Part, and each go his way." It is an inflexible law, but, perhaps, not an unjust one, for the good of our country demands that our ways should diverge.

* * *

The various College societies have prospered greatly during the past year. The Y. M. C. A., under the efficient management of Mr. W. Hamilton, has done good work and has given evidence of being a most important adjunct to college life. The Literary Society has also had a successful season, for which credit must be given to the executive ability of Mr. W. McDonald, President for the first term, and Mr. A. P. Ketchen, President for the second term. In Athletics the climax was reached on the evening of the Indoor Sports, when the best exhibition given here for several years was witnessed by a large audience. The admirable arrangement and success of the evening was due to the good judgment of Mr. H. Galbraith, President of the Athletic Association.

* * *

We have been criticized in a recent Exchange for having so much space

in our paper devoted to Agricultural and Horticultural topics. The reason of this criticism is easily seen. On looking over the columns of that paper, the K. S. A. C. Herald, we do not find the slightest evidence of any articles bearing on Agricultural subjects. In fact the paper seems to have a decided aversion to anything of any practical importance, whatever. Even the reports of college life are not given the space that we might expect in a paper that pretends to print what is of interest to the students, and which criticizes us for lack of interesting material. We think, with the Herald, that the aim of a college paper should be to interest the students, and we may also add, ex-students. This is all true, but there is another object in view. A college paper is the best form of literary training that a student may have, who intends to wield his pen to good effect in later years, and six of our O. A. C. men have been called to work on prominent Agricultural journals within the past year. It is, therefore, to be expected that the articles written for the REVIEW by the students should have Agriculture and Horticulture as their chief subjects. No one could tell from the Kansas paper what the aim and object of its editorial staff might be. From the uncontrollable mania for criticizing its contemporaries, which is in evidence in its exchange columns, we must come to the conclusion that the Editor of that department is in training for the position of dramatic critic in some of the yellow journals of the South. The departments of our paper which are devoted to the students and their doings are given due attention and prominence, and the

students' interest in it never wanes. Had any such criticism come from our students or ex-students we should have accepted it as final, but no such complaint has ever been put forward. Concerning the latter part of our contemporary's criticism, we must say that it is too peurile and too characteristic of American jingoism to need any further criticism.

* * *

We wish to acknowledge the receipt of articles from G. A. Putnam, B.S.A., W. J. Black, B.S.A., and J. McR. Russell, which, on account of lack of space, we are forced to keep over until next issue. These articles will undoubtedly be of interest to ex-students.

* * *

The question regarding the spending of our long vacation has arisen in the mind of many a student. It may be of interest to know that in almost all of the older colleges and universities it is an accepted principle that students should spend the greater portion of their vacation in systematic study. In the English and Scotch universities it is the custom for students to form themselves into "reading parties" under private tutors, and devote their attention to study in some given direction. A few attempt to break new ground, while

the majority endeavor to master those studies in which they have found themselves deficient. The expense of this excellent plan has prevented its general adoption in America. In many parts of the United States the summer school has become very popular. Several of the best universities continue their work almost without a break throughout the whole year.

Many of our graduates have done their best work during the vacation of their course. This is the case in nearly every standard institution of learning. We would suggest that all our present students consider this matter, and as many need not look far for weak points in their education, we would urge upon them to undertake at once the studies they most need.

The facilities for such work in Canada are now excellent. The Canadian Correspondence Collège, Toronto, which does private tutoring by mail, is prepared to help every student of this Collège who desires to make the most of his long vacation.

We believe that our students should stimulate their friends at home to take courses by correspondence. Perhaps many of them will then decide to take a resident course in this Collège.

Personals.

A. R. Douglas, '97, V. S. (McGill), '01, is now at Dauphin, Man.

Among the Easter visitors at the O. A. C. were N. M. Ross, B. S. A., '95; P. Suckling, '98, and A. Fairweather, '99.

Fred. Fawcett, '01, who has taken the ten weeks dairy course, is starting, and will operate, a creamery near his home in N. B.

E. C. Hallman, B. S. A., '98, called at the college recently, previous to his departure for the west. His address is Airdree, Alta., N. W. T.

Prof. Thomas Shaw, formerly connected with this college, and now editor of *The Farmer*, St. Paul, Minn., visited around here on March 31st. The Professor is looking well.



G. C. Creelman, B. S. A.



W. J. Brown, B. S. A., LL. B.

J. McLean, '99, Ailsa Craig, Ont., has been made glad by the advent of a daughter. Hurrah! Jim; build up Ontario.

Francis A. Wilkins, '89, C. P. R. engineer, is at present engaged in surveying for the construction of a new line near Saskatoon.

Dr. Hans Streit, of the Bacteriological Department, has gone on a visit to his home in Switzerland. He will be back in June.

C. F. Whitley, B. S. A., '90, of Ottawa, spent a short time around the college recently. Investigation work in the Bacteriological Department claimed his attention.

The following item will no doubt be of interest to many ex-students. Rev. Rennie attended the O. A. C. in the years '86-'87:

RENNIE-WHITELAW—In New Orleans, La., on April 15th, 1903, in St. Paul's Protestant Episcopal Church, by the Rev. L. W. Loit, Miss Elizabeth R. Whitelaw, of New Orleans, and the Rev. Ernest A. Rennie of Hamilton, Ontario.

G. A. Hunt, '99, formerly of the O. A. C. Poultry Department, and more recently with Swift & Co., Chicago, is poultry manager at Lakewood Farm, Wisconsin.

Alexander Cuppage, '81, experimental feeder at the O. A. C. in '92, attended the stock judging course. Mr. Cuppage has been farming near Orillia since his return from Florida, three years ago.



E. J. McMillan, B. S. A.

Entering the O. A. C. in the fall of '97, Mr. McMillan from that time led his class until graduation in 1900. He then returned to his home in Prince Edward Island, and at once became identified with progressive agriculture in that place. He now holds the position of Secretary of Agriculture for P. E. I., Superintendent of Farmers' Institutes and also that of Lecturer in Agriculture at the local agricultural college.

J. A. B. Sleightholm, '90, Humber, Ont., writes: "I was especially pleased

with the article in the February issue entitled 'Our Motto.' It may not be generally known that this motto was given expression to in an inaugural address to a first-year class by Prof. Thomas Shaw, who then occupied the chair of Agriculture at the O. A. C."



Prof. John A. Craig, B. S. A.

Prof. Craig is a native of Russell County, Ont. Graduating from the O. A. C., he at once assumed control of The Live Stock Journal. Then he became professor of Animal Husbandry at the University of Wisconsin. Called to Iowa, Prof. Craig occupied the positions of Professor of Animal Husbandry and Vice-Director of the State Experiment Station. Leaving this in 1901, he accepted the position of editor of the Iowa Homestead. After a short service in that capacity ill-health forced him to seek rest and strength in the warm southwest. Prof. Craig has done much to reduce the work of stock judging to a scientific basis.

College Reporter.

During the first two weeks of this month a special course was given here at the dairy school for the benefit of dairy instructors. This course followed immediately upon that given here in March for Farmers' Institute workers and speakers, and was practically for the same purpose. Heretofore each instructor has usually had a separate manner of teaching, and also a separate set of ideas to teach. As a consequence a certain amount of confusion has resulted. In an endeavor to overcome this, then, it was thought well to give this special short course, when all the instructors could come together and imbibe the same methods. After this there will doubtless be more unity in the dairy education and also better results. Some of the best butter and cheese experts of Ontario were present and gave lectures.

The early Spring, with which we have been favored this year, has given an early impetus to things about the college in general. The work on the farm is rapidly progressing, a large amount of seeding already being done. On the lawn the gardener is busily engaged with flower beds and other decorations, and in the garden also is his presence being made manifest. The plots in the experimental field, too, are daily receiving the attention of that department, and will soon be all arranged for another year of work.

The final meeting of the Junior Maple Leaf Literary Society was held on the evening of the first Saturday

of this month. A most interesting programme of music, recitations and speeches was rendered, and the society can be congratulated on its last effort. Perhaps the most interesting part of the programme was that representing the condition of love affairs existing before and after attending the O. A. C. Mr. Bailey is to be praised on the wonderful improvement which he has undergone—passing from the bashful and discomfited suitor of the first scene to the brave and conquering lover of the last; while Miss Baker (Mr. Baker) deserved the same mark of our appreciation for the very able way in which she climaxed the play. She certainly showed that she was an adept in the art of coquetry and conquest. The programme:

Instrumental Duet... Misses Springer, Mills
 Address.....Mr. A. P. Ketchen
 Recitation.....Mr. Irving
 Address.....Mr. Bracken
 Play—Part I—Before Attending the O. A. C.
 Song.....Miss Springer
 Recitation.....Mr. Irving
 Play—Part II—After attending the O. A. C.
 Address.....Mr. McMillan
 Instrumental.....Mr. Brown
 Address.....Dr. Mills

GOD SAVE THE KING.

THE SOPHOMORE BANQUET.

"Joy have I had, and going hence,
 I bear away my recompense.
 In spots like these we prize
 Our memory, feel that she hath eyes.

On the morning of April 16th, amid the revelry of banquet, was concluded with grand eclat the second year of the largest class in the history of the O. A. C. As this class ex-

celled all predecessors in genius and numbers, it was in keeping with the eternal fitness of things that its banquet should transcend all previous ones in the sumptuous richness of its menu, in the surpassing excellence of its programme and peradventure in the lateness of its hours. On the principle that the best was none too good, the committee early decided to hold the feast in the Commercial Hotel, and the wisdom of the choice was attested by every one of the seventy sophs, as well as by those members of the staff who have not as yet committed the indiscretion of renouncing the privileges of single blessedness for the disqualifying encumbrance of hymeneal bonds.

A distinctive feature of this festival was the unique character of the menu cards, which delighted the boys and reflected great credit upon the originality of the committee in charge. The cards were embellished with apt quotations and allusions designed for the benefit of those banqueters who had never had an opportunity to study French. It was hoped by association with familiar things to assist them in supplying more intelligently the wants of the inner man. That this insistent presence was amply satisfied by the fourteen courses pro-

vided, was made evident by the subsequent jollity and good-fellowship.

The pleasure of the dinner was much increased by the presence of the orchestra, which discoursed sweet and thrilling music while the boys discussed the fare. Of the rest of the entertainment little need be said. Those who were there know what it was; those who were not would be tantalized by the description. But whoever knows the class which rendered it will appreciate its merit from the interesting and varied character of the programme.

Upon the conclusion of the programme the boys all joined hands, and, in a hearty farewell fellowship, united in the chorus of "Auld Lang Syne." Thus, in truly fitting style, was celebrated the dissolution of this former class. The year is over; the boys have separated to their various homes; the college experience is a thing of the past. But their memories are the richer for their experience here; their friendships and attachments will endure, and now that they have left the college halls, may they ever cherish with a warm regard the memory of their year and the old stone building on the hill, where they have spent so many happy days.

Athletics.

INDOOR SPORTS.

The annual Indoor Sports were held in the gymnasium during the last week in March. In the early part of the week the preliminaries of the boxing contests and a few of the other events were held. The boxing bouts were hotly contested, and, considering the disadvantage the boys were under, owing to the lack of a proper instructor, they gave a very good exhibition of the manly art. In the more intricate exercises of the parallel and horizontal bars competition was confined almost entirely to the Senior students. These exercises cannot be learned without competent instruction. The Senior students have had the advantage of this instruction to a limited extent, but the Junior students are entirely without any instruction whatever. The caretaker of the gymnasium, even if he was able and willing to teach them, has not the time to devote to such small affairs. His time is fully occupied by his other multifarious duties, the most important of which is feeding balanced rations to the rabbits and the guinea pigs.

The indoor sports were brought to a fitting final by a public exhibition on Thursday evening, March 26th. The finals of the boxing bouts and some of the more interesting events were reserved for this night. The sports and the excellent programme provided for the evening attracted a large number of people from the city. The spacious gymnasium was filled to its greatest capacity with an appreciative audience. The following programme was rendered:

PART I.

| | |
|------------------------------|---------------------------|
| Music..... | Orchestra |
| Chairman's Address..... | Prof. Gamble |
| Parallel Bars..... | |
| Song—Irish Ballad..... | Crystal Brown |
| Fencing..... | Martinez and Rivara |
| Duet—"Golden Love,"..... | |
| | Misses Kelly and Springer |
| Boxing Bout—Lightweight..... | |
| | McAulay and Ramsay |
| Song—"Love the Pedlar,"..... | Crystal Brown |
| Tumbling..... | |
| Comic Song..... | Hon. Mr. Daly |
| Fencing..... | Martinez and Granel |
| Music..... | Orchestra |

PART II.

| | |
|--|-----------------------------------|
| Recitation—"How Salvador Won,"..... | |
| | Miss Irene Sheahan |
| Wrestling..... | Granel and Cleal |
| Song—"Sands O' Dee,"..... | Crystal Brown |
| Sabre Exercise..... | Granel and Roca |
| Presentation of Hockey Medals..... | |
| Solo—"Forget, Forgive,"..... | Miss Springer |
| | Violin Obligato by Douglass Weir. |
| Boxing Bout—Middleweight..... | |
| | McFayden and Cleal |
| Comic Song..... | Hon. Mr. Daly |
| Presentation of the Championship Medals..... | |
| Song—"Stein Song,"..... | Crystal Brown |
| GOD SAVE THE KING. | |

The Athletic Association were fortunate in securing the services of Crystal Brown, tenor, of Toronto. His numbers were very appropriate and were heartily applauded by the audience. The songs given by Miss Springer were well chosen, and the Athletic Association were very much indebted to Miss Springer for the able assistance which she gave them in making the evening a success. The other numbers on the programme were well received and much enjoyed by the audience.

The following is a full list of the winners in the different events:

| |
|------------------------------------|
| Horizontal Bars—Sneyd. |
| Parallel Bars—Cleal. |
| Horses and Tumbling—Cleal. |
| Travelling and Flying Rings—Cleal. |
| Fencing—Granel. |

Clubs and Barbells—Atkins.
 Boxing—Featherweight—Robinson
 Welterweight—Barber, T. C.
 Lightweight—Ramsay.
 Middleweight—McFayden.
 Heavyweight—Granel.
 Standing high jump—Cleal.
 Championship—1, Cleal; 2, Granel.
 Judges—Gamble and McLean.
 Referee—Mr. Milligan.

Officers of the O. A. C. Athletic Association for 1903-4:

Hon. President—Prof. Gamble.
 Hon. Vice-President—Mr. Springer.
 President—R. G. Baker.
 Vice-President—J. E. McIntyre.
 Sec.-Treasurer—H. R. McMillan.
 Hockey Manager—F. H. Reed.
 Football Manager—R. G. Baker.
 Committee—Fansher, '04; Carpenter, '04; Granel, '05; Bracken, '06; Weir, '06.

Once more has the time arrived and gone for saying good-bye to college associations and acquaintances. On the 15th the year of 1902-3 came to a close, and with its close came the departure, for their respective homes or elsewhere, of the great majority of freshmen and sophomores. The place that knew them for so long now knows them no more. It is a well-earned holiday, however. After seven months of hard study, ending in the trying ordeal of exams., most of the boys feel a longing to once again be free; to again be able to enjoy the leniency and surroundings of farm life. But the time will come again when the longing to return will be as great as that was to leave, because, like many other things, college life has its charms; and, like many other

things, it is a period in life never to be forgotten.

The second oratorical contest, which was held on March 20th, one week after the first, was, like its predecessor, highly successful. There were four speakers battling for the honors of the evening, and each one, it must be said, did exceedingly well.

Mr. Taylor, the first speaker, had as his subject "Hannibal," a subject which he handled well. Mr. E. D. Eddy came next. His oration on the "Rule of the People" was well taken. S. M. Pearce and H. S. McDiarmid both gave excellent speeches, the former on the "History of Liberty," and the latter on the "Land of Promise."

Besides the orations the programme comprised music and recitations, rendered by Messrs. Peltzer, Cutting and Irving.

The judges, Mr. MacKinnon and Revs. Ross and Glassford, of the city, placed the merits of the speakers in the following order: S. M. Pearce, Mr. Taylor, H. S. MacDiarmid and E. D. Eddy. Each of these gentlemen is to be congratulated on the success of his efforts.

Exchanges.

The following have been received: Vox Wesleyana, Jay Hawker, Industrial Collegian, Montana Exponent, McMaster Monthly, The Argosy, Arcadia Athaeneum, Canadian Horticulturist, Ottawa University Review, Trinity Review, Acta Victoriana, The Stillwater College Paper, Rocky Mountain Collegian, Kansas Herald, Dalhousie Gazette, McGill Outlook, Queen's University Journal, Smith Academy Record, The Merchistonian, M. A. C. Record, Student's Herald, Kansas.

Locals.

Relata refero:—

**Fin de Siecle; or, "Brother's"
Lament.**

This life's a hollow bubble,
Don't you know?
Just a painted piece of twouble,
Don't you know?
We come to earth to cwy;
We gwo oldeh and we sigh;
Oldeh still and then we die;
Don't you know?
It is all a howwid mix,
Don't you know?
Business, love and politics,
Don't you know?
Clubs and pawties, cliques and sets;
Fashions, follies, sins, wegets,
Stwuggle, stwife and cigawettes,
Don't you know?
And we worry through each day,
Don't you know?
In a sort of, kind of, way,
Don't you know?
But it's all so flat and dead,
Bweakfast, luncheon, dinneh, bed;
That is life when all is said,
Don't you know?
Love? O, yes, you meet a g'll,
Don't you know?
And you get in such a whi'l,
Don't you know?
Then you get down on the floah
To adoah and to imploah
And it's weally such a boah,
Don't you know?
Business? Oh, that's simply twade,
Don't you know?
Something's lost or something's made,
Don't you know?
And you twouble and you mope,
And you hang your highest hope
On, perhaps, the price of soap,
Don't you know?
Politics? Oh, just a lawk,
Don't you know?
Just a highmatch in the dawk,
Don't you know?

You pespiah all day and night,
And atfeh all the fight,
Why, perhaps, the w'ong man's wight,
Don't you know?

Society? is dwess,
Don't you know?
And a sou'ce of distwess,
Don't you know?
To determine what to weah,
When to go and likewise wheah,
And how to pawt your haih,
Don't you know?

So theah's weally nothing in it,
Don't you know?
And we live just foh the minute,
Don't you know?
Foh when you've seen and felt,
Dwank and eaten, heahd and smelt,
Why all the cawds are dealt,
Don't you know?

You've one consciousness, that's all,
Don't you know?
And one stomach, and it's small,
Don't you know?
You can only weah one tie,
One eye-glawss in each eye,
And one coffin when you die,
Don't you know?

—Farmers' Advocate.

McKillican's definition of Practical
Physics: "A geometrical progression
from bad to worse."

Prof. Gamble—"How much does a
litre of water weigh?"

Scott—"One cubic centimetre."

Brown, the man from Jamiaca
(when the April snowstorm came).
"Is this next winter already?"

Second Year Horticulture:

Query—"What is the most suitable
place in which to grow roses?"

Daddy—"Why, a "Shady" Bower,
of course."

Prof. of Chemistry—"What is hydrochloric acid gas?"

Rev. Dan. Jones—"A liquid, sir."

Prof. Cumming—"Did we have good or bad results from sowing this variety of wheat?"

McKenney—"Yes, very."

A. B. C.—"What are the effects of cultivation of the soil?"

Middleton—"It makes the soluble plant food insoluble."

Mr. Evans (after delivering a lecture):

"Now, gentlemen, you may ask me any questions you like."

McMillan—"Please, sir. What time is it?"

Davison (in the hospital):

"Say, boys! If a feller could afford the time, he would just as soon be here sick as not."

Prof. H.—"What kinds of plants contain the most ash."

Thom—(after some rapid calculation on the fly leaf of "Warrington's")
Why the biggest plants, of course.

The Dean:

"I will not ask you to read the "Mill on the Floss"; I only require you to become thoroughly familiar with its contents."

2 a. m.—Watson, after he gets into bed.

"Well now. There is a boot and sock I might as well take off."

The latest song:

"We are the people who must be respected," as sung by themselves, to the tune of "There'll be a Hot Time in the Old Hall To-night."

Heard during the Indoor Sports (after the decision):

Freshman—"Well, I don't know. You see, MacFayden got one in on Cleal almost every time he hit him."

MacIntyre, at the table.

"Talk about "baby" beef, will you, after this?"

"It must have been in its second childhood."

Prof. of Euclid (in answer to an unusual look of amazement):

"Well, what is it, Mr. Buchanan?"

The Chief of the tribe of Dan. (with reference to figure on the board)—"I don't know what it is."

Overheard in the Reading Room:

"Oh! Mr. Deachman. What brings you over to the Dairy so much lately. Are you taking special lectures on Poultry."

Even the students who knew the propensities of Bob also marvelled greatly.

Get Prof. Taylor, of the Chemical Department, to work out a dairy ration for you.

Guaranteed to contain:

| | | |
|------------------------------|----|----------|
| 'Various solids not fat..... | 90 | percent. |
| Owen's mixture | 9 | " |
| Silage..... | .5 | " |
| Hay | .4 | " |
| Moisture..... | .1 | " |

Time, 11 p.m.:

The lady (innocently)—"Oh, Mr. Peart, are you going to stay around here all summer?"

Peart (surprised, looking at his watch)—"Why no, er—yes. Don't know." (Exit Peart).

And still he wonders if it was meant.

Farmer, the man who publishes his social standing on the bulletin board, does hereby challenge any one who is anxious for fame, to compete with him in a gastronomic exhibition. Awards will be made according to the best work done on a stack of brown bread crusts, not less than 4 feet in height.

1st man (who didn't go):

"And could you get close enough to the wreck to see it pretty good?"

2nd man (cautiously)—"O, well, not so very near, but—"

3rd man (very incautiously)—"O, yes, we got comparatively near to it; about four miles or so from it, and say; it was quite out of sight."

Rules to govern future athletic meetings:

1. When in doubt about your next move ask the secretary to give a few selections from the constitution. It passes the time and is very inspiring.

2. To prevent dullness in the meeting, either ask irrelevant questions of the President, or make equally irrelevant motions which may be withdrawn before being voted on.

3. If the above rule fails to work, pass jokes (?) on the work of last year's executive. This is highly gratifying to the present committee.

4. If there is any point of order to which the constitution does not apply, quote from the constitutions of the Literary Society or the Y. M. C. A.

5. If there is anyone at the meeting that you wish to roast, ask the Secretary to read appropriate paragraphs from the constitution as many times as possible. This rule may not be effective, but you can apologize to the Secretary afterwards.

Clippings from Easter exam. papers: Freshman and Horticulture.

Fruit is the product of plant life and is very good to take.

By spraying, the general health of the neighborhood is greatly benefited.

Fruit is that enlarged portion of a developed blossom, and may consist of enlarged calyx.

Fruit spurs are bristles that grow on some kinds of fruit.

Self-sterility indicates that the tree is self-sterile.

Cambium is the sap going up the tree when it comes down.

Bordeaux mixture is used to kill the flies, and is prepared with different kinds of medicine.

A cutting is a piece of a branch which grows when it starts into growth.

Fresh Clothing.

Go to bed in fresh clothing every night. Never think of allowing yourself to sleep in the clothing worn during the day—not a stitch of it. Take everything off. Put on nightclothing that has been thoroughly aired.

When you get up in the morning, take off everything again. This is the time to take a cold bath, very quickly, with vigorous rubbing. If for any reason you do not take the cold bath, rub your skin all over thoroughly with a rough towel. Don't be afraid of being naked a little while.

There is no better tonic for the skin than nakedness. Take off everything. Give yourself a little hand massage. Exercise the muscles. Rub your skin

with a coarse towel, anything, so as to spend a little time naked. Then put on fresh clothing.

People who wear the same clothes every night and day get themselves surrounded by an atmosphere of their own bodily emanations that is very unhealthy. Neither faith cures nor drug cures are of a particle of use to dirty people. Cleanliness is the first law of health. If this law be broken, it will be very little use to try any remedy.—*Exchange*.

**Books Added to the Library during
December and January.**

Shakespeare's Works, edited by Knight; Penny Encyclopaedia, 26 volumes; Eden, or Compleat Body or Gardening; Taxidermy and Modelling, Browne; Liebeg, Agricultural

Chemistry; Kirby, Introduction to Entomology; Marr, The Scientific Study of Scenery; Apgar, Trees or the Northern United States; Rack, French Wine and Liquor Manufacturer; Clark, Study of English and American Poets; Husman, American Grape Growing and Wine Making; Percy, Reliques of Ancient Poetry; Fuerst, The Protection of Woodlands; Nordau, The Drones Must Die; Douglas, Encyclopaedia; Reynolds, An Inversion of Ideas as to the Structure of the Universe; Whitaker, Almanac, 1902; Hupfeld, Encyclopaedia of Wit and Wisdom; Jenkins, Heraldry; Cram, American Animals; McConnell, Agricultural Geology; Hill, Construction of Timber; Liebig, Natural Laws of Husbandry; Springer, Forest Life and Forest Trees; Wallis-Taylor, Refrigerating and Ice-making Machines.

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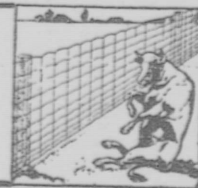
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