

QUEEN'S
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VOL. V.

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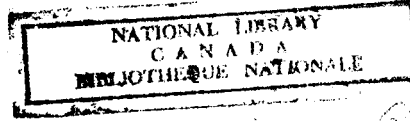
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Vol. V.

Robert Bell

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QUEEN'S QUARTERLY

VOL. V.

JULY, 1897.

No. I.

All articles intending for publication, books for review, exchanges,—and all correspondence relating thereto—should be addressed to the editors, Box A, Queen's University, Kingston, Ont.

THE CHURCH AND MODERN THOUGHT.

AN ADDRESS AT A CONFERENCE OF THE ANGLICAN CLERGY IN
TORONTO IN 1884.

“Doth not even nature itself teach you?”—1 Cor. xi. 14.

WHAT do we mean by the Church? I hope I may be allowed, throughout this paper, to use the term in its most loose and popular acceptation, meaning Christianity at large, with all its varieties,—with all its conflicting psalms, doctrines, interpretations and revelations—that unhappy condition of things, neither coherent nor homogeneous, which the religion of the day presents.

And what do we mean by Modern Thought? Is the daily paper its expression? If so, what hopeless confusion meets us while we scan its columns! Opinions of every hue on all possible subjects; pious sentiments and profane expressions; the sermon of the revivalist; the lecture of the free-thinker; the seance of the spiritual medium; the record of some noble deed; the long list of atrocious crimes; the last discovery of Science; the last gigantic swindle; the last miracle at the shrine of some saint; the last case of answer to prayer; the last dynamite explosion;—what a witches' cauldron is the daily paper! What a chaos is such modern thought!

No; by modern thought we mean educated, cultured thought; the thought which is serious and earnest, which is in pursuit of absolute truth, though not along our paths; which determines to acknowledge whatever truth it finds, no matter at what cost; which often with intense grief feels its hold on faith

relaxing ; which, thanks to our modern education, is well versed in all the secrets wrung of late from Nature, and, comparing them with the assertions of its old-time religion, cries with a heavy heart, "The two are incompatible, one must go." With such modern thought how is the Church to deal? That is our question ; and what a momentous one for the Church of to-day ! For every year sees Science in its advance brushing to one side some prejudice or tradition of the pious ; every year sees Science consolidating her statutes and unifying her operations, while Religion, as it at present exists, torn into a hundred factions—so that scarce a single proposition of hers is acceptable to all of her own votaries—looks on distracted and helpless. And can we wonder at this when every year sees young men leaving our state-endowed seats of learning without the slightest knowledge of systematic or scientific Theology, but with minds well stored with the latest advances of Physics, Astronomy, Geology, Evolution and the Positive Philosophy ? Can we wonder if Religion thus handicapped should feel herself powerless amid this advance, and her champions—many of them relying wholly on her subjective and ignoring or depreciating her objective character—many of them volunteers and free lances, with the crudest of theological notions—many others educated in some seminary, and well versed, it may be, in their own special line of Divinity, but innocent of all scientific training—can we wonder, I say, if so many of her champions only answer their opponents with a scream ?

Besides, we must remember that Protestant Religion at any rate stakes her existence on private judgment and reason. To this principle Protestantism in her revolt from Rome appealed. And now modern thought is crying out in tones not to be misunderstood, "Hast thou appealed unto Reason? Unto Reason shalt thou go!"

Another fact must be faced and duly recognized in considering this question, and that is the increasing difficulty of believing in God's immediate and miraculous intervention, through increasing knowledge of the laws of Nature. We are seeing more and more clearly day by day that every phenomenon is the result of law, and the field of man's belief in the direct agency of the Deity is continually narrowing as every fresh discovery resolves

some hitherto unexplained phenomenon. In the time of the Great Plague of London every smitten house was marked with a red cross and the words, "Lord have mercy!" Now-a-days such houses would be marked only with the bulletins of the Board of Health. A hundred years ago a fearful storm, an earthquake, a comet, was looked upon with awe as an exceptional act of divine power: To-day we consult probabilities, we look to the storm drum, and we are informed when and where the next comet will appear. Thirty years ago it was no uncommon thing for a coroner's jury to return a verdict, Died by the visitation of God; to-day, methinks, such a finding would scarcely satisfy the public mind.

Now under all these disadvantages how is the Church to still retain her hold on modern thought? The answer has been already suggested. If the Church would influence modern thought, she must study modern thought. She must send out her defenders and champions, not only well equipped in Theological lore, but also fairly furnished with the tools which the science of the day has forged. She must remember that God has caused two Scriptures to be written for our learning, the Book of Nature and the Book of Revelation; and if the students of Nature come to conclusions at variance with those of the students of Revelation, a most weighty responsibility lies on the Church if she does not reconcile them. That is the Church's business; she must be like the wise householder bringing out of her treasures things new and old; she must learn to adopt every truth of Nature when fairly established and adapt it to her system or adapt her system to it. Theology has well been called the Queen of Sciences; but if she would retain her throne she must learn to reign as a constitutional monarch; and when an act has passed triumphantly the Commons and the Lords of Science, Theology must needs give her royal assent. It was through her imperious obstinacy that she nearly lost her throne in the time of Galileo. Then an outcry was raised because the modern thought of that day seemed to contravene the Word of God. Texts were quoted in abundance to prove that the sun travelled round the earth, and that the theories of Galileo were heretical. And to-day the same mistake is being made with reference to the age of the world and the first appearance of death therein.

Surely we must know that experts in Science can only smile when they see the pictures in our illustrated Bibles of Adam and Eve sitting *in puris naturalibus* among lions and tigers and polar bears, the said beasts possessing, even in Eden, carnivorous teeth and claws. They are aware how thoroughly irreconcilable with known laws are such representations, and so they relegate the whole story of the Creation to the realms of legend and myth. In fact, while the Religion of Christ is tied to such Miltonic presentations of the Cosmogony and made to rest on such foundations, we cannot wonder if faith slips away from the graduates of our Universities; and unless the Church arouses to a sense of her position and her responsibilities, and learns, like Science, to marshal her ranks, consolidate her forces, and unify her system, we are in danger of seeing the time when (to parody the words of the historian) the multitudinous forms of Christianity will be held by the vulgar as all equally true, by the learned as all equally false, and by the magistrate and statesman as all equally troublesome.

It may be asked: Granting that the Church should be alive to the advance of Science, and adopt all her established truths, how is she to adapt them to her system? How are the things of the Spirit to be enforced by a knowledge of the things of Nature? What has the one to do with the other?

The very fact that men of Science cannot receive our saying because they conceive it conflicts with known laws, shows how much the one has to do with the other. The very fact that Religion sets out with an account of the creation of the earth and man shews that she does not divorce herself from Nature. The very fact that Religion specifies or has hitherto specified with such exactness the moment when decay and dissolution began their sway in this world of ours shews that her teachings overlap the domains of Physical Science. And the very fact that such assertions have been disproved should warn her to take heed to her steps, and so to set forth her doctrines that at least they shall not clash with the ascertained facts of Physics. Nature and Revelation, being joined together by God, must not be divorced; and the exponent of Revelation must not, on peril of the salvation of those for whom Christ died, present his Religion in such a way as to repel the earnest student of Nature. If we want to

know how to avert this, let us turn to the words of the Master Himself. He taught by parables—that is, by analogy. His favourite formula was, “The Kingdom of Heaven is like unto”——and then would follow some simple illustration from the ordinary course of Nature, thus recognizing the truth that Nature and Revelation are the work of the same Almighty hand. Yes; the argument from analogy we must learn to apply to the latest discoveries of Science. And that champion of the Faith will—I speak, of course, as regards *intellectual* attainments merely—be best equipped for his work of guiding modern thought, who is a student of Nature, who knows something of such modern writers as Darwin, Helmholtz, Grant Allen, Bain, Clifford, Proctor, Herbert Spencer, and who in Theology has thoroughly digested and assimilated the argument of that prince of metaphysical theologians, Bishop Butler. I do not mean one who has “crammed” his work so as to scratch through an examination; I do not mean one who can turn to chapter and verse and quote his *ipsissima verba*; but one who is thoroughly master of his line of reasoning and is able to modify and amplify and adapt it to the present state of knowledge. The main principle of that work is eternally true, though common sense will show that in certain details, as Butler himself intimates, advancing knowledge of Nature may require modifications, and Butler’s principle is nothing more than that of the Lord Himself, whose parables form the axioms, so to speak, of Butler’s propositions. That line of reasoning is briefly this:—the Author of Revelation is also the Author of Nature; therefore we may look for analogies in His dealings in both departments; similar difficulties and obscurity; similar explanations and light; similar “antinomies,” to quote Kant’s expression, and similar lines of procedure. Such works as Christlieb’s “Modern Doubt and Christian Belief,” the Duke of Argyle’s “Reign of Law” and “Unity of Nature,” and Prof. Drummond’s “Natural Law in the Spiritual World,” are modern instances of the application of Butler’s principle.

If we enquire of modern thought what are the hindrances to its accepting Christianity, I think we shall find there are two main points which prove its greatest stumbling blocks. The two I refer to are the Cosmogony and the Atonement. I do not conceive that the idea of the miraculous *per se* is a hindrance.

Modern thought, if we could only embody it and give it a voice, would probably say: "I do not deny that there is a Creator of the Universe; I do not deny that such a Creator as He must be could, if he chose, reveal His will specially to the intelligent portion of His creatures on this planet. I do not deny that in doing so He might use means out of His ordinary course—in other words, miraculous methods. But such a revelation must agree with facts; your account of the Creation does not agree with facts, and therefore could not have proceeded from the Creator. Again, as to your doctrine of the Atonement, it seems to me contrary to all right and justice; such a doctrine might have done well enough in those barbarous ages when it was considered perfectly fair to put to death the hostage of some escaped or pardoned felon; but in these days such a transaction would be doubly criminal. Making the innocent suffer in order that the guilty may go free might suit an eastern despot or a tyrant of ancient times, but is altogether opposed to modern ideas of justice and right."

Now, how are we to meet these objections of modern thought? Are we to treat them scornfully and with a supercilious wave of the hand quote that much abused text, "Science falsely so called," and then think we have done everything? Or are we to weigh them carefully, see how much force there is in them, and see what we can do to break down or mitigate that force?

Let us take the first point. Modern thought says: Your story of the Creation and Fall is contrary to fact. You make all living things immortal and innocuous before the first pair ate of the forbidden fruit. Now all Nature declares with no faltering voice that for ages before man appeared on the theatre of the world living creatures had been devouring one another; that the very rocks on which the first man trod were but vast tombs of dead creatures; that death and pain and suffering were from the first inseparable from life.

Surely our answer to this must be to frankly own it, and to discard for ever these human additions—for such they are—to the Word of God.

Time would fail me to tell of all the objections to our presentment of the Creation and Fall. But to be brief, let us take

the plain unvarnished tale of Holy Scripture and see what was the condition of primal humanity according to the simple account of Genesis, stripped of all Miltonic and mediæval traditions, and due allowance being made for the oriental imagery of the Scriptures. Man—naked, eating fruits and roots—his mind almost a blank—innocent BECAUSE IGNORANT—*not knowing good from evil*—not (as Milton would have it) full of all goodness and only blissfully ignorant of evil, but not knowing one from the other. His conscience, his ethical faculty was as yet undeveloped. Nay, more, the Bible itself declares that the evolution of that ethical faculty was a vast step in advance. “Behold the man *is become* as one of us, to know good from evil.” It was a tremendous development, even if purchased at great cost. Let us fully weigh that fact—that man at first did not know good from evil, with all that it involves, and the glamour of the Miltonic Adam will disappear. I know it will be replied, “But man was made in the image of God.” True; but what does that expression mean? I confess I cannot be satisfied with the exegesis of Prof. Delitzsch in his *Biblical Psychology*, nor of any other author I have read. Was man made in the image of God physically? No. Intellectually? No. Morally? No. In the image of God ideally, *i.e.*, the image which the Lord intended to assume when He subsequently became incarnate? That is certainly a more tenable though a very roundabout interpretation. I venture to suggest one which seems to me much overlooked, and yet most practical. The term “of God” is here, as we know it is so often elsewhere in the Old Testament, simply the Hebrew superlative. Man was made in the image of God, *i.e.*, in the highest image. His was the highest possible or, at least, highest actual organism on this planet. He was the acme and crown, the superlative of Creation. Such a rendering is grammatical, and in accordance with Hebrew idiom, while at the same time it harmonizes the expression with Science, and with the language of Genesis itself, which speaks of man having his faculties developed through his very fall. “Behold the man *is become* as one of us, to know good and evil.”

And now as to the second difficulty: that which modern thought finds in reconciling the doctrine of the Atonement with its moral consciousness. And here let us ask, Is not modern Chris-

tianity much to blame for this recoil from the doctrine of the Cross, by the coarse and repellant figures with which she often illustrates it? I grant these are only figures; I grant we must use illustrations, and that at best we can but approximate to the depths of the divine mystery. But at least let our illustrations be such as to commend themselves to the moral sense of men. We are all touched by the story of Damon and Pythias, we admire their self-sacrifice, each anxious to yield up his own life to save his friend. But we cannot but abhor the ruthlessness of the tyrant of Syracuse, perfectly indifferent as to which of the two suffered so long as he got his "satisfaction" by the blood of one of them. And even he was at last forced by very shame to pardon them both. Now, if any government of the present day were to enforce or even suggest such a thing as executing an innocent person, though a consenting party, in the stead of a guilty one, such government would incur the execration of the whole civilized world. And yet in such a light do many preachers, with their exaggerated and clumsy metaphors, represent the Father of all—and what wonder if modern thought recoils from the contemplation?

Now, instead of using for illustrations of the great mystery of the Atonement the forensic and judicial procedures of an uncivilized and bygone age, let us *apply the principles of Butler and turn to Nature*. We first observe that all through organic life there exists and has existed from the time when the first amœba or monad was devoured by some higher organism, an all-pervading law of Sacrifice—the sacrifice of one life for the benefit of another. In these days, when we love to talk of law and reduce everything to law, let not this universal law be lost sight of—that every living organism is maintained in life by the forfeiture of other organic life. It is a paradox and yet a truth that the law of Sacrifice is the law of Life. Then, as we ascend the scale of animated Nature, another law or another phase of the same law meets us, *viz.*, that of Self-Sacrifice, the voluntary giving up or risking of life for the sake of a loved object. And the more complex the organism and the higher the intelligence, the more strikingly is this Self-Sacrifice—or in the jargon of modern thought Altruism—displayed. We see it in the hen defending her chicks, we see it in an eminent degree in the love of the dog to his master.

Ascending now to man, we see that self-sacrifice reaching a height of devotion that is grand indeed; not simply the self-sacrifice born of excitement—the self-sacrifice of the hot blood—but the patient, calm, ever-enduring self-sacrifice of the human mother. This, then, is the law in its various degrees pervading all animated Nature. And consider how, notwithstanding the pain and suffering, nay, because of and by means of that very pain and suffering, this law of self-sacrifice has evoked such noble deeds and developed such loveliness of character. Consider the fortitude, the patience, the sympathy, the courage, the tenderness, the poetry, the passion of love with which the world has been flooded through this law so fraught with suffering, and yet so beneficent, so lovely. And now let thought ascend *in excelsis*. Conceive of God, the Creator and Father of all, the Author of this universal law, Himself submitting to His own ordinance, and in the sacrifice of Calvary see the culmination of this mysterious principle; see there, brought to a focus, so to say, the whole rationale of self-sacrifice; see there its expansion, not merely to those for whom one has a personal and selfish regard, but to all the world. “Peradventure for a good man some would even dare to die; but God commendeth His love towards us, in that while we were yet sinners Christ died for us.” See in the divine light of the cross the concentrated anguish at once and tenderness, the pain and the beneficence, the suffering and the glory of this mysterious universal law. “God so loved the world.”

So it seems to me that the devout study of Science but enhances the value of Religion, and every fresh light thrown on Nature illumines the pages of Holy Writ. Even if we accept Evolution, let us not be startled. I do not by this term mean that the primal man was but the product of some tailless monkey. Theology is not bound to admit this; she can afford to wait until the missing link turns up. But I mean the whole system of Philosophy propounded by Mr. Herbert Spencer, Prof. Proctor and others, beginning with the Nebular Theory and postulating the slow and gradual development from incoherence to coherence, from the homogeneous to the heterogeneous, from chaos to kosmos, of all matter and all force. Even if we insist on the direct and special creation of each species or genus, it

remains true all the same that that creation, *or series of creations*, was, according to a certain line of procedure, a development of forms and types in regular order and scale, and that those forms and types are conditioned by their surroundings. Now, admitting this much of evolution, has not the Kingdom of Grace had its own evolution too? From the time of a first dim and vague intimation of a coming Saviour, all through the line of priests and prophets, the light of God's truth shining more and more until the perfect day of Christ—and even since the Resurrection until now—the extension of the Incarnation in “the Church which is His Body, the fulness of Him that filleth all in all,” the incarnate Lord being, I say it in all reverence, the protoplasm of eternal life—what is all this but an evolution? “God who at sundry times and in divers manners spake in times past unto the fathers by the prophets, hath in these last days spoken unto us by His Son.” There is the spiritual analogue of the material philosophy of modern thought.

Yes, the more the light shines from out of Nature the more should the Christian rejoice at the light elicited from Revelation. The one is God's light just as much as the other, and the Christian feeling this can hail the light of Science. It will dispel many a dark cloud now disfiguring Religion, it will put to the rout many a crude and fantastic form of Christianity. But it will make manifest the attributes of God and the character of His work, both in nature and grace. And the catholic Christian, the first article of whose creed is, “I believe in one God, the Father Almighty, maker of heaven and earth, and of all things, visible and invisible,” will recognize that the investigators of His work are illustrating His Word also; and feeling that every freshly ascertained fact of Nature is further light from God Himself, and reflects that light on His revealed Word, can confidently say, “In Thy light shall we see Light.”

GEORGE J. LOW.

RECENT PHASES OF SOCIALISM.

SOME one of superior insight has said that he thought little of the heart of a young man who was not socialistic, and little of the head of an old man who was. In that terse statement is to be found the "promise and potency" of a world of truth concerning socialistic theories. The charm of socialism for the heart of man, and especially for the yearning, idealistic heart of youth, is that, in its higher and more captivating forms, it gives expression to the longing of the sympathetic human heart to be able to put an end to the misery and suffering which permeates indeed the whole range of organic life, but which comes home to us more directly in our fellow men, and especially those of our own nation and kindred. Yet socialism is not all a matter of the heart. As each succeeding socialistic congress brings out in stronger relief, the great majority of those who form the rank and file of socialism are actuated by the most individualistic self-interest that one may anywhere find. With these it is essentially a matter of the pocket and the stomach. But, even of that interesting and picturesque minority who are attracted by the philanthropic and sentimental aspect which socialism wears in literature, nine out of ten are seeking relief from the distress caused to their feelings by the reports which reach them of the physical distress of humanity, the lack of the necessaries and comforts of life. To supply the primary physical wants of a specimen of the human race is, indeed, the first step towards making a man of him, but it is only the first step. If we may judge by the words and actions of socialists, rather than by the writings of the few literary exponents of socialism, it does not seem to occur to many of them that the starvation of the spiritual man is really a more distressing fact than the starvation of the physical man. As Carlyle puts it, "It is not because of his toils that I lament for the poor; we must all toil or steal (howsoever we name our stealing) which is worse: no faithful man finds his task a pastime. . . . But what I do mourn over is, that the lamp of his soul should go out: that no ray of heavenly, or even of earthly knowledge, should visit him, but only, in the haggard darkness,

like two spectres, Fear and Indignation bear him company. Alas! was this, too, a breath of God: bestowed in heaven, but on earth never to be unfolded!—That there should one man die ignorant who had capacity for knowledge, this I call a tragedy were it to happen more than twenty times in the minute, as by some computations it does." But as it is with most of us, we are apt to say, Insure to every man food, clothing, warmth and shelter, and those other trifles which pertain to his spiritual nature will come to him as a matter of course, and, at any rate, what does it matter so long as he is happy? The ideal of the typical Dickens Christmas story, somewhat expanded, perhaps, and rendered permanent and abiding, is the ideal of socialism to the great mass of those who are attracted by it. All things considered, this is most natural and even reasonable in a way, and it is precisely in that fact that the danger with which socialism threatens the world lies.

Many people suppose that the danger lies in the hold which socialism has over a number of educated men. But there is really no danger from that quarter. Most of these men are on the road from the dominance of the heart to the regulation of the head. As one of them confesses, they are sowing their philanthropic wild oats. Even though some may pass into maturity, and even old age, without correcting in this respect the humours of youth, yet they are so hopelessly at variance among themselves and with the regular socialists, as regards the positive side of their programme, that nothing like a general organized movement can come from their side. Moreover, their tendency to minimize the purely material side of socialism, their introduction of ethical and spiritual features, and their adherence to the individualistic principle of competition in talent, has so completely discredited them in the eyes of the workingman socialism, which is everywhere the backbone of the movement, that their influence is entirely to be counted on as a useful, though all too feeble brake on the more radical and practical agitation.

The really practical aspect of socialism and its real danger to modern society lies not in its sentimental or strictly socialistic features, but in its individualistic basis. The strength of that basis is the appeal to the personal and material self-interest of men who, in their ignorance, have been led to believe that they

are being unjustly deprived of a great part of the wealth which properly belongs to them by a tyrannous and selfish upper class. There is, of course, a sufficiently large sheaf of facts to be gleaned from actual life to give colour to this claim. The intense and righteous indignation which is capable of being aroused by a firm belief in such a supposed condition of affairs, we can all, I think, perfectly understand, and, to a certain extent, sympathize with.

That the rank and file of socialism has any real interest in a collective utopia, having as its object the perfection of man as a spiritual being in an organized community, or that it is actuated by high philanthropic motives, cannot be held, I am sure, by any one possessed of an impartial mind who will read the proceedings of the last general socialistic congress, held in London last summer. At the same time it is quite true that a great deal of socialistic literature, though not the lower and more business-like, nor the higher and more scientific, is filled with what appear to be the most lofty and beautiful sentiments of brotherhood and all manner of charity. Here we find millennial, though withal somewhat nebulous, visions of perfectly realized capacities, of satisfied desires, of a permanently sustained and otherwise unearthly happiness. But this is a socialistic state which is to be reached by eliminating all the powerful mainsprings of human nature, and we may rest assured that it will never reduce to a dead calm the surging waves of the sea of life.

The practical strength of socialism lies in its appeal to individual self-interest, that is to something which is contradictory of its ideal principles. The theoretic strength of socialism lies in its criticism of the existing order of society. This is also the only bond of union between its multifarious forms.

Socialism is always able to point out that there are many imperfections in even the best states. So far, I fancy, we are all socialists, for few of us are satisfied with the present achievements of society. These imperfections, again, are attributed to the present economic, social and political structure of society. This also may be admitted, in the sense that they could not well be attributed to an order of society which does not exist. But it is to be observed that modern civilized societies are not all of the same structure, and that the evils of which socialists chiefly complain are to be found in all of them, which would seem to indi-

cate that the evils were due to some more fundamental imperfection of human nature than a mere defect in the form of society. It must be something much more radical than a mere difference in the structure of society which accounts for the variations in the working of democratic institutions, as between South America and North America. However, admitting that form is one important element, as between more and less perfect societies, we are prepared for the socialist's general conclusion that the present structure of society should be changed and some other system introduced which would do away with our present evils. Here again we may answer, though past experiences promise little hope of a rational reply, with all our hearts, if only you can show us such a system, and give us reasonable expectation of its success. Here we part company with the socialists for a time, promising to join them again when they have devised their remedial system. But in taking leave of them we observe that they are taking leave of one another, after splitting up into a bewildering number of groups, exhibiting anything but a collective unanimity and brotherhood; manifesting, on the contrary, a very aggravated form of individualistic competition in envy, malice, hatred and all uncharitableness. This characteristic finds very full illustration in the recent International Socialist Congress. The congress met to consider ways and means for the promotion and ultimate introduction of a new social order in which everything is to depend on perfection of organization and the harmonious blending of all interests. Yet, as the irony of fate would have it, this assembly of the cream of the world's socialists exhibited the most woeful incapacity to organize their own congress. For the first three days the congress consisted of a combination of the forces of babel and bedlam, presenting to the world the spectacular drama of "Chaos come again." When, however, under probably the most outlandish organization that has ever governed any modern congress, they finally settled down to work, it was quite evident that socialism in the concrete was not, to the majority of these men, anything in the line of a millennial fairy land perfumed with rose water and sentiment. The discussions carried on and the resolutions passed leave no doubt that practical socialism is a purely sectional affair, being entirely in the interest of the laboring classes of society. Hence,

as the following extract will show, they cannot conceive of the well-to-do classes taking any honest interest in the promotion of their objects. They therefore advocate the maintenance of an attitude of suspicion and aloofness towards the middle and upper classes. Here is an extract from the Commission of the congress on political action : " This Congress understands political action as the organized struggle in all forms for the conquest of political power and its use nationally and locally in legislation and administration by the working class on behalf of their emancipation. The Congress declares that with the view of realizing the emancipation of the workers, the enfranchisement of humanity and the citizen, and the establishment of the International Socialist Republic, the conquest of political power is of paramount importance, and calls upon workers of all countries to unite, independent of and apart from all bourgeois political parties, and to demand universal adult suffrage, one adult one vote, the second ballot, together with the national and local referendum and initiative.'

The Fabians were naturally very much opposed to this exclusion of the middle and higher class elements, and were supported in their opposition by the Belgians and some of the English trades unions, but a motion to amend the report on this point was swamped by a great majority. Thus the fact that practical socialism is a lower class movement is doubly confirmed. Therein lies at once its moral and intellectual weakness, its practical strength, its blind, crude and incalculable force, its narrow and selfish individualistic basis, and hence its capacity for working indefinite injury to society in spasmodic attempts to realize its objects.

No international congress had been held since that of Zurich in 1893, and in the meantime the English socialists of the study were claiming that socialism was becoming more rational and scientific in character and adopting a more elevated moral tone. This is the ground taken for instance by Mr. Sidney Ball, of St. John's College, Oxford, in a long article on " The Moral Aspects of Socialism," in the April number, 1896, of *The International Journal of Ethics*. He claims to represent the most developed form of socialism, which is no doubt true, but he considers it to be the faith of the majority of the socialists, which is most certainly false : the more's the pity.

He admits that the ideal of the older socialists was of a somewhat sordid kind, being so largely taken up with schemes for the satisfaction of our lower nature. The new socialism, however, has advanced far beyond that stage. Instead of paying little or no attention to the development of the various aspects of the spiritual nature and the perfecting of character, it is claimed that spiritual development and the perfecting of character are precisely the essence of modern socialism, which in these respects, too, has become scientific. But we are rather taken aback when he appeals to Mr. Ruskin's writings on social and economic subjects, as a sample of the new socialism. Mr. Ruskin has said some very interesting things in an isolated way, but this is the first time that I have found his meanderings in the fields of politics and economics classed with anything claiming to be scientific. Those who are familiar with Mr. Ruskin's efforts in these spheres will, doubtless, have observed that they are peculiarly humorous, and that the humor is of that traditional Caledonian type which is most irresistible where it is least intended.

To the representatives of the new socialism the International Congress, with its multitude of warring factions, its unseemly tumult, and its flat contradiction of their bright forecasts, must have been a bitter disappointment. No doubt they now recognize that there is quite as much need for missionary work among the socialists themselves as among those outside the fold.

The new socialism, however, is very interesting from several points of view. Having got so far as to recognize the importance of character in human life, many other modifications of the old standard socialism had to be made. For instance, it is now admitted that private property must be not only tolerated, but fostered and protected, also inequality allowed in the possession of property to an indefinite extent. Competition even, that root of all evils to the standard socialist, must remain and be fostered, particularly in the form so obnoxious to the commonplace man, which offers special rewards for the exercise of superior capacity and special talents. Just here one cannot but note a suspicion of sectionalism on the part of the new socialists, in stipulating for the enjoyment of all the special advantages to be derived from an inheritance of superior mental or physical capacities, while

insisting on denying to others the privileges and enjoyment of inherited command over the powers and capacities of material nature.

We observe, further, that the new socialists are fully alive to the possibilities of over population, the deterioration of the national stock, and other social difficulties of a biological nature. They even claim that the new socialism would put in operation for the first time a stringent selective system in the regulation of marriages, and thereby not only preclude the possibility of the socialistic state being overwhelmed by a swarm of incapables, but distinctly raise the standard of the race. Again, it recognizes in the modern trust, and other great organic combinations of capital and labour, not a movement against all human interest and progress, but one which is embodying many of the best features of socialism, and from whose experience socialism may borrow many valuable suggestions. It proposes in fact to allow the present enterprising and progressive method to continue the development and organization of the various branches of industry until they are sufficiently condensed in management, and wide-spreading in action, to enable the state to step in and take them over bodily one by one. Whether there should then be any further advance, or whether, indeed, the acquired efficiency could be maintained after they had passed under the bureaucratic administration of the state, is not made clear by the advocates of the new socialism. At any rate their programme is not chaotic and revolutionary. They propose to proceed gradually and cautiously, wherein we see the effects of education and intelligence—in other words, the influence of the head as regulating the heart.

So far, then, as the new socialism is concerned, society has little to fear, for it proposes to give experience a hearing. It advocates not a sudden overturning of the present order and the immediate bringing in of the socialistic state, but a gradual preparation of society for the change by an extension of the powers of the modern civic and governmental bodies in economic and educational directions—in other words, an approach to real socialism by means of what is commonly called "state-socialism."

As a great deal of loose thinking and incoherent speaking and writing is indulged in at the present time with reference to the

growth of "state-socialism," we may take a little closer look at it.

The mere extension of state or civic control over economic or other services, does not of necessity involve anything in the nature of socialism. Indeed, nothing that is at present being attempted in these lines is at all socialistic. The question is not whether the state discharges few or many positive functions, but whether it does so in accordance with present business methods, or on a basis of socialism. The only class of social theorists who advocate an attitude of entire non-interference on the part of the state are the anarchists and extreme individualists like Mr. Spencer. But the principle involved in their case is that it is not the duty of the state to do anything of a positive nature, whether on an individualistic or a socialistic basis. Those, therefore, who differ from Mr. Spencer and the anarchists in this matter are not of necessity socialists.

The real question with reference to the greater or less extension of the positive functions of the state, is a question as to whether, all things considered, it is wise or not for the state to attempt, on present business lines, any particular enterprise in question. The problem of socialism in connection with present state functions is never raised. In the case of a city water-works or electric car service, for instance, the question between socialism and the present order of things is not a question as to whether or not the state should own and operate its water-works or car service, but whether it should operate them along the lines of modern business methods, or along the wholly different lines of the socialistic system. The taking over by the state of certain economic functions and services is no more a practical application of socialism than the relishing of a moderate meal is a practical illustration of gluttony. It is not a question of degree, it is a question of kind.

Observe, again, that in the postal service as carried on by our Dominion Government, the public school system as carried on by our Provincial Government, or the supply of water, light, drainage or insurance by a civic corporation, the various corporate bodies may or may not undertake to make the returns for the services rendered pay for the services, but may derive either the whole or part of their support from the general wealth of the

community by means of taxation. In securing the necessary instruments, machinery and other supplies, in engaging workmen and officials, these corporations conform to the present recognised business methods, at least they are most anxious to have us believe that they do. Nay, they may even carry the individualistic competitive system to its extreme, as in the case of the engagement of many public school teachers, wherein quality is sacrificed to cheapness. These various public bodies also exercise the liberty of dismissing their servants, and the servants have the liberty of leaving the public service. Even where pensions are given they are not at the expense of the services rendered, but at the public expense as represented by taxation. In a socialistic state, however, there could be no taxation upon which to fall back to replenish all waste and cover up all blunders. There could be no independent and self-responsible economic system from which both the taxes and what they purchase could be drawn, from which trained servants could be chosen, to which they could be returned, and in which the incapables could be left. In a socialistic state there could be no shirking of responsibility for the incapables, no thrusting back all refractory or vicious specimens upon general society, whose non-political institutions might be held responsible for them, as at present.

Under socialism the state must find steady employment for all the citizens and remunerate them out of the product of their labour; it must induce the lazy and the parasitic to work, the grasshoppers to be provident and lay up something for winter; it must take care of those who are incapable, through either their own or others' vices or misfortunes, of rendering any adequate return for their maintenance.

Whether or no actual socialism would or would not be able to bear all these and a hundred other burdens of like nature is a matter for separate consideration, but at any rate it is very evident that what is now loosely called state socialism is something radically different from actual socialism. In passing from one to the other, as I have said, it is not merely a question of degree, but a question of revolution in system.

In distinguishing from socialism the present extension of positive economic and other functions of the state, I must not be understood to be either justifying or condemning that extension.

So far I merely wish to emphasize the fact that to dub it socialism is no admissible criticism. To say, on the other hand, that where the extension is successful it proves the feasibility of socialism is equally groundless. Of the same nature is the assertion that the great modern trusts prove the feasibility of socialism. These institutions are built up on the basis of the present industrial system and express the natural evolution of that system in accordance with the changed conditions of machine production, capital investment and business competition. To argue, as is commonly done, that because socialism would do away with wasteful competition, and modern industrial combination does away with wasteful competition, therefore modern industrial combination is socialistic is of the same nature as to argue that to provide a living for one's family is praiseworthy, but highway robbery provides a living for one's family, therefore highway robbery is praiseworthy.

Our general conclusion is, then, that the justification or condemnation of state interference with the supply of social wants and the merits or demerits of modern industrial combinations are matters to be settled on the ground of their practical effects and their relations to the present condition of society, but they have no necessary connection with socialism.

So far as one is able to judge from the present appearance of the socialistic horizon, there is likely to continue a widening of the gap between the socialism of the street and the socialism of the study. The former will likely continue to attach less and less importance to the theory of socialism, and more and more importance to the necessity for grasping something concrete. It also will probably divide into two sections, the more intellectual forming a sort of radical political labour party, which, forgetting the real socialistic state, will devote itself to the amending of the present state in the interests of labour. In that direction it may work both good and evil; good in safeguarding the interests of labour, evil in committing the state to wild-cat expenditure for the sake of employing labour. The other and less intellectual section will continue to breathe forth fire and smoke in an incoherent manner, but with what power to do damage is wholly unpredictable since it will depend upon their numerical strength, the general prosperity and political condition of the countries af-

fect, and the character of the socialist leaders. The socialism of the study will never itself be dangerous, though some perverted forms of it, escaping to the street, may prove dangerous at times of national crisis. It will always find itself maintained by a certain morally indolent, can't-we-all-be-good-and-happy cast of temperament, whose theory of life begins with a morbid sympathy for the weaknesses of humanity, and ends in a sentimental metaphysic. Socialism, as a positive theory of society, like other nebulous things, exists and unfolds itself only so long as it can be maintained in an amorphous and vapory condition. So soon as it attempts to crystalize into something definite it drops to the ground, and experience is the chilling wind that brings about its condensation and fall.

ADAM SHORTT.

LA SIMPLICITÉ.

Fénélon, disait d'Alembert, a caractérisé lui-même en peu de mots cette simplicité qui le rendait si cher à tous les cœurs.

La simplicité est la droiture d'une âme qui s'interdit tout retour sur elle, et sur ses actions. Cette vertu est différente de la sincérité, et la surpasse. On voit beaucoup de gens qui sont sincères sans être simples. Ils ne veulent passer que pour ce qu'ils sont, mais ils craignent sans cesse de passer pour ce qu'ils ne sont pas. L'homme simple n'affecte ni la vertu ni la vérité même, il n'est jamais occupé de lui, il semble d'avoir perdu ce *moi* dont on est si jaloux.

THE GERM THEORY OF DISEASE.

THE germ theory of disease dates back to 1837, when Schwann and Cagniard de la Tour discovered the yeast plant. It was known before this that any sweet liquid when exposed to the air would ferment. It was also known that fermentation was an accompaniment of the manufacture of all kinds of wines and liquors, but the true cause of fermentation was not understood until after the discovery of the yeast plant. In 1857 Pasteur began his researches on the cause of musty ale. The London brewers were alarmed and discouraged by the heavy losses they sustained through large quantities of their ale "going bad." Pasteur was engaged to ascertain the cause and suggest a remedy. He soon demonstrated that bad ale meant ale that had been produced by bad fermentation. The brewers had allowed the ale to become contaminated by a large number of germs which grew in the fermenting liquid along with the yeast germ, and thus destroyed the taste and flavour. To secure good ale they had to employ pure materials, occupy clean premises, and use one kind of germ—the yeast, not a mixture of germs. As a result of Pasteur's early work, it has been found that the best qualities of wines, brandies, &c., depend upon the use of particular kinds of yeast: and in Germany there are laboratories which cultivate and sell to manufacturers of wines and liquors the special kinds of yeast required to produce the best kinds of liquors.

The yeast plant, and a number of others like it, propagate in two ways. When well fed, each distinct plant divides or buds, and thus gives rise to two. If not well nourished, the central mass of the plant shrinks and divides into four very minute bodies, the skin or outer wall ruptures and lets out into the air the four very minute bodies called spores. These spores or germs float away through the air, and if they happen to fall upon the surface of a sweetish liquid, start to grow and soon produce the yeast plant and the accompanying fermentation.

Thus far there seems to be very little connection between the yeast plant and the germ theory of disease, but there is a con-

nection nevertheless. Scarcely had Pasteur's work on musty ale been completed when he was asked by the French Minister of Agriculture to investigate the cause of the silk worm disease. The losses in this industry had been enormous, the production falling from 52,000,000 lbs. in 1853 to 8,000,000 in 1865. The disease was called pébrine, from the black spots which appeared all over the insect. The symptoms were languor, unequal growth, fastidiousness in the matter of food, and early death. The cause of the disease was discovered in 1849, but was not clearly recognized as the cause until 1857, when it was demonstrated to be due to a bacterium or very minute parasitic plant. These bacteria first infested the intestinal canal, and spread thence to every part of the body; they filled the silk cavities, the blood vessels, the lymph spaces. The sick worm went through all the movements of spinning the silk, but there was no raw material in the silk glands, and the delirious movements had no more meaning than those of a typhoid patient in a fever hospital.

Pasteur proved that the germs might be in either the egg, the worm, the chrysalis, or the moth, although escaping detection by the microscope in the first two of these stages. He emphasized the fact that in order to have healthy worms for the following year, the eggs must be laid by healthy moths. To influence the cultivators, he played the role of prophet. He undertook to foretell the results of the next season's hatching by a microscopic examination of the moths and the eggs which they produced. Of fourteen batches of eggs which he pronounced bad, twelve produced no worms, and the other two produced only half a crop. Two batches which he pronounced healthy produced a full crop. He confirmed his conclusions by feeding thirty healthy worms on food inoculated with germs taken from the bodies of diseased insects. This was begun on the 16th of April, and all of the thirty were dead by the 11th of May. The disease spread just as small-pox would, by simple contact through association, or by wounds made on each other by their claws.

In writing up his final report for the French government, Pasteur made use of the following remarkable words: "It is in the power of man to make infectious diseases disappear from the face of the earth, if, as is my conviction, spontaneous generation is a myth." The "if" introduced a tremendous limitation.

Aristotle had taught the doctrine of spontaneous generation of all lowly kinds of animals and plants. The doctrine had come down unimpeached through the long periods of the middle and dark ages, and was firmly rooted in the popular mind, and in a large part of the scientific mind of the day. All admitted the presence of the bacteria or parasitic plants in diseased organs, but the large majority claimed that the bacteria were the natural products of disease—its invariable accompaniment ; while a solitary worker here and there proclaimed spontaneous generation a myth, and boldly pronounced bacteria the *cause* of disease and not its *result*.

One step remained to be taken and the credit of taking it is due to the late Professor Tyndall. By a series of experiments on germs and dust particles in air, experiments the thoroughness of which has never been excelled, Tyndall proved that spontaneous generation is a myth. All life comes from life : the inanimate never produces the animate, or if it does, we have no means of recognizing the fact.

All our contagious diseases are due to and are spread by parasitic plants or their germs getting into the body and producing there the symptoms of the particular diseases to which they give rise. It has, of course, long been known that certain diseases as small-pox, scarlet fever and the like are highly contagious ; but the reason why they are contagious, and the explanation of how they spread from place to place, can only be said to have been satisfactorily demonstrated during the past few years. The central idea in the explanation of the spread of contagious disease is not hard to understand. An illustration will make the matter clear. Suppose you stood and looked at a freshly ploughed piece of land. On it you could see growing not a single blade of grass, flower or shrub. It was all black rich earth. Suppose you did not see that same field for some months. And now as you look it over carefully, you see blades of grass, dandelion, mallow, burs, thistles and all sorts of weeds. *Not one* of you would believe for one moment that these weeds and grasses had been produced spontaneously by the earth. On the contrary, you would believe, no matter what any man said to the contrary, that the grass and weeds had grown from seeds, and that the seeds had either been sown by man, or been wafted there by the winds from adjoining fields. Like comes from like. Every plant produces seed after its

kind, and the seed invariably grows when it falls upon suitable soil, and has suitable surroundings in the shape of warmth and light.

Now, in exactly the same way contagious diseases are spread. From the breath, or skin, or from the excreta of patients suffering from an infectious disease are given off very small seeds—spores we call them. They are wafted hither and thither by the air, get into the lungs or mouth or stomach, or through the skin by an abraded surface into the blood, and spreading through the body, give rise to the same kind of disease as the one from which the original patient was suffering. Just as mustard or chicory or thistles on one man's farm will cross the fences and roads, and spread over his neighbour's farm; so the spores of scarlet fever will spread from one child in a house to another, until it "goes through" the whole family. And just as all thistle seeds which fall on a farm do not grow, because some of them may not happen to fall upon congenial soil, so too all the spores of scarlet fever or consumption do not produce disease in those who come into contact with the germs.

There is no foundation for the popular belief that bacteria are generally harmful. The very opposite is the truth. Many species are known to be very useful; a vast number may be either useful or indifferent, we know not which; and a very few indeed are hurtful or disease producing.

To the first class will belong plants like the yeast, or those that produce the souring of milk, or the putrefaction of animal matter. To this same class belong those plants which return nitrogen to exhausted soil (nitrification bacteria) and those which give the best taste and flavour to butter and cheese. Those of our readers who are not familiar with modern butter-making will be somewhat surprised to learn that there is a close resemblance between the process of making good ale and that of making good butter; and between making bad or musty ale, and bad or rancid butter. For, just as Pasteur insisted on the necessity for using clean vessels, pure material and uncontaminated yeast, so the scientific butter maker of to-day insists upon using clean vessels, pure cream, and the uncontaminated ferment, whose action on the cream produces butter of fine taste and flavour. Of course, it is hardly necessary to say that the butter ferments or plants

are not the same as yeast, and just as a mixture of ferments get into and contaminate ale, so different kinds of butter ferments good and bad, get into cream and determine the quality of butter produced. So thoroughly is it known that the manufacture of the best quality of butter depends upon the best butter ferments, that laboratories have been established in North America and in Europe, in which the best butter ferments are cultivated and from which they are sold to butter factories.

The noxious or disease-producing bacteria are comparatively few in number. Some twenty-three diseases are infectious, and of this number thirteen are known to be produced by specific bacteria or parasitic plants. In the case of typhoid fever, relapsing fever, erysipelas, diphtheria, cholera, malarial fevers, yellow fever, septic disease or blood poisoning, glanders, malignant pustule (anthrax), trichinosis, tuberculosis (consumption) and gangrene, the specific parasitic plant or animal has been isolated and identified. But in the case of typhus fever, scarlet fever, measles, small-pox, influenza (la grippe), rabies, whooping cough, and some others, the specific bacteria have not yet been recognized; because the difficulties in the way of determining what one particular organism is the cause of a disease are in some cases almost insurmountable.

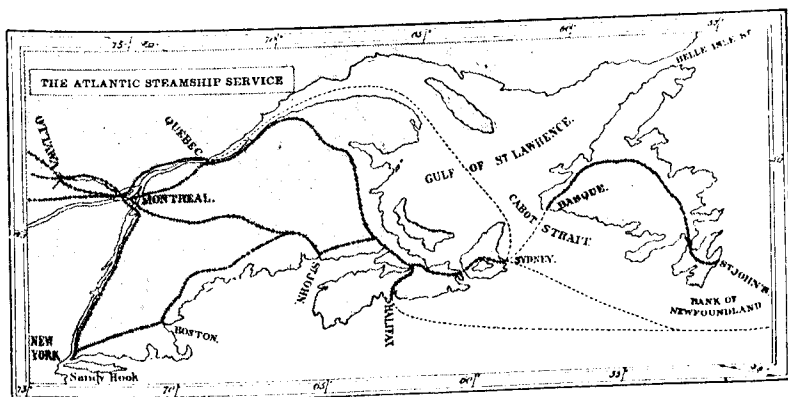
All these minute parasitic plants are within certain limits subject to the same influences as our common plants. For example, boiling water kills them. Extreme cold has no effect on them—even cold so great as 107° C. below zero. Sunlight kills some kinds (the harmful ones), but is favourable to the growth of others. Chemical substances, such as strong alcohol, bleaching powder, carbolic acid, bichloride of mercury, and mineral acids kill them. Some will grow in air; some out of air.

Certain fluid substances are particularly favourable soils for their growth, such as decoctions of fruit, vegetables or flesh. Blood serum, jelly mixed with beef-tea, and boiled potato are the substances on which micro-organisms of all kinds are grown in a biological laboratory.

A. P. KNIGHT.

OUR ATLANTIC STEAMSHIP SERVICE.

III.



SINCE the publication of my two papers on the Atlantic Steamship service, a provisional contract has been entered into with a responsible firm for the establishment of the long contemplated "fast" line: In this agreement the executive has not declared itself in favour of an extreme northern route. The Straits of Belle Isle have not been named, and there is nothing in the terms of the contract to prevent the adoption of conditions in my view of paramount importance. Prominent among these conditions is the establishment of a "port of call" during the open season on the eastern Atlantic coast of Nova Scotia, such as in a previous communication I have taken upon myself to advocate.

In the two papers which have appeared I did not enter into the circumstances which led me to investigate the subject. I conceived that it was neither necessary nor expedient so to do. I have, however, been advised that the facts by which I have been influenced are not without importance. On this theory I am impelled to submit them to public attention as a continuation of what has been already submitted by me on the subject.

On September 21st, 1895, my youngest son embarked at Montreal, with many other passengers, on board the steamship "Mariposa," of the Dominion line, for Liverpool. Three days afterwards, in a dense fog, the vessel while steaming at the rate of 5 or $5\frac{1}{2}$ knots an hour was wrecked in the Straits of Belle Isle. The official enquiry, afterwards instituted, elicited the fact that the officers of the ship considered it dangerous to proceed at a greater speed than 5 or $5\frac{1}{2}$ knots, owing to icebergs. In this instance, notwithstanding the caution exercised, the steamship "Mariposa" became a total wreck.

On August 6th, 1896, I myself embarked at Liverpool on the steamship "Sardinian," of the Allan line, for Quebec. On the evening of August 12th, when nearly 300 miles off Belle Isle, we experienced a fog so dense that the captain deemed it prudent to stop the engines.

The ship made no progress during the night. On the following morning the fog lifted and revealed to those on board an immense iceberg directly in front of the vessel. Had we struck the iceberg, even at a moderate speed, a disaster of the most serious kind would inevitably have resulted. Certainly nothing could have saved a 20 knot passenger steamship at full speed dashing against such a formidable obstruction.

When a Fast Service through the Straits of Belle Isle was being strongly advocated, and when Parliament had granted a large subsidy in favour of the project, these two circumstances forcibly directed my attention to the matter. They brought back to the memory other occurrences on the Belle Isle route which trans-Atlantic travellers will not soon forget: among them collisions with icebergs by the steamships "Lake Superior," "Lake Nepigon" and "Vancouver" between 1890 and 1894, the total wreck on Belle Isle of the steamships "Mexico" in 1895 and "Montreal" in 1889, and at an earlier date the crushing by ice and sinking of the steamship "Canadian," of the Allan line, the second of the name, at the entrance of the Straits.

The knowledge of these occurrences in the same locality, apparently proceeding from the same causes, awakened in my mind the desire, from a sense of public duty, to make a careful study of the whole question. My object was to ascertain how far it would be possible to prevent such accidents and avoid great risks,

in establishing a Canadian fast steamship service worthy of the name. After a full investigation, it seemed to me proper to make known the conclusions that irresistibly forced themselves upon my mind.

The evidence goes to show that the obstacles to safe navigation at high speed on the Belle Isle Route are icebergs in thick weather. The prevalence of such weather is indicated by the fog tables in my first paper. All testimony establishes that frequently the approaches to the Straits, and the Straits themselves, are beset with icebergs, and that indeed they are never entirely absent. As icebergs are continually moved by currents it is not possible, unless they become aground, to predetermine their position. If they remained stationary their exact place could be shown on charts, and means could be taken to give warning of danger to approaching vessels. But no system has yet been devised by which a sea pervaded for hundreds of miles by icebergs can be navigated at any speed, with safety, in thick weather.

It has been argued that steamships can proceed slowly through the iceberg region, and especially during the periods, so common, when the dangers are concealed by fog. Such a principle of caution however admirable in itself would not fulfil the purposes of a fast line; moreover as in the case of the S. S. "Mariposa," which I have cited, the speed reduced even to 5 or 5½ knots is not a guarantee against disaster.

As the strength of a chain is determined by its weakest link, the navigation of the Straits of Belle Isle may be held to determine the character of the northern route, and the only logical conclusion is, that, the use or disuse of that route between Montreal or Quebec and Great Britain, will eventually determine the failure or success of the Canadian Line of Fast Steamships; for obviously the loss of a "Lucania" or a "Teutonic" on a passage through the Straits of Belle Isle would be fatal to the enterprise, in its hold on public favour and patronage.

In my second paper I pointed out that if in place of following the route by the Straits of Belle Isle, the steamships are required to pass through the Cabot Straits, the objection I have raised would, if not entirely, to a large extent be removed. The difference between the two routes may be briefly stated. Icebergs on

the Cabot Strait route can be avoided by a sufficient deflection to the south, while on the northern route there is no escape from them, for it traverses the region in which they are so frequently met. The northern route is the shorter by about 170 miles, a saving of distance which would give an advantage of 8 or 9 hours over the southern route, provided that full speed can be maintained. As full speed cannot be maintained without a concurrence of favourable conditions such as the non-prevalence of icebergs, absence of fog with clear nights, it is obvious that the gain in time can rarely be realized. This important consideration must be earnestly weighed. The northern route has the one possible advantage only, that a few hours may occasionally be saved on the whole voyage when every condition is favourable; is this one possible advantage sufficient to counterpoise the tremendous risks to which fast passenger steamships, in navigating the Belle Isle route, would so seriously and so frequently be exposed? I am myself unable to answer that question in the affirmative.

In the event of the southern route being chosen as the one to be followed, the establishment of a "port of call" near Cabot Strait, would involve but little delay to steamships running between Montreal or Quebec and Liverpool, on the other hand it would be fraught with many benefits.

Few can refuse to admit that the people of the three Maritime Provinces—New Brunswick, Prince Edward Island and Nova Scotia—have strong claims to be considered in the determination of this problem. With the establishment of a "port of call" at or near Cabot Strait, they will simply be placed in a corresponding position in relation to the "Fast Line" so the people of Quebec and Ontario. Without this arrangement, in order to cross the Atlantic, they will be forced to take a long journey westward to Quebec or Montreal, in order to embark on an eastward bound steamship; or, indeed, they might, in some cases, find it more convenient to proceed *via* New York; in either case entailing expense, fatigue and loss of time. This unnecessary tax on the people of these Provinces, going and returning from Europe, would be removed or greatly diminished by the establishment of an eastern "port of call."

Another important consideration presents itself: the claim of

Newfoundland on the Dominion of Canada. This ancient colony at this date is not one of the Canadian Provinces. She is, however, a sister Province under the same sovereign, and has relationships to us, which we should never lose sight of. A "port of call" for our trans-Atlantic fast steamships established near the entrance to the Gulf would extend the greatest benefit to Newfoundland. On the other hand, such a policy would occasion but little delay, and would cost the Dominion nothing.

Is it not the duty of Canada, from the prominence of her position in the British Imperial system, to extend a helping hand in this instance? No one will deny that this important question should be considered in a proper spirit. There is, indeed, an extreme probability, when it is submitted to practical examination by the Imperial and Dominion authorities, that the views I have presented will not escape observation, and that the establishment of an eastern "port of call" will be determined on some such principle as that indicated.

If Sydney be constituted during the summer months the "port of call," a steam ferry to Port aux Basque would connect it directly with the Trunk Line of Railway through Newfoundland, and would result in giving to that colony a position as nearly as possible corresponding with that of one of our Maritime Provinces.

An examination of the plate at the head of this article, showing the relative position of Newfoundland and the Eastern Provinces of Canada, with the existing lines of railway and the proposed steamship route, will make the proposal clear. It will be obvious how much the suggested combination of great lines of communication by land and sea will tend to consolidate British interests on this continent.

The contract is to extend over ten years, a period sufficiently long for the settlement of several questions bearing on rapid trans-Atlantic navigation. Regarded simply as an experiment, the step taken must be held to be of great national importance.

SANDFORD FLEMING.

THE BABYLONIAN STORY OF THE FLOOD.

PROFESSOR Paul Haupt, of the Johns Hopkins University, has been for some time engaged in translating the tablets, found many years ago amid the ruins of Nineveh, which tell about the flood. The *New York Journal* (February 7, 1897) gives the following translation, which Professor Haupt has pronounced correct. These tablets are copies made for King Assurbanipal six hundred years before Christ, but it is generally believed by scholars, from internal evidence, that the story goes back beyond the time of Moses, and probably much beyond it:

1. Gilgames spoke to him, to Par-Napistim, the translated.
2. I see thee (with wonder), O Par-Napistim.
3. Thine appearance is unchanged, like me art thou;
4. Yes, thou art indeed unchanged, like me art thou.
5. Although thou art cut off from life while I must (still) fight the battle
6. Against that which no longer rests upon thy shoulders.
7. Tell me, how camest thou (here), in the council of the gods to find (everlasting) life.
8. Then said Par-Napistim to Gilgames,
9. To thee, Gilgames, shall I disclose the secret.
10. Of my translation to the gods, also shall I tell thee.
11. Thou knowest the city Suripak,
12. Which lieth on the banks of the Euphrates.
13. This city was old (sinful). Hence, to the gods,
14. Came the thought to bring a flood, the great gods
15. Were assembled: their father, the god Anu,
16. Their adviser, the grim god Bel.
17. Their Destroying-Angel, the god Adav;
18. Their leader, the god Ennugi.
19. The Lord of inscrutable wisdom sat by them, but (on the watch)
20. And he made known the plan to the reed-huts.
21. Reed-huts! Reed-huts! Stone-houses, stone-houses!
22. Reed-huts, hear! Stone-houses, hearken!
23. Suripakit, son of Ubaratutu!

24. Make a house, build a ship !
25. Leave your possessions, try (to save) your life.
26. Leave your belongings, save your life !
27. Take up into the ship seed of life of every kind.
28. The ship which you are to build,
29. Let its lines be long,
30. And its breadth and depth equal.
31. On the sea let it float.
32. When I heard this I said to the god Ea : My Lord !
33. Thy command, O Lord, which thou hast just given
34. Shall I obey and follow,
35. [But] what shall I say to the city, to the people and the chiefs.
36. The god Ea opened his mouth and said--
37. Spoke to me, his servant :
38. Thus shalt thou speak to them :
39. Bel has banished me and hates me,
40. Therefore I cannot stay in your city,
41. On Bel's earth can I not remain.
42. To the sea shall I go, to remain with my Lord Ea.
43. Upon you, however, a flood will pour down ;
44. Man, birds, beast will die ; the fish
45. common.
46. When the sun brings about the time, then will the ruler of the
hurricane
47. Rain destruction down upon you at evening.
48. When [the first appearance of sunrise] is seen--
49. . . . 50. . . . 51. . . . 52. . . . 53. . . .
54. fruits of the earth
55. walls
56. Powerful (?) . . . The needed plane at hand.
57. On the 5th day I began to join the hulk together.
58. Its sides were 120 cubits high on the outside.
59. And likewise 120 cubits was the breadth of its decks.
60. I joined its bow and fastened it tight (the whole ship).
61. Then I built 6 decks in it.
62. Thus I divided it into 7 stories.
63. The interior (of each of the 7 stories) I divided into 9 apart-
ments.
64. Water pegs (in all the joints) did I drive in all over,
65. I sought out a mast and provided the needed fittings.
66. 6 sar of pitch I used to caulk it.

67. 3 sar of naphtha (I took) on board.
68. While the people, who bore the ship's sussul, brought 3 sar of oil.
69. I kept one sar of oil which was needed for the offering.
70. 2 sars of oil did the pilot set aside.
71. For I slaughtered oxen.
72. I killed daily.
73. Jars with sesame, oil and wine.
74. Large casks like the water of a river.
75. A feast as on New Year's day.
76. consecrated oil my hand laid.
77. the ship was completed.
78. The of the ship was brought up and in,
79. The weather sides of the ship sank $\frac{2}{3}$ in the water.
80. With all that I possessed I loaded it,
81. With all the silver that I had I loaded it,
82. With all the gold that I had I loaded it.
83. Also every living thing of every kind, that I had,
84. I took on board my whole family and my servants,
85. Cattle of the meadows, beasts of the field and artisans, all these I took aboard.
86. When the sun brings the appointed time,
87. That the ruler of the whirlwind should send the destructive rain,
88. Then go aboard and close the door after you.
89. When this time came,
90. That the ruler of the whirlwind should send a heavy rain in the evening,
91. Then I looked upon the earth,
92. But I was afraid to look at the earth.
93. I went aboard the ship and closed the door after me,
94. To the captain of the ship, Puzur-Sadurabu, the pilot,
95. I turned over the great house with all its cargo.
96. When the first rays of sunshine appeared,
97. The dark clouds rose on the horizon.
98. In which Ramman lets his thunder crash,
99. While Nebo and the "King" go before.
100. And the Destroying-Angel strode over mountain and valley.
101. Uragal let loose the elements,
102. Adar passed scattering woe.
103. The Annunnak bear torches,

104. By whose sheen they light the earth.
 105. Although Ramman's whirling dust-cloud rises to heaven
 106. And all light is changed to darkness.
 107. of the land [crash] like an earthen vessel.
 108. The first day of the storm hand
 109. Raging stormed . . . the . . . hand
 110. As in battle they descend upon man
 111. Brother regards not brother,
 112. Men trouble not about one another ; (even) in heaven
 113. The gods fear the flood,
 114. They escape to the (highest) heaven of Anu.
 115. The gods crouch like dogs, cower behind heaven's lattices.
 116. Istar cries like a woman in travail.
 117. The sublime goddess cries with a loud voice.
 118. Thus is then the old world (again) made mire,
 119. Because I, in the council of the gods, have sworn evil to it,
 120. Because I, in the council of the gods, have sworn evil to it.
 121. The exterminating war against mankind have I sworn.
 122. But I will reestablish my mankind,
 123. Even if now they fill the sea like chaff.
 124. Then the gods wept with her on account of the Spirits of the Deep,
 125. The gods were prostrated, sat there wailing with woe.
 126. Their lips were pressed tight together, all were paralyzed.
 127. Six days and nights
 128. Wind, wave, and storm raged over the earth.
 129. At the coming of the seventh day, however, the storm was laid
 (and) the flood, which at battle
 130. Had waged like a war-lord.
 131. The sea became still, hurricane and flood ceased.
 133. As I looked at the world, I wept aloud,
 134. For all men were again become mire,
 135. The dammed up fields and marshes were become as one.
 136. I opened a window and as the light of day fell on my face,
 137. My knees bent under me, I had to sit down and weep.
 138. Over my face flowed the tears.
 139. I looked in every direction, except at the sea ;
 140. But after twice twelve hours, an island arose,
 141. The ship was held by Mount Nizir.
 142. The mount, Mount Nizir, held the ship fast and let it not move.
 143. The first and the second day Mount Nizir held the ship fast
 and let it not move.

144. Also the third and fourth day Mount Nizir held the ship fast and let it not move.
145. Likewise on the fifth and sixth day Mount Nizir held the ship fast and let it not move.
146. When the seventh day broke,
147. I took a dove out and let it loose.
148. The dove flew hither and thither,
149. But as no resting-place was there, it returned.
150. Then I took a swallow, and let it loose.
151. The swallow flew hither and thither,
152. But as there was no resting-place, it returned.
153. Then I took a raven, and let it loose.
154. The raven flew away and saw the decrease of the waters,
155. Ate, while he croaked, wading in the mire, but returned no more.
156. Then I loosed all to the four winds. There I brought an offering.
157. I prepared an oblation on the summit of the mountain.
158. Full seven jars for libation I ranged in order ;
159. In their bowls I planted calamus, cedarwood, and incense.
160. The gods smelled the savour,
161. The gods smelled the sweet savour.
162. The gods gathered like flies about the offering.
163. When then the sublime goddess came down
164. She seized the precious jewel which Ana had made according to her desire.
165. Ye gods here, by the beauty of my neck, never will I forget !
166. Of this day shall I be mindful, never shall I forget it.
167. The gods may come to the oblation.
168. But Bel must not come to the oblation.
169. Because he rashly caused the flood,
170. And delivered up my human beings to annihilation.
171. When the god Bel came thither,
172. And saw the ship, then Bel grew furious,
173. Full of anger was he against the gods and the Ighih.
174. By whom the living beings had escaped,
175. No man shall remain alive at the destruction !
176. Then the god Adar opened his mouth and spoke,
177. Spoke to grim Bel.
178. No one save Ea could do such a thing,
179. Ea knows all the arts.

180. Then Ea opened his mouth and said.
181. He spoke to grim Bel :
182. Thou art the grim leader of the gods.
183. How could'st thou be so rash as to cause a flood ?
184. Let the sinner bear (the consequences) of his own sins,
185. The evil-doer bear (the consequences) of his misdeeds,
186. But have some foresight, that not (all) be destroyed, be gracious that not (all) be annihilated.

From THE LITERARY DIGEST.

REPLY OF DOCTOR KINGSFORD

TO THE STRICTURES ON VOLUME VIII. OF THE HISTORY OF
CANADA IN THE REVIEW OF HISTORICAL PUBLICA-
TIONS RELATING TO CANADA.

ANY writer of history, which embraces a period of importance, must look for differences of opinion to be entertained on many points included in his narrative; but he has the right to expect that such views are expressed with fairness and courtesy, and that the criticism to which he may be subjected is not advanced upon personal, but upon literary grounds. There is more than one school of thought in the estimate of public events and of public men, but there is only one standard of right and wrong, which in no case can with impunity be violated. The unfairness and the absence of honest representation with regard to the last volume of my history shown in the late publication issued under the authority of the University of Toronto bring this view forcibly into prominence*. Unless for the circumstance that the attack,

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it cannot be called a criticism, had been made under this authority, I should treat with disregard the opinions expressed, for there is little in the article to command respect or attract attention. Written anonymously, the editor of the publication must be responsible for its arrogance of tone, its acerbity of expression, and (what is of greater importance as affecting his character as a Professor of History) for the erroneous views it expresses regarding the facts of history and the superficial information it displays. Only that the statements made appear with the *imprimatur* of his University, I should allow them to pass unnoticed. Given to the world under the authority of the Senate, I feel called upon to reply lest my silence should be construed as an acceptance of their correctness.

I will briefly deal with the personal allusions to myself. I have to act in this case as many men have to do in a difficult position. I have to throw myself on my character and refer to the text of the book. Mr. Wrong, in his barbarous English, once before this occasion wrote of me that I was not a "stylist," whatever the word may mean—an expression to call forth from the Toronto press a contemptuous reproof, as he doubtless well remembers. My text can be adduced to show the character of the English I write, as well as the care taken by me to represent what I hold to be the truth. I am told that in this book there is an excessive amount of careless writing. If the defects claimed be admitted, they must not be attributed to this cause. My sheets in form were jealously read by a friend, to whose criticism they were subjected. From feelings of delicacy I do not mention his name. He is an associate of King's College, London, one of the highest honours attainable in the world of letters; a graduate of Oxford, where he took high honours and obtained a reputation rarely surpassed; in Montreal he is known by his brilliant and learned contributions to periodical literature, by his admirable and unsurpassed translations of Horace, and, among other writings, by a volume of poems of the highest merit. He is a member of the Royal Society. Although unnamed, his identity is sufficiently plain. If I wrote bad English, he is *particeps criminis* in allowing it to pass. He differs in his training and attainments from Mr. Wrong, as he surpasses him in learning, courtesy and reputation.

Who the unsigned critic may be I have yet to learn. This, however, may be said of him. He writes as one living in a petty parish community, imperfectly educated with some superficial, miscellaneous reading; with an unbounded admiration for obscure United States authorities, and with an unfathomable opinion of his own powers and merits; a living example of the truth of the oft-quoted French proverb, that *au royaume des aveugles les borgnes sont rois*.

This person complains of the want of sufficient references to my authorities. Any general accusation of this character is easily made and must go for what it is worth. In my humble judgment I have given all the references that are necessary. I was desirous of avoiding any complication of my text by irrelevant and unnecessary notes, and all cumbersome repetition of fact: an essential of all narrative. Notes, indeed, as a rule, are needed only when it is necessary to enforce attention to a disputed fact; or when an opinion expressed is at variance with the view generally entertained. It is likewise imputed to me as a literary crime that I have relied on what is to be found in the Canadian archives, the transcripts of the British official documents of the time, which furnish a true and reliable basis for historical narrative. It is also made a matter of accusation that I supplemented these researches by the British writers, James and Richardson, and that I fail to cite United States authorities, except those of eighty years ago. This writer fails to allude to my reference to Mr. Henry Adams, the author of the best published history of the presidential rule of Jefferson and Madison, when I "acknowledge my many obligations to him" for his "laboriously collected information." [Vol. VIII, p. 21.] He admits, however, that I cite the "prejudiced and untrustworthy Wilkinson" epithets easily explained, for Wilkinson is antagonistic to his theories of Procter's conduct at Sackett's Harbour.

Indeed, there is no point on which he fails generally to dilate, to shew what I must be permitted to call a vulgar acerbity in his effort to depreciate my work. He complains of my speed of production with the complacent remark, "that hasty work almost invariably results in faulty workmanship." I have been ten years exclusively engaged upon my history. A sum in arithmetic will prove that a volume a year is no astounding effort, when the

whole time of a writer is given to his subject. Four pages a day is but a moderate average of production; and 125 days of such work will give a volume of 500 pages, leaving 240 days for examination, research and proof reading. It is not easy to write of one's self, but I believe that I may say with propriety that it is known to my friends that I have avoided society; that I rose at five every morning of my life in summer and winter; that for hours I was a daily attendant, either at the parliamentary library or at the archives branch, and that I sought information wherever it could be gained. With these facts I am justified in considering that Mr. Wrong's anonymous writer is as impertinent as he is unjust, either in pronouncing on a matter of fact of which he must be ignorant, or if knowing the facts in deliberately misrepresenting them.

I refer to the text of this volume for the proof of the conscientious care with which I have striven to write, and I challenge both editor and writer to produce a passage which they consider as "obscure and unintelligible." The very opposite is the opinion of men capable of judging from education, training and literary *status*, uninfluenced by the malignity apparent throughout this attack.

I turn to the historical statements to which I feel called upon specially to reply. This writer disputes my assertion (p. 132) that Mr. Foster, the British Minister at Washington, failed to announce the declaration of war by the United States to Brock in Upper Canada, leaving the fact to be communicated by the Governor-General. He takes this ground on the authority of a United States letter, which states that one Vosburgh was arrested on his return from Queenston after delivering Foster's despatches. Mr. McTavish is named as the "person concerned." On this slender ground he conceives he has authority for the fact that such despatch was sent by Foster to Brock. The contrary is generally considered to be the case. The first intimation Brock received of the war was from a newspaper containing the president's message confirming the news, with a communication from McTavish, McGillivray & Co., affirming the fact. The official news only reached Montreal on the 7th of July, and the following day, the 8th, was sent round to Brock. On the 10th Prevost wrote to Brock stating that from the disunion in the States the

“attempts on the Province must be feeble.” At this time Hull was at Detroit preparing to invade Canada. There is no authority that Brock ever received such a despatch from the British minister. The party arrested may have brought letters to Canada; the probability is that it was the communication from McTavish, a partner in the firm by which the information was sent; indeed he is personally named as the “principal person concerned.”*

On the authority of a despatch from Major-General Sheaffe, that Mr. Willcox (*sic*) was present at Queenston, the writer asserts that this person was the notorious traitor, Joseph Willcocks, who subsequently deserted to the United States, and was killed at Fort Erie towards the close of the war. There were others of the name, and very strong proof is required to prove that the “Willcox” named was the traitor Joseph Willcocks.

William Willcocks was a cousin of the Baldwin family. His history is given at some length by the late Mr. Dent in his *Canadian Portrait Gallery* [Vol. 1, p. 20]. Suffice it to say that he arrived in New York in 1797. Subsequently he reached York (Toronto), and it was by his influence that the elder Baldwin arrived in Canada in 1798; the grandfather of Robert Baldwin. His eldest son was established in Toronto, and subsequently mar-

*In order to show the want of value of the statements of this flippant, superficial writer, I append the narrative of the incident as given in the *Life and Correspondence of Sir Isaac Brock*, edited by his nephew, Ferdinand Brock Tupper (edition of 1847, pp. 188, 9). It is well known that this work is based on the MS. long in the possession of the general's last surviving brother, Savery. Its historical value is undisputed. The work has indeed taken its place in the national annals as a record of the man whose memory is held in universal reverence in the Dominion. The contradiction of this statement, as given in this volume on the shallow authority of a United States letter, relating a mere report, would scarcely have appeared possible except to the folly of this writer, who has adduced it as a warrant for the expression of a contrary opinion:

“Mr. Foster, the English minister at Washington, seems to have partaken of this delusion, for it does not appear that he had taken any precautionary measures to convey to the Governor of the British North American Provinces the earliest intelligence of the declaration of war, on the 18th June, 1812; and, had it not been for the prudent foresight of the agent of the British North-west Company at New York, who sent the intelligence by express, it is possible that the first intimation would have been received from the mouths of the American cannon. To Upper Canada Mr. Foster transmitted no notice whatever of the war, and Major-General Brock was left to learn it officially through the circuitous and dilatory channel of the Governor-General. Happily, individual diligence made up for this unpardonable neglect; and the war was known by private expresses at Montreal in Lower, and at Fort George in Upper Canada on the 24th of June, or in six days after its declaration at Washington.”

ried Phœbe Willcocks. Two sons and four daughters accompanied the first Baldwin to Canada.

Willcocks had also children. We are told by Dr. Scadding (p. 138) that a William Willcocks was a pewholder in St. James' Church in 1813.

There was a third Willcocks, Charles, formerly of the Cork militia. He is mentioned by Dr. Scadding (p. 349) as having on one occasion challenged Joseph Willcocks, who failed to appear on the ground.

The Joseph Willcocks, declared with the constant positiveness of this writer to have been present at Queenston, was a member of the House of Assembly, which opened on the 27th July and was prorogued on the 5th of August, 1812. His whole conduct was antagonistic to the theory of his presence as a defender of Canada on this memorable day. With one Marcle, both of whom in a few months deserted to the United States, he did all he was able to encourage gloomy forebodings regarding the war, and it was by their influence that the House, by a majority of two, refused to pass the suspension of the habeas corpus act. Sixty-six days only elapsed from the prorogation of the House to the Battle of Queenston Heights on the 13th of October, and there must have been some extraordinary change in the opinions of this Willcocks for him to be present on the British side as a volunteer. Such a proceeding would have been totally at variance with his previous career and the opinions he professed. His subsequent conduct is antagonistic with any such line of conduct. In the proceedings of the Parliament of 1814, which met on the 15th of February, both he and Marcle are named in the list of members as having "deserted to the enemy." Sheaffe called the Parliament of 1813 on the 25th of February; it lasted to the 13th of March. It was after this date he deserted, and his name in no wise appears as a loyal man. Before the fact can be admitted that he was present at Queenston much stronger evidence must be given than the imperfect report quoted by this writer, that he is to be identified with the "Willcox" named by Sir Roger Sheaffe. I still adhere to my view that he was not present.

If there be a fact in the history of the country which is established, it is that although Prevost commanded in the opera-

tions against Sackett's Harbour, on their failure he delegated to Colonel Baynes the duty of writing the despatch describing them. The despatch of Prevost, written a few days later, does not do away with the facts: a striking contrast to his conduct at Chateauguay after de Salaberry's success, of which he assumed all the merit, although not present. James, says this writer, makes the same statement. He does more. He gives the despatch itself. This writer deems it necessary to defend Prevost's personal courage. I am not aware that it has been called in question. I may refer to what is said on this point by myself (p. 270), "that in the field he was without moral courage, irresolute, ever shrinking from responsibility." The writer of this so-called review calls me to account for not recognizing the statement made by Brenton. I have not done so, for I do not consider him worthy of credit. He was private secretary to Prevost, brought with him from Halifax to fill the position from which Ryland was displaced to create the opening. All that he has written has been to vindicate the memory of his chief. His efforts in this direction were continued after Prevost's death. Thus his statements are not to be accepted in preference to the evidence of the actors in the expedition. It was Brenton who was sent to England after the disastrous retreat from Plattsburg with a despatch dated from the State of New York, although it was plain by internal evidence that it had been written in Canada.

This writer is indignant that I do not attach weight to the authority of General Brown, who commanded the United States force. He shows a constant preference in this direction. He affirms in commercial language that my statement must be discounted on what he calls concurrent evidence, that is of Prevost himself, his secretary Brenton, and the assertions of the United States General Brown, that if the retreat had not been ordered, the troops would never have regained their ships. He accuses the writers who describe this attack in different language—the writer of the pamphlet "Veritas," and James, the historian of the war, as being Prevost's personal enemies. They were no more so than any other writer who may form a view unfavourable to Prevost's public character. The opinions they expressed were based on the facts as they were related, and the defence of

Prevost made by this writer will avail little against contemporary judgment and modern investigation. He uses the words, "such writers as James, Christie and Richardson." The last named must not be confounded with the Hon. John Richardson, supposed to be the author of the letters of "Veritas." He was afterwards known as Major Richardson, at the time an officer of the 49th, and the author of a history of the war in which he took part, and of several novels and memoirs. A careful examination of these works has in my mind proved their value; that of Richardson especially, for it is the narrative of the events in which he participated. To speak of these writers as malicious, and as guided by personal feeling, is sheer nonsense, while it may be said of Brenton that he avowedly wrote to defend his patrons. With the evidence at our command I contend that my account of the operations at Sackett's Harbour is substantially correct, and that very different testimony to that advanced by this writer must be produced to prove that such is not the case.

This writer, in his attempt to give a higher reputation to Prevost than I have felt it a duty to assign him, is careful not to refer to the despatch written by him after the success of de Salaberry at Chateauguay. I must content myself with repeating what I have said on this subject (Vol. III, p. 369): "I do not know a more disingenuous production in military history than this despatch dated the 31st of October, 1813. The first consideration is why Prevost should have written it at all. The record of the action should have been made by the officer in command, de Salaberry; but he is made to bear a thoroughly subordinate position. The conduct of Prevost in this case must be contrasted with his proceeding at Sackett's Harbour. The miscarriage which followed was attributable to his own orders, but to avoid the responsibility he directed his Adjutant-General to write the despatch, confining himself to the official duty of forwarding it. In this case he appropriated to himself the laurels of de Salaberry, to which he had not the shadow of a claim."

Prevost's reputation has long been determined in the mind of every enlightened student of history. His government was weak and irresolute; it is a mercy that it did not prove disastrous. Except for the genius of Brock, Upper Canada would have been

taken by Hull to offer a *point d'appui* to advance on Montreal. British power would then shortly have been reduced to the citadel of Quebec, if the citadel itself could have been defended. Brock received no encouragement in his defence of Upper Canada. On the contrary, he was counselled by Prevost against all activity of campaign.* Brock's energetic and bold advance was the dictate alone of his own loyal and gallant nature. Prevost's irresolute and weak policy was that of defence. He had endeavoured to obtain an armistice until negotiations could be opened with the British government. The President declined to enter into any such arrangement. On its termination Prevost issued a proclamation. In place of speaking in the bold language of a British governor, he made an apology that the expedition against Detroit had been undertaken.† Shortly afterwards he ordered the evacuation of that post, but Brock availing himself of the discretion allowed him did not act upon the order.

After Procter's disaster at the Thames on the 5th of October, 1813, Prevost's want of courage, and of that spirit of endurance by which the battle of life is won, came prominently to the surface. He was prostrated by the news and ordered the abandonment of Burlington heights, and the retreat of Vincent's force to Kingston. I venture here to reproduce what I have said regarding this order. [p. 376.] It may be considered a specimen of the slovenly English that this writer attributes to me, sustained by Mr. Wrong's declaration, that I am not a "stylist."

"Many powerful considerations presented themselves against the movement. There were many sick both at Burlington and York (Toronto). It was the commencement of November, when heavy rains are frequent. In modern times 'as spurs the weary traveller apace to gain the timely inn,' or as he drives over a cross country road to pass from one main line of communication to another, we still have some experience of trying journeys, wherein every rod we move we dread to break the axle. In those days the main roads themselves were often impassable at the late season, and to have abandoned the heights was to have

*Prevost to Brock. Given in Tupper's *Life*, page 201.

†Tupper's *Life of Brock*, p. 442.

left the sick to the mercy of the enemy, with the ordnance, stores, baggage and provisions, which could not have been moved. The necessity of leaving the sick behind to be cared for by the invaders would have suggested the avoidance of every act which might cause irritation on their part. Thus the stores could not have been destroyed when the retreating general asked that the sick he would have left behind him might be fed and cared for. There was also the abandonment of the strong position at Burlington heights, confidently believed to be unassailable when garrisoned and provisioned. Kingston, likewise, was short of provisions at the time, and the arrival of the western force would have led to much privation and have extended to results entirely unforeseen.

In civil life there was the painful consequence of subjecting the whole population to military occupation, to the exactions, enforced contributions and remorseless severity of the United States as conquerors. A council of war was held at Burlington heights, and it was resolved not to abandon the position but to hold the ground occupied, and await events."

Prevost appropriated to himself the credit of introducing the war money bills. According to Mr. Gordon Drummond, the proposition had its origin with Commissary-General Robinson, and was simply countenanced by Prevost as Governor-General.

Plattsburg is too painful a recollection in Canada to these days to need comment. The very word is an epitaph for the chief actor in the disgrace, Sir George Prevost.

Such, briefly described, is the man, the defence of whom has been undertaken by the writer of the article, and countenanced by the Professor of History of Toronto University in a publication brought out under the auspices of the Senate. I do not conceive that the puny arguments in their pages will in any way modify the view expressed in Canadian history with regard to this personage, even if enforced in the lectures of the professor.

A similar defence is also offered for Procter, who was tried by court-martial for his disgraceful conduct on the Thames. Although the light sentence passed on him was confirmed, it was most unacceptable to the Horse Guards, and only acquiesced in, from the impossibility of reassembling the court; while the general officer commanding in Canada was desired to convey to

General Procter the Prince-regent's high disapprobation of his conduct.

Even this writer does not attempt to defend his conduct on the Thames; he however brings into prominence, the 'energy and decision' with which the attack was made against General Winchester on the 21st of January, 1813, at Frenchtown. There is no question to be raised on this point. The objection is urged against his mode of attack. Procter's generalship led him to commence the assault of the position with 3 pdrs. Had a man like Harvey been in command he would as at Stoney Creek, have stormed the entrenchments with the bayonet, for the United States force had been surprized. The attack having been opened by artillery permitted the United States infantry to occupy the *banquette* from which they poured upon the advancing British troops a destructive fire. The consequence was that out of a force of 500 men 24 were killed and 158 wounded, making a total of 182 casualties.

The writer says little of the advance on Fort Meigs on the River Maumee. He, however, unwarrantably assigns the failure of Procter's attempt to his Indian contingent. He is silent with regard to the deplorable attack of Sandusky, in which Procter's deficiency in the qualities of a great commander is painfully shewn. I must follow the example given me in the cursory notice of these events by referring the reader to my volume (VIII. pp. 302-309), and by stating that I in no way modify the opinions I have expressed on these two events.

From the length which this paper is attaining I do not deem it necessary to enter into a critical examination of the battle of Chrystler's—and it is not important whether or not this writer considers some of the details a misconception, as they are given by me. The main features of the campaign remain uncontradicted.

On the points into which I have entered, I have shewn the little claim to respect the opinions of this writer present, when he treats of the leading events of the war, and the characters of two of the most prominent personages in its history.

But what is to be said of the petty spite and meanness which gloats over some misprints of names and dates, plainly typographical errors, or at the worst, as shown by the text, slips

of the pen of the author? Anyone of fairness would recognize them to be errors of accident, and not make them a matter of reproach. They occur more or less in every book which contains many hundred names and dates in the 601 pp. of text. No one trained in literary work, who owed his position to his own merit and experience, but would be guided by sympathy with work of importance exacting thought, research and continuous labour. No one except from malignity of purpose would think of parading his discovery of such faults with evident feelings of mean satisfaction. Many are so plainly the fault of proof-reading as to be unworthy of comment such as 95th for 98th, 44th for 49th, Baccus for Backus, Rainsfeld for Rainsford, Bambridge for Bainbridge, Fort Talbot for Port Talbot, and many such slips. I leave to the writer and the professor of history their enjoyment of the satisfaction they experience at their enumeration of mistakes, which I feel as little satisfaction in recognizing as they are gratified in pointing out.

There is, however, an asserted error on the part of this writer and accepted by his editor which is simply astounding. It is stated that on page 130 of my volume Marcle is given by mistake for Mallory in the paragraph in which I stated that Willcocks and Marcle had deserted to the enemy. If the writer had referred to the journals of 1814, on the meeting of the house on the 15th of February, he might have read that on the roll of the members being called, six were absent: Wilson sick; McDonnell, Clench and McGregor prisoners with the enemy; while Abraham Marcle and Joseph Willcocks are mentioned as having deserted to the enemy. This correction of so-called error on the part of the writer is not the blunder of a proof reader; it is simply a record of ignorance of the records of the Upper Canada legislature on the part of the writer and editor.

Objection is made that I have increased the number of my volumes by giving a narrative of the American revolutionary war, and a long description of the disputes with the United States which led to the declaration of war of 1812; that I have included the account of the capture of Washington, the attack on Baltimore and the battle of New Orleans; further that I have included in my history an account of the naval actions. I have to reply simply that I felt it a duty so to act. I cannot be ac-

cused of pilfering the labours of others. Even those unfriendly to me cannot arraign me for the crime of "padding out" my pages. Indeed the labour bestowed on this portion of my history was by no means of small account. The explanation I have to offer is that I considered it essential that in the Dominion we possess a correct knowledge of these events for they form a part of the history of the continent indispensable to the comprehension of our own national position.

The American revolution was the parent of the settlement of Upper Canada. The operations at Washington, and at New Orleans, with the naval actions, form a part of the war in which Canada bore so distinguished a part. Not only do I entertain no feeling of regret that I have included these narratives in my history, but I claim recognition for having rendered a national service in having written of these events so that no misrepresentation concerning them may arise. Every writer of a work of this character which has occupied upwards of ten years of his life must himself be the judge of the principles by which he will be guided. He cannot hope always to have on his side even critics friendly to him. He must throw his bread on the waters and trust to the future for the fair appreciation of his motives, and the just estimate of his labours.

This writer expresses himself arbitrarily on the point that I have failed to consult American authorities, and that there is a deficiency of notes and references. On these two points the writer is entitled to his opinion. I only consider it necessary to reply that I am not impressed with it; whatever my defects, in my own view they do not lie in this direction.

I am called in question for being deficient in allusions to the social and industrial life of the people, the condition of agriculture, the increase of commerce, the development of trade. This writer fails to bear in mind that the volume he has seen fit to call in question includes the period 1808-1815, seven years only; that it is devoted to the events which led to the war, and to the war itself. Accordingly it was not the place for such considerations. If reference be made to the other volumes, he will find these subjects treated to the extent that it is possible. If the writer has any general knowledge of Canadian history he must know that there is scanty allusion to these points in contempor-

aneous literature, and that reliable information regarding them is by no means widely given. The people of Upper Canada, in the early years of settlement, were so occupied in the struggle of life as to give little thought to "progress" in the enlarged meaning of the word, except so far as it influenced their own fortunes; and what leisure they possessed was principally occupied by the part taken by them in political life.

As to the mission of John Henry, I conceive that I have bestowed all the attention upon its details, that they call for. I do not recognize that it exercised so wide an influence as to demand a more extended allusion than I have given to it. It attracted some attention at the time in the United States and created some excitement for a long period, but it was without permanent effect. I cannot accept the view that it had great direct influence in the creation of the feeling which led to the declaration of war.

The length to which this paper has reached suggests that I should bring it to a close. There may be points in the onslaught upon my work upon which I have not touched; nevertheless I conceive that I have vindicated my claim that my record of the war of 1812 merits different consideration than has been accorded to it in the publication of Toronto university. I do not quarrel with the theory that opinions differing from mine should be expressed. Such a contradiction of view invariably presents itself in every department of literature and science. We may do our best to carry out the Horatian maxim:—" *Denique sit quidvis, simplex dumtaxat et unum.*" But, to repeat another of his sayings, "*quandoque bonus dormitat Homerus.*" The best of us often fail in our purpose and but partially achieve success. I feel, however, justified by every canon of criticism in denying the assertion that I have written hastily, and without care; and that I neglected authorities which, had I consulted them, would have led me to express opinions different to those I have written.

I must concede that it would have been more desirable if the proof reader's errors of dates, and the orthography of the uncommon names, of which much is said, did not call for remark. I do not desire to explain them away; I can only regret that they present themselves to give ground for unfriendly comment.

They do not, however, constitute what is called faulty proof reading. I may say that, while my friend allowed me to appeal to his overtaxed time to watch my language and expression of thought, to correct any slip of grammar and any clumsiness of expression that might have glided into the narrative, he undertook no critical watchfulness over the dates and names only to be met in the bye-paths of historic literature. Otherwise, I had no assistance in this work. My daughter laboriously copied my MS. and aided me in the proofs in the matter of orthography, or drew my attention to that which she considered obscure. My work has been performed single-handed, under what circumstances it will little interest the reader to learn.

It was undertaken as a national work. I can with much satisfaction say that in all quarters of journalism in the Dominion it has received full recognition from writers whom I had no power of influencing. Equally in the mother country it has been as kindly received by the press of world-wide celebrity, the conductors of which knew me only by my name as appearing on the title page. In any circumstance the history certainly deserves a better fate than that accorded by the individuals who have considered it in the University publication.

I do not recognize on the part of either writer or editor the possession of the erudition, reading, or critical capacity, to enable them to judge of such a work. As the editor of an unsigned article Mr. Wrong is responsible for the opinions it expresses, justifying Prevost and Procter, which suggests a very superficial acquaintance with Canadian history. He brings to my mind Professor Truffles in the play of Douglas Jerrold of "Time Works Wonders," which half a century ago caused great attention in the theatrical world :

"What are you doing, Truffles?" asked a friend, for the Professor is supposed to have fallen on evil days."

"I am giving lectures in Chinese," answers Truffles.

"Do you know Chinese?"

"I teach it."

The text of the paper suggests that in some such spirit Professor Wrong labours at his duties in the chair of history in Toronto University, especially as it is known that he has made the slight, imperfect, sketchy, insufficient work of Greswell a text book :

a book devoid of all information, written in the spirit of a magazine article to give condensed, superficial information regarding Canada to the members of the Imperial Institute. That such a proceeding should have been admitted by the Senate, and not called in question by the minister of education seems marvellous.

Under any circumstances, even of failure, the labour bestowed upon such a work as I have now completed, the last two volumes are in the printer's hands and will appear before the close of the year, should command consideration and forbearance, even in dealing with its shortcomings. Certainly it should not be disingenuously misestimated. These two persons are the solitary instances of injustice and misrepresentation among those who have written on it.

Not simply on my own behalf, but in the cause of literature, I enter my protest against unknown men of no *status* in literature arrogantly assailing the labours of a public writer, on no ground but their own weak device ; and, what is more important, against the propagation of false, erroneous and untenable views regarding our national history ; against setting admittedly reliable evidence at defiance ; against the attempt to set up a critical house of cards doomed to be prostrated by the first breath of the contempt which it has called forth.

WILLIAM KINGSFORD.

THE OLD FORTIFICATIONS ON POINTS FREDERICK AND HENRY, KINGSTON.

SOME time ago I had the honour of reading before the members of the Historical Society of Kingston a paper on the subject of Fort Frontenac and the old military defences in the vicinity of the city of Kingston, and I then promised that I would, on a future occasion, give the Society the benefit of some information in my possession respecting the old fortifications on Points Frederick and Henry. It would be impossible to prepare a connected or interesting paper on such a subject without including in it many facts which are probably matters of history and are to be found in more than one printed reference, and therefore I make no apology if some of the material which I present in this paper is not original. In connection with history the office of the compiler is as necessary and useful as that of the original recorder. I propose to weave together and present a fabric composed of recorded facts and such material collected by my father as is in my possession, including the recollections of Mr. Robert Sellars, a gentleman well known in Kingston, who was in early life connected with the Royal Engineers' Department, and who lived to the ripe age of 100, and died only a few years ago. His recollection of facts which occurred in the early part of this century was very remarkable; and the correctness of some of the information given by him has been frequently verified by reference to recorded papers. I have also had the benefit of personal interviews with old inhabitants of this city, particularly Sheriff Ferguson, who has an excellent memory, and gave me a good deal of interesting information respecting the building of the new fort on Point Henry, more indeed than I would venture to put into this paper.

The Government having, after the cession of Canada by France to England, resolved to continue Kingston as a military post, the attention of those entrusted with the conduct of the affairs of the country would naturally be directed to the best mode of providing for its defence and protecting the commerce of the lakes and river. There had been a naval station at Carle-

ton Island, which lies between Wolfe Island and the American shore, and fortifications had been built at that point which were occupied by a British garrison. In 1788, four years after the establishment of Kingston as a town, Lord Dorchester, then Governor of Canada, formerly Sir Guy Carleton, instructed John Collins to make a survey of the different forts and harbours from Carleton Island to Michilimackinac, and particularly to report upon the respective merits of Carleton Island and Kingston as a site for a naval station. Mr. Collins, in an elaborate report presented to his Excellency, expressed an opinion in favour of Carleton Island; but this opinion seems to have been disregarded by the Government, for in 1789, as nearly as I can ascertain, a Naval Yard and Station were established on the east side of Point Frederick and in Navy Bay. Considerable progress must have been made in the erection of buildings and fortifications between the time mentioned and 1815, when Col. Bouchette, in his work on Canada, thus refers to Kingston and its vicinity:—

“ For the last fifteen years the town has obtained considerable mercantile importance; wharves have been constructed and many spacious warehouses erected that are usually filled with merchandise; in fact, it has now become the main entrepôt between Montreal and all the settlements along the lakes to the westward. From the commencement of spring until the latter end of autumn, great activity prevails; vessels of from eighty to nearly two hundred tons, employed in navigating the lake, are continually receiving and discharging their cargoes, as well as the batteaux used in the river. The harbour is well sheltered and convenient, accessible to ships not requiring more than three fathoms of water, with good anchorage close to the north-eastern extremity of the town. Opposite to the town, and distant about half a mile, is a long, low peninsula, forming the west side of Navy Bay; the extremity of it is called Point Frederick: Point Henry is the extremity of another peninsula, but of higher and more commanding ground, that forms the eastern side of it. This is the principal depot of the royal navy on Lake Ontario, and where the ships are laid up during the winter; the anchorage is good, but somewhat exposed to the south and south-west winds. On the western side of Navy Bay are the dockyard, large storehouses, slips for building the men-of-war, naval barracks, wharves, and several dwelling houses for the master builder and other artificers, for whom, since their occupations have been so unremitting, it has been found necessary to erect habitations on the spot. In this yard the ships composing the present British Ontario armament were built and equipped: the construction of the ‘St. Lawrence,’ a first-rate, mounting one hundred and two guns, will sufficiently prove that the power of this fleet may hereafter be increased to a vast extent. As a

rival station to the American one of Sackett's Harbour, Navy Bay is entitled to every consideration, and as long as it becomes an object to maintain a naval superiority on the lake, the greatest attention must be paid to this establishment; particularly when we observe with what care our rivals complete such of their ships as were begun during the war, and also the measures they are adopting generally to be enabled to contend against us, at a future period, with numerical strength in their favour; and, in fact, the methods they pursue are well calculated to obtain the objects they steadily keep in view. The conduct of an enterprising enemy should always be narrowly observed, and a countervailing power be prepared commensurate to the means of aggression. The Americans build their ships much faster than we do on our side, and for this reason strength is the chief object with them, and if that be obtained, they care but little about beauty of model or elegance of finishing; in fact, they receive no other polish than what is given them by the axe and the adze. On the other hand, we employ as much time upon ours as we should in the European dockyards; they are undoubtedly as strong as the Americans', they are handsomer and much better finished, but they are far more expensive, and will not endure a longer period of service. When we reflect that ships built on this lake will not last more than five, or at most six years of actual service, it may be a subject not unworthy of consideration whether we cannot, with some advantage to ourselves, adopt the methods of our opponents; and if we have a fleet as strongly built, equal in number and size to theirs, and capable of keeping up the unrivalled splendour of our national banner, be satisfied with it, although it be not a rival in beauty and splendid decorations to that which has awed every enemy into submission."

Points Frederick and Henry and the bays to the east of each of them were, I am told, named after two of the governors of Canada, namely, Frederick Haldimand, 1777, and Henry Hamilton, 1785, the point nearest to the city being Point Frederick, the bay next to it Haldimand Cove (Navy Bay), the next point being Point Henry and the bay beyond it Hamilton Cove or Dead Man's Bay.

The town having been established, arrangements were made for the defence of the harbour. With this object in view a strong battery was erected on Mississauga Point, which lay at the foot of what are now Gore and Earl streets. This battery is referred to in the diary of the captain of voltigeurs lately introduced to us by Dr. Neilson as having been lined with heavy square timbers on the inside. Sheriff Ferguson remembers this battery, which, he says, was furnished with a furnace for the heating of shot, intended to give a warm reception to an enemy. All traces of the structure have now disappeared.

On the opposite shore of Point Frederick, at its southwest angle, was established another battery, intended to co-operate with that on Mississauga Point. This battery appears on the plan of Bouchette's survey of the harbour dated in 1796. From a memo. in my possession I find that it was composed of a breast-work of logs and earth with traversing platforms for guns. It was probably constructed about the same time as that on Mississauga Point. After the war of 1812-14 a blockhouse was constructed within the breast-work and remained standing until it was destroyed by fire in the year 1820. (See Canniff's *History*). The armament of the battery on Point Frederick, according to Mr. Sellars' recollection, consisted of about six or seven 24 pounders.

The two batteries, Mississauga and Point Frederick, completely commanded the entrance to the harbour so as to make it difficult, if not impossible, for a hostile vessel to effect a passage. The location of the batteries and the line of cross fire are shewn on a plan in my possession prepared and issued by the Admiralty.

In or about the year 1789, as I have already stated, the naval depot was established at Point Frederick for the building and protection of ships and military stores. The works on Point Frederick no doubt formed part of the defences of the dock yard which was situated on the east side of the Point. The memo. from Bouchette, which I have already quoted, refers to the progress made in the erection of buildings in the dock yard. Some of the buildings have disappeared but others remain. The building, now used as a dormitory in connection with the Royal Military College, was originally intended as a naval storehouse. It was built between 1816-19 of stone which was quarried on Point Henry, near the site of the military hospital, and close to the water-side. The stone taken from this place is easily distinguishable by its rusty yellowish tint.

This stone storehouse was fitted up at a later period for the accommodation of the sailors of the lake fleet in the winter time. It was divided into decks and its whole interior made to resemble the interior of a frigate. The floors were called decks, each with its distinctive name, and the cartridge cases and other furniture were marked as they would be on a man-of-war. The

building thus received the name of "The Stone Frigate." I had the opportunity of seeing it in its frigate stage and remember that the captain's room was very beautifully finished in light wood. Further alterations have converted the building into what it now is, the dormitory in connection with the Royal Military College.

I find in a letter written by the late John Creighton, in the year 1882, some remarks about the stone frigate and the vessels moored in Navy Bay, which will, no doubt, be interesting to my readers: "The Canadian rebellion," he says, "commenced in the fall of 1837, and in the spring of 1838 Captain Sandom, R.N., and about two hundred sailors and marines, with their officers, were sent to Kingston from the ships of war at Quebec.

Previous to this the naval station at Kingston had been broken up by the British Government and Captain Sandom had no quarters afloat for his men; hence they were placed in some old buildings on shore, a portion of them in the large naval store building. This being the largest and most important building in the dock-yard was named Her Majesty's ship 'Niagara.' It was a stone frigate, it is true, but it answered the purpose of giving Capt. Sandom's crews a habitation and a name.

During the summer of 1838 a small steamer named the 'Experiment' was purchased for the naval station here and three small gun-boats were built. A steamer was also purchased for Lake Erie, and a detachment of Capt. Sandom's command was sent there to man the vessel.

The 'Experiment' did good service at Prescott in the fall of 1838 by driving the steamer 'United States' over to Ogdensburg and cutting off communication by water with the Yankee horde who had taken refuge in the Windmill and surrounding buildings.

When I came to Kingston in 1823 (then a boy 6 years old), the stone frigate referred to was filled with naval and military stores.

All the vessels used in the war of 1812 were lying roofed over in Navy Bay, otherwise Haldimand Cove, immediately in front of the 'stone store,' or frigate as it was afterwards called. These vessels were sold a few years afterwards by the British Government and broken up except the ship-of-war 'St. Lawrence,' capable of carrying 102 guns. A portion of the hull of this vessel floated when the upper part was taken off. It was towed over

and sunk again and forms part of the wharf in front of what is known as Morton's brewery and distillery."

Several vessels were built at the dockyard, including the "Speedy," the "Mohawk," the "Mississauga," the "Toronto," "Duke of Kent," (built in 1806), the "St. Lawrence," a large vessel carrying 102 guns, the "Prince Regent," the "Princess Charlotte," and the "Royal George." One vessel, the "Psyche," was framed in England and sent out, and the parts were with much labour and expense carried to Kingston, where they were put together in the dockyard in 1814. The British Government also sent out for each ship on Lake Ontario a full supply of water casks with an apparatus for distilling sea water. Some of these particulars, though they are recorded elsewhere, are contained in a memorandum prepared by Mr. Sellars and now in my possession.

When the war of 1812 broke out Sir James Yeo was sent out from England to take command of the naval station and the operations on the lakes were conducted under his supervision and direction.

Amongst the officers employed at the dockyard and in connection with naval operations were Commodore Barrie, from whom, I understand, Barriefield derives its name, and John Marks, whom I recollect very well, and who lived to a good old age, and, I am told, contributed liberally towards the erection of St. Mark's Church, Barriefield.

After the war of 1812 an arrangement was made between the British and American Governments to limit the number of armed vessels upon the lakes, and in pursuance of this arrangement, and on the 28th April, 1817, a proclamation was issued, which reads as follows :

"The Naval force to be maintained upon the American lakes by his Majesty and the Government of the United States shall henceforth be confined to the following vessels on each side, that is

On Lake Ontario to one vessel, not exceeding 100 tons burden, and armed with one 18 pound cannon.

On the Upper Lakes to two vessels, not exceeding like burden each, and armed with like force.

On the waters of Lake Champlain to one vessel, not exceeding like burden, and armed with like force.

All other armed vessels on these lakes shall be forthwith dismantled, and no other vessels of war shall be then built or armed."

It was further provided that the proclamation should continue in force till six months notice of abrogation should be given.

The martello tower and fort at present existing on Point Frederick were built in the year 1846, and formed part of a system of fortifications devised for the defence of the harbour.

The traveller in search of the picturesque and the beautiful in nature will go far before he will find a grander or more charming view than can be obtained from the heights of Point Henry on a bright summer day. A hundred feet below him, the point on which he stands is washed by the waters of Lake Ontario, clear as crystal and blue as the heavens. Towards the south-west the great lake stretches on and on until it is lost in the horizon. To the north of this expanse of water lie Amherst Island and the peninsula of Prince Edward. To the south Wolfe and Simcoe Islands. To the north across Navy Bay lies Point Frederick, and beyond it the city of Kingston. To the south sits Cedar Island like an emerald in blue setting; and in the distance, over and beyond Wolfe Island, can be dimly seen the northern shore of the State of New York. Eastward the noble St. Lawrence, issuing from the great lake, pursues its majestic course through islands and rapids, past hamlet and city, until it mingles its waters with the ocean.

In 1813 the features of this landscape must have been to a large extent similar to those of to-day, but the point itself must have presented an entirely different picture.

The captain of voltigeurs, to whom I have already referred, gives a humorous account in his diary of the condition of the Fort Hill in May, 1813, when he was sent over with a detachment to occupy Point Henry. He describes the ground as a wilderness of stumps, fallen trees, boulders and rocks of all sizes and shapes, infested with mosquitoes, gnats, sand flies and other abominations in the shape of loathsome reptiles.

The stumps and fallen trees, the mosquitoes, gnats, sand flies and other abominations have long since disappeared, but there remain scattered about in every direction boulders and pieces of limestone left by the quarrymen and stone-cutters who were engaged in the building of the fort.

There was evidently in 1812 no fort or permanent structure of any kind on the ground. Col. Bouchette, in his book, to

which I have already referred, states that the dockyard was defended by a strong fort on Point Henry. This fort, which was built of logs, and was surrounded by an embankment, was constructed in 1813. The war between the United States and Great Britain had probably demonstrated the necessity of erecting permanent fortifications on Point Henry. There were constructed in 1815-16 two towers each fifty feet square, with rounded corners, built of strong rubble work. These were surrounded by palisades, erected in the form of *chevaux de frise*. There was also a large building, 80 feet in length, put up and used as officers' quarters. It was built of cut stone on the site of the advanced battery, now upon the ground. This building, or rather the stone in it, was sold by auction about the year 1841, and the stone was brought over to the city where it was used in the building of a house on Barrack street and two others on Brock street.

Besides the officers' quarters, stone magazines, ordnance offices, and an armory were built outside the fort in 1813-1814. Stone barracks 230 feet long, roofed with tin, were in 1818-20 put up for the use of the men. Two other buildings, for the accommodation of the men, each 80 feet long, and with a cook house attached to each, were built near the entrance to the fort between the two towers.

The new fort, begun in 1832, was completed and occupied about 1836. It was at first intended to build it of granite, a quarry of which lies between the fort and Cartwright's point, but the stone was found so intractable that the idea was abandoned, and the fort was built of limestone quarried on both sides of the road leading from Kingston to Gananoque, the stone being of better quality there than elsewhere in the vicinity. The material required for mortar and cement was procured in every direction, as may be seen at the present day by examining the ground to the north of the fort. The stones used in building the fort were dressed where they were quarried, and Sheriff Ferguson conveyed them under contract to the fort. The advanced battery was constructed in the year 1842, and is said to have been a serious military blunder. I have in my possession a plan of the forts on Points Frederick and Henry shewing the details with great minuteness.

Cedar Island appears at a very early date to have been cleared of timber and used as a telegraph or signal station for military purposes. There was one station on Cedar Island, another lower down the river, and another on Snake Island. I do not of course use the word telegraph in the modern sense. The trees on the island were subsequently allowed to grow. In the year 1848 the Martello Tower on the island was built. It was intended to call it "Cathcart's Redoubt;" but this idea was abandoned, and it goes under the name of "Cedar Island Tower." It was built by the Hon. Alexander McKenzie in the days when he practised his trade as a stone mason.

RICHARD T. WALKEM.

SOME WORKINGMEN'S PROBLEMS.

ONE of the features of the later periods of the Victorian era has been the increasing attention paid to problems affecting the working classes. Their wages have improved, they are better clothed, and education is more general among them, but, in addition to these desirable conditions, there is a more sympathetic interest taken by other classes of society in whatever concerns their advancement. Sometimes there has been friction between employer and employee, but the public at large is now always ready to extend its sympathy to the working classes whenever they have just causes for complaint, and seek a remedy in a fair spirit and by constitutional methods. The knowledge of the probable course of public opinion has often a powerful effect in lessening this friction or preventing its occurrence altogether.

Whilst, however, the workingmen's unions have given large attention to problems affecting, among other matters, wages, hours of labour, mutual assistance, and local benefit funds, there are other economic problems of great importance which should have their careful consideration. To some of these I wish, in a very brief way, to draw attention, more especially to

The high rents frequently paid in the cities in proportion to the accommodation obtained.

Improvements in the character and locality of the dwellings.
Compensation for injuries.

Old age pensions and government annuities.

Greater facilities for education, especially in science as applied to manufacturing and construction.

These are all of them important questions, affecting either the health, the income, or the future prospects of workingmen and their families.

RENTS.

In the larger cities, and perhaps it may be found to be the case, more or less, in all cities, rents paid by workingmen are, generally—considering the character of the accommodation, and the locality and value of the dwellings—relatively higher than those paid by the middle and upper classes. The landlord of an average dwelling situated in the more desirable parts of the city expects to receive six to seven per cent. annual return on his investment, and out of this he has to provide necessary repairs. From dwellings suitable for workingmen, situated in other parts of the city, landlords expect to receive from ten to twelve per cent., and possibly even a higher return, and the dwellings will, in many instances, be found to be poorly constructed and insufficiently provided with sanitary arrangements. The reasons occasionally given by the landlords for this difference are that the working classes do not always take proper care of their houses, and that the rents are sometimes not paid, the consequence being that provision has to be made not only for extra wear and tear, but for losses in rent as well. These reasons have probably some force, and, so far as they have, the remedy is in the hands of the workingmen themselves; but, apart from that, the principle of charging relatively higher rents to the wage earner does not carry fairness with it. It is not because he is more able to pay. It may be said that the law of supply and demand will prevail, and that high rents will bring their own remedy by leading to the building of more houses. This is only in part a truth, as house structures, being of a permanent character, are built only after great deliberation, and are not like money or goods, which can

be transferred from point to point, wherever the most advantageous return can be obtained for them.

Can this matter be remedied? Can a fair rent payable by the tenant be reconciled with a fair return to the landlord on his investment? Opinion will probably differ as to what constitutes fairness, but with rates of interest on real estate investments so low as they have now reached, it will not be difficult to recognize an excessive rent. Seven to eight per cent. return on a well built house, after deducting taxes and allowing for repairs, should be considered more than ample when it is so difficult to find good general investments yielding over five per cent. Would it be wise to fix a maximum limit by legislation?

Municipal corporations, in collecting ordinary taxes, are virtually precluded by statute from exceeding a maximum rate on the assessed value of the property, and it is well worth considering whether, in a similar way, rents might not be also limited by statute to a maximum rate on this assessed value. Within that maximum figure the rent, or aggregate rents in the case of tenement houses, could rise and fall in accordance with the demand for houses, but the tenant would always know that there was a point higher than which the rent could not go. The assessed value in cities and towns is, generally speaking, a fair estimate, and opportunity is annually given to interested parties to contest its correctness. There would thus be a check on any possible attempt to attach a fictitious valuation to any property in order to increase the rent. The whole question is worthy of discussion by the workingmen. The amounts paid in rents and taxes form a very important part of their yearly income.

IMPROVEMENTS IN DWELLINGS.

Notwithstanding all that has been urged during recent years on this subject, much requires yet to be done in securing dwellings of a better class, with proper ventilation and sanitary arrangements. As a rule, workingmen's dwellings are not built under the supervision of an architect, and the building inspector's duty, where such official exists, seems too often limited to a superficial examination into the safety of the structure. Health is, if anything, more important to the workingman than to the man of leisure or means, as he cannot afford the time to be ill, and he has not the personal resources to fall back on in case his

health does give way. In the matter of dwellings, the health inspector's duties should commence at the same time as those of the building inspector, and he should see that the ventilation is ample, and that the sanitary arrangements and conveniences are of the most modern type and of good workmanship. There should not be complaints of damp cellars, uncemented or broken drain pipes, antiquated closets, or unventilated rooms, if, during construction, every dwelling was carefully examined under the supervision of a proper health inspector or sanitary engineer.

Our long and severe Canadian winters lead to more time being spent indoors, and less inclination, as well as opportunity, to ventilate the houses in the usual way through the doors and windows. Hence the greater need during that period for ventilation by special means, and the absolute necessity for perfect sanitary arrangements. Landlords, perhaps, do not generally know that if disease breaks out they are responsible in damages for neglect to have proper precautions to prevent its development. No city or town, however small, should in fact be without a sanitary engineer or properly qualified sanitary inspector. No landlord should be satisfied without at least one careful inspection each year by this official, and this inspection should include thorough tests by the most modern methods of the condition of the drains; and no tenant should take the lease of a house without insisting on the production of a certificate of a recent inspection and test.

Other subjects which might well be considered in this connection are the prevention of over-crowding in the larger cities; the planting of trees by municipal corporations on streets occupied by the workingmen, and the taking by the workingmen of an interest in their preservation; and the co-operation of the tenant with the landlord in keeping the dwelling and its surroundings in good order, thereby affording the landlords an inducement to make their houses more attractive.

COMPENSATION FOR INJURIES.

The introduction into the imperial parliament of a government measure providing for compensation for injuries has opened a wide field for discussion of an important subject. The position assumed by the Government is that in many important trades accidents to workmen must be regarded as incidents of the busi-

ness, and that compensation for injuries should thus be a charge on the cost of conducting that business. This position has, as would be expected, been assailed by many employers, especially by the colliery owners, who know the difficulty of obtaining insurance against accidents in coal mines, and whose experience shows that colliery accidents frequently arise from the carelessness of one individual, and too often lead to very large loss of life. The principle of the bill has, however, been on the whole favourably received in the imperial parliament, and will probably become law in August next. It is not intended to apply to sailors, agricultural labourers, tramway employees, excavators, or men in the building trades where machinery is not used, and the limit of compensation is half wages, but not to exceed \$5 per week during temporary disablement, and three year's wages, or \$750, whichever is greater—but not to exceed \$1,500—in case of total disablement or death, provided, in the latter case, the workingman has left dependents behind him.

How far would it be wise to enact in Canada legislation similar to the proposed British Act? The subject is one in which the general public is directly interested, as, in the case of manufacturers, any compensation paid will, undoubtedly, be provided for in the price of the products manufactured. The consumer, and not the employer, will thus furnish the funds. Which of the three interests concerned can the most easily bear the burden? It would seem as if on the consumer, as representing the public, it would fall most lightly, as the addition to the cost would as a rule be barely noticed. Even now in all cases where negligence or defects result in the employer having to pay compensation, this compensation makes itself felt in the price of the goods produced.

Other questions, however, suggest themselves. Will the adoption of the principle of compensation in all cases of injuries lead to less promptness on the part of employees in detecting and remedying, or pointing out, defects, and less care in avoiding accidents? Is it altogether wise, on principle, to compensate men for suffering or loss in cases where their own negligence has led to this suffering or loss? Will not a result of this compensation be that many working men will drop their provident and benefit societies, and that the younger men will not join

these societies at all? These are questions requiring careful thought. The principle of providing for the future by annually setting aside a fixed sum, whether it is paid to a benefit society or life insurance company, or is deposited at interest in a savings bank, is recognized by experience as so excellent that nothing should be done to discourage it. With regard to negligence, the British Government has agreed to an amendment to the bill, under which a breach of a statutory rule, drunkenness or other grave misconduct will preclude compensation; whilst, as to the remaining question, there need be no apprehension that the employees will observe less care. Common sense will prevail. The British Act, besides, provides that the workman's injury must not be trivial, and that he must be laid off from work for a given number of days.

On the whole, until more experience is gained, it would be better to take a medium course which, admitting the principle of compensation, would at the same time encourage the habit of saving among working men. Whilst some moderate amount would be given in every case of injury without misconduct, this amount might be somewhat increased wherever the injured man was found to be a member of a friendly or benefit society, or insured in a life insurance company, or had a given minimum sum at interest in some bank. This would keep up the connection of the men with such societies and companies.

The Act should, at the same time, make provision for the investment of the sum allowed in an annuity for the benefit of the widow and children. For the whole principal sum to be frittered away in present enjoyment or to be imperilled by investments made on the advice of inexperienced friends, would seem very unwise.

OLD AGE PENSIONS.

The present Secretary of State for the Colonies, Mr. Chamberlain, has made the suggestion of old age pensions for working men, which the government might supplement. The idea has not as yet taken any practical shape, but may be described as endowment insurance, to which both the workingman and the Government will contribute, the former paying given annual premiums up to a fixed age, which it has been proposed should be 60, from which time onward until death he would receive a pen-

sion representing these premiums and interest, and such further sum as the Government decided to add. No one will question the importance of the proposal: the real points on which there will be any division of opinion are the methods of carrying it out, and the advisability of the Government committing itself to an annual permanent expenditure, which would be very large, and having to be met with promptitude, might, in some years, prove a great millstone on the neck of the nation.

In Canada there were at the time of the last census 177,261 males of the age of sixty years and upwards. These, of course, would only gradually come upon any old age pension fund. If, however, this fund had been in existence sufficiently long to make it possible to include them all, and only one half of them actually became by right participants in it, the Government, if its responsibility went as far as one dollar per week to each pensioner, would have had in 1891 an annual charge for pensions of \$4,608,552. As population increased this annual sum would also increase. What would be the yearly charge in Great Britain with the population exceeding forty millions!

Whilst a direct Government addition of any importance annually to each pension would, on account of the magnitude of the aggregate sum be out of the question, the general principle of old age pensions is good, and the habit of saving for the future should be encouraged among the working classes. Perhaps few among them realize the large aggregates to which small amounts, annually paid and left to accumulate at interest, increase in the course of years. A sum of \$33.58, paid in annually for twenty years, or of \$17.83 for thirty years, to a bank or trust company which will allow four per cent. interest, will, each at the end of their respective periods amount to \$1,000, and this \$1,000 will then afford a pension of \$89 yearly for fifteen years. In other words, a workman who at the age of thirty commenced to lay aside thirty-five cents each week, will find himself at the age of sixty with a pension of nearly ninety dollars for the subsequent fifteen years, and this period is "the expectation of life," which a man who reaches sixty has before him.

What could be done by the Government would be to establish an old age pension department in connection with the post office savings banks. A special rate of interest, exceeding that on or-

dinary deposits, could be allowed on the pension deposits, and the interest made part of the principal at the close of each year. On the period arriving when the pension would become payable, the aggregate deposits and interest would be transferred to an annuity account, the Government continuing to allow the special rate of interest and capitalizing the balance of principal and interest each year until the termination of the pension by death. The contribution of the Government to the scheme would thus be the special amount of interest which it allowed on the pension premium for a long, fixed period, and the freedom of the scheme from the very heavy annual expenses of the life insurance companies by the Government working the scheme in connection with the post office.

That the Government should institute in Canada a system of annuities payable by it forms part of this proposal. Hitherto it does not appear to have considered the subject, but the prospect of a very large business arising from the institution of old age pensions and compulsory compensation for injuries might form a great inducement.

If the workingman died or became permanently incapacitated for work before the time when the pension became payable, he, or, in case of death, his representatives, should be allowed to withdraw the accumulated premiums and interest at some fixed rate, and have them at once turned into an annuity so far as they would go.

The benefit of compensation for injuries and of old age pensions should be open to women workers as well as to men, and the pension should, in the case of a married man, take the form of a joint annuity payable to the widow if she survives him.

TECHNICAL EDUCATION.

That there has been a widespread increase of education among the working classes of this country during the last two or three decades is a necessary outcome of the improved school systems prevailing, especially in the English-speaking provinces. Has, however, the character of the education given been in every respect the best adapted to the special needs of the working classes? To be able to read and write brings the daily newspaper to the workingmen's doors and enables them to utilize the post office, but have they fully recognized its far greater import-

ance in opening up a vast field of future possibilities in special work if the opportunity of further improvement is afforded? Public libraries have been established in some cities. Have they always profited by the wealth of special literature brought thus within their grasp? On the other hand, how far have opportunities of technical education been afforded them, and where technical schools have been instituted, have these schools in the fees charged been within the reach of the great army of young men of slender means?

Such questions are especially suggestive at the present time. These are days of intense competition, and the manufacturer who can produce the best finished and the most serviceable article at the lowest price will control the trade in that particular article. Hence each manufacturer requires the best knowledge and the most intelligent thought of every workman in his employ to be at his disposal in the production of the special goods he manufactures, and those workmen rise most rapidly whose general as well as special knowledge, wide experience, inventive faculty, or genius for discovery, aid most in suggesting or creating improvements which are helpful in this competition.

Turning to our own country, there is no reason why Canada should not only retain control of its own markets against competition from the United States, but should also compete with that country in many lines in foreign fields. This is, however, only to be done by employers being alive to the importance of having only the newest processes and the best workmen in the effort to improve quality and cheapen cost, and probably also by confining themselves more to special lines in which they can acquire a name and by which they can produce goods in larger quantity, and therefore more cheaply. Hence we need in Canada more technical education, which in its cost will be within the reach of the masses. Every young workman, ambitious of doing well, should have an opportunity, at the manufacturing centres, of obtaining not only a good general education, but that preliminary technical instruction which will be so helpful to him afterwards in suggestions. During the course of active employment, he will be frequently brought face to face with problems embracing improvements in constructive or manufacturing processes. Some one must solve these problems if the maximum of success in the business is to be obtained, and why should not he?

A. T. DRUMMOND.

THE COLLEGE.

REPORT OF THE PRINCIPAL TO THE BOARD OF TRUSTEES FOR YEAR
ENDING APRIL 28, 1897.

NUMBER OF STUDENTS.

No. of Undergraduates in Arts (attending)	280
" " " (Extra-mural)	90
" General or Unmatriculated Students in Arts	24
" Post Graduates in Arts	16
" Undergraduates in Theology	52
" " Practical Science	15
" " Medicine	113
<hr/>	
Total	590
Or, allowing for double registration	567

This marks an increase over last year of 20 in Arts, and a decrease of 19 in Medicine; an increase of 12 in Theology, 9 in Practical Science, and 2 in Post Graduate study, and a decrease of 22 in unmatriculated students. Instead of increasing the fee for all extra-mural students, as was suggested in last year's report, tutors have been appointed in many classes to examine, correct and return prescribed essays and exercises, and for this assistance special fees are charged. The Calendar shows in which classes this tutorial system is compulsory, and in which it is optional. The tendency is to make it compulsory in all classes.

DEGREES CONFERRED.

In Medicine, M.D., C.M.....	30
In Theology (10 Testamurs and 2 B.D.s).....	12
In Practical Science (1 D.Sc. and 2 B.Sc.)	3
In Arts (48 B.A.; 13 M.A.).....	61
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In addition, three honorary degrees were conferred: In Divinity, on Rev. James Fraser Campbell, Rutlam, Central India, and on Rev. Robert Chambers, B.A., Bardezag, Turkey in Asia; in Laws, on Her Excellency, Ishbel Gordon, the Countess of Aberdeen.

The Senate also decided to offer the Degree of LL.D. to the Honourable Wilfrid Laurier, Premier of Canada; and on learning from him, last March, that autumn would be the most suitable time for him to attend a Convocation, agreed to confer the Degree on next University Day, (Oct. 16).

UNIVERSITY EXTENSION.

In giving the number of our students, we do not include those in the affiliated "School of Mining and Agriculture," or in Veterinary, or in the Dairy School now controlled by the Provincial Government, nor do we include those in classes connected with the various forms of University Extension. I submit three reports, showing the work

done along this line in summer and winter during the past year. All show clearly that what is aimed at is not popular lecturing by professors, but the extension of university work to persons unable to attend the regular classes. The School of Mining does valuable work of the same kind in mining centres under the guidance of Mr. Hamilton Merritt and Mr. Willet Miller, and also by geological excursions to points in the neighbourhood of Kingston during the autumn months.

REPORT ON SUMMER SESSION BY PROFESSOR KNIGHT.

The prospectus promised two courses of instruction in each branch of Biology, "an elementary one for beginners in Botany and Zoology, and a more advanced one for students who already possessed some knowledge of these sciences."

I had seen two kinds of summer school, one at Woodshole, and the other at Edinburgh University. At the former, the aim was to do a limited amount of work thoroughly. At Edinburgh the plan was to give students the outlines of a number of subjects. Both plans have advantages, and both have drawbacks. The one may end in vaneer like that of a Chautauqua reading club, the other may end in discouragement at the endless array of details which must be mastered. I preferred to take the latter risk.

The elementary course was nearly equivalent to the junior in winter, and to the requirements for the senior leaving examination of the High Schools. The advanced course was just a section of the honour work of one winter session, viz., the *Histology of Vertebrates* worked over as thoroughly as in winter. I promised 50 microscope preparations and gave about 70.

The total attendance numbered 21, of whom 8 took the elementary, and 13 the advanced class. Nearly three-fourths were teachers, who came for guidance in the prosecution of studies which they pursue at home. The rest were undergraduates in Arts or Medicine, who wished to utilize a portion of their long vacation.

While all worked diligently, I must mention the enthusiastic manner in which the teachers pursued their studies. It was often six o'clock before they left the Laboratory, and all were in attendance at 9 a.m.

This being the third summer session, it may be useful to review our work thus far:

Session of	Attendance.	Fees.	SUBJECTS OFFERED.		Subjects seriously studied.
			Major.	Minor.	
1894	21	\$ 90 00	Chem. & Miner'y	Bot., Zool., Phys.	Chem. & Mineral'y.
1895	17	109 00	do	do.	do. do.
1896	22	180 00	Bot. & An'l Biol.	None.	Bot. & An'l Biol'y.

At the suggestion of the Hon. Mr. Dryden very elementary courses were offered during the first two years in Chemistry and Physics, Geology and Mineralogy, and Botany and Zoology, but no one attended them. The Public School teachers who did attend in 1894 and '95, wanted work that would count in obtaining a University degree, and consequently took the advanced work in Chemistry and Mineralogy. They wanted Botany and Zoology also, but not the A B C of these subjects. When advanced instruction was offered them this year in these subjects, they attended the classes and paid twice the sum in fees paid in 1894. Only \$58 were collected in fees for Botany this summer, but if Professor Fowler had been here the fees would have been almost doubled.

To Mr. B. W. Folger, jr., the class was indebted for a free pass to Wolfe Island. The class combined the pleasure of an outing with the benefit of some field

work in Zoology, besides learning methods of collecting material. To Dr. Clarke, of Rockwood Hospital, the class is indebted for a very instructive lecture on *Heredity, Crime and Insanity* in the John Carruthers Science Hall.

To Mr. Archibald Williamson, M.A., I am greatly indebted for unremitting assistance in preparing my daily demonstrations for both classes—a labour much greater in summer than in winter.

If the summer session is to be made permanent, I would suggest the publication, early in the winter session, of a full syllabus of the work proposed to be done in 1897. Tutors may assist in the work, but it is essential that the Professors should take the principal part in the work of instruction.

REPORT ON UNIVERSITY EXTENSION CLASS IN ENGLISH (HELD LAST WINTER),
BY PROFESSOR CAPPON.

This class was intended primarily for teachers and those who were willing to pursue a systematic course of study in literature. A merely popular audience was not invited. The course consisted of eighteen lectures, delivered once a week, on Wednesday evening, from 7.30 to 9 o'clock. The number of students enrolled was 52, and the attendance was very regular throughout. Essays were prescribed three times and written by fourteen students. Oral examination was also freely used during the course, and showed that the class as a whole was diligent and took a good hold of the work. After considerable experience of Extension lecturing, both here and in the old country, I think that this type of class, with its professional preparation and habits of study, and with its strong practical interest in the subject, makes the most solid basis for the work of the Extension lecturer.

REPORT ON UNIVERSITY EXTENSION CLASS IN JUNIOR PHILOSOPHY BY PROFESSOR
DYDE.

Seventeen persons, all but two of whom were public school teachers, formed themselves last winter into a class, and asked to be given a course of eighteen lectures, covering, as far as possible, the work of Junior Philosophy. One lecture was given each week, and was to have lasted one hour. In point of fact the lecture, including the time given to questions and to the discussion of points raised by essays, lasted from 7.30 to 9.30, and sometimes even to 10 p.m. The effort on the part of students and professor was considerable, but it was felt that satisfactory results in such a subject as philosophy could not otherwise be secured.

The interest evinced by the class can be judged by the fact that its members were willing to pay \$5.00 each for the course, to purchase the necessary textbooks, and in some cases to write essays. As nearly all of them had to teach in the public schools, the preparation for the class, involving a study of the text, must have consumed much of their spare time during the week. Their desire to obtain as far as possible the benefit of a college training is highly laudable. Other subjects might be taken up next winter. The University would thus be brought into closer relation with the city, and the needs of persons, employed in various ways throughout the day, and unable, therefore, to attend the regular college classes, would be at least partially met.

SCHOLARSHIPS.

In last Report it was stated that a committee had decided to appeal for \$5,000, to endow scholarships in memory of the late beloved Dr. Williamson. The response has as yet not been what was expected. The following subscriptions have been received, but these, even along with his "estate," which he left to the University, and which amounts to less than \$800, would not warrant the establishing of more than one good scholarship. We need four or five of these Williamson memorials:

THE COLLEGE.

SUBSCRIPTIONS RECEIVED BY THE TREASURER, J. B. MACIVER, TO WILLIAMSON MEMORIAL SCHOLARSHIP FUND.

Principal Grant, Kingston, \$100, interest paid	\$ 6 00
J. M. Farrell, B.A., Kingston, \$100, interest paid.....	6 00
R. S. O'Loughlin, New York.....	100 00
A. E. Malloch, B.A., M.D., Hamilton.....	50 00
Rev. Alfred Gandier, M.A., Halifax	25 00
Charles Macdonald, LL.D., New York	25 00
W. A. Logie, B.A., Hamilton.....	20 00
Mrs. Keith, Halifax.....	20 00
E. R. Peacock, M.A., Upper Canada College	15 00
Rev. James Cumberland, Stella.....	5 00
Mrs. Cumberland, Stella	5 00
Rev. Robert Campbell, D.D., Montreal, \$50, first instalment paid	10 00
Rev. Dr. Snodgrass, Scotland	10 00
P. C. McGregor, M.A., Almonte	10 00
John Mudie, B.A., Kingston.....	10 00
Judge Cumberland, B.A., Brandon, Man.....	10 00
J. B. McLaren, M.A., Morden, Man.....	10 00
Alexander McLeod, B.A., Winnipeg, Man.....	10 00
Dr. J. T. D. Mackenzie, Kingston	10 00
Sir H. G. Joly de Lotbiniere, LL.D., Quebec	10 00
James Armour, B.A., Perth	10 00
Hon. G. A. Kirkpatrick, Toronto.....	10 00
A. H. Ireland, Toronto	9 00
Rev. Robert C. H. Sinclair, B.A., Oliver's Ferry.....	7 00
Rev. J. A. Leitch, B.A., Watson's Corners	5 00
Rev. J. C. Smith, B.D., Guelph	5 00
Rev. Archibald Currie, M.A., Sonya	5 00
Rev. R. Chambers, D.D., Bardezag, Turkey in Asia.....	5 00
Prof. A. P. Knight, M.D., Kingston	5 00
G. L. B. Fraser, B.A., Ottawa.....	5 00
M. Flanagan, Kingston	5 00
Richard J. Clark, M.A., Victoria, B.C.....	5 00
S. D. Pope, B.A., LL.D., Victoria, B.C.....	5 00
W. T. McClement, M.A., Chicago, Ill.....	5 00
Rev. J. E. Duclos, B.A., Valleyfield, P.Q.....	5 00
Rev. H. E. Horsey, M.A., Abbotsford, P.Q.....	5 00
A. F. Riddell, Montreal.....	5 00
Miss M. J. Thompson, B.A., Almonte	5 00
Rev. John Hay, B.D., Cobourg	5 00
Rev. Alex. Campbell, B.A., Broadview, N.W.T.....	5 00
Rev. Dr. Wardrope, Guelph.....	5 00
A. W. Playfair, M.A., Upper Canada College	5 00
Rev. D. R. Drummond, M.A., St. Thomas	5 00
Andrew Bell, C.E., Almonte.....	5 00
A. N. Young, Almonte	5 00
R. McPherson, Kingston.....	5 00
J. Gillies, Braeside.....	5 00

Mrs. John Macpherson, Kingston.....	\$5 00
"A Friend," Kingston.....	5 00
Rev. Alfred Fitzpatrick, B.A., Cape Vincent.....	4 00
Rev. E. D. McLaren, B.D., Victoria, B. C.....	3 00
P. A. Macdonald, B.A., Winnipeg, Man.....	5 00
W. J. Patterson, M.A., Carleton Place.....	5 00
Rev. D. Strachan, Rockwood.....	2 00
Rev. J. W. Muirhead, B.A. Whitewood, N. W. T...	2 00
A "Friend," Kingston.....	2 00
J. M. Strange, Kingston.....	2 00
Dr. Gibson, Belleville.....	2 00
Mrs. Drummond, Kingston.....	1 00
F. Welch, Kingston.....	1 00
Reginald Instant, Emerald.....	1 00

The Principal or the Treasurer, or Rev. J. Cumberland, M.A., Stella, Convener of the Committee, will be glad to receive subscriptions or suggestions regarding the fund.

RETIREMENT OF THE REGISTRAR.

The Rev. George Bell, LL.D., who for some years discharged the duties of Librarian and Registrar, and, since the appointment of Professor Shortt as Librarian, the greatly increased work of the Registrarship, resigned his position last autumn, the resignation to take effect to-day. The estimation in which he was held by the staff and the students was shown in Convocation Hall yesterday, when Professor Marshall in their name presented to him his portrait to be a memorial to successive generations of the first student of Queen's, and one who has always been worthy of the "grand old name of gentleman," and when at the same time the Alma Mater Society presented him with an address which fitly expressed the sentiments of every member of the University. In all his years of office Dr. Bell never failed to do his duty or to preserve a winning dignity and a courtesy, patience and readiness to oblige which made the student on his arrival at Queen's feel that he was dealing not with an official, but with a friend. Although unwilling, because of advancing years, to continue his arduous labours, his connection with Queen's should not be entirely broken, and I would take the liberty of suggesting that, at the first opportunity that presents itself, he might well be elected to the University Council, or to the Board of Trustees of which he was a valued member before his appointment to office.

THE FACULTY OF PRACTICAL SCIENCE.

Extracts from the Dean's report to the University Council are appended, and these give details of the work done during the year, of the special needs of the new Faculty, and of the erection last summer of workshops, on the basis authorized by the Board at its annual meeting. It is impossible to exaggerate the debt that the University owes to Professor Dupuis for his untiring labours to make the new Faculty a success. He has been ably seconded by Professor R. Carr-Harris, C.E., who continues to lecture without salary, and by

Mr. Norman R. Carmichael, M.A., who has taken charge of the classes on Electrical Engineering and the thermodynamics of the steam engine. Students of Mining Engineering register and take their course in the School of Mining, the buildings of which are contiguous to the workshops in Practical Science. The erection and equipment of these shops, combined with a gymnasium, cost over \$3,500. Towards this amount the following subscriptions, amounting to \$500, have been received :

Principal Grant, Kingston	\$100 00
W. F. Nickle, B.A., "	100 00
John Manuel, Ottawa.....	100 00
T. Ahearn "	50 00
Warren Y. Soper "	50 00
Alexander Fraser "	50 00

The ladies of Kingston have resolved to raise the remaining \$3,000, and they expect to have half the amount in hand before the end of the month. They deserve assistance from every one interested either in the new Faculty or in the physical well-being of the students.

It is with a sentiment of something like wonder that I chronicle the erection of this building, which serves in a modest way twin needs of so much importance. It seems to have sprung into existence without effort, and to have been maintained without expense; but every one understands that there must have been effort, and that annual expenditure is required. That the ladies will succeed in their undertaking I have little or no doubt. In the meanwhile, the interest is paid by the students generally, and the fees in Practical Science meet the annual charges.

THE FACULTY OF MEDICINE.

The departments of Physiology and Bacteriology, to which Professors Knight and W. T. Connell give their whole time, have become so important that more room is required by the Professors, especially for experimentation and research. The Faculty is also convinced that a great step in advance would be made if a separate building were erected for dissecting purposes and the teaching of Anatomy, and it is considering how to do this, and thus at the same time provide additional room for the other subjects. The spirit of the Faculty is highly to be commended. Against heavy odds they have built up an excellent school of medicine, and they are determined to do all in their power to make further improvements, and, indeed, to let no year pass without a forward movement. The Fenwick operating theatre is perfect of its kind, and the Doran building for gynæcology is proving, under Dr. Garrett's management, a great blessing to women. The advantages of having a specialist in Pathology and Bacteriology, like Dr. Connell, are shared by the whole medical profession in the city and neighbourhood, as well as by the college, and also by the Dairy School and the Experimental Farm. I, therefore, cordially commend to the friends of the University the suggestion of providing an additional building, with the objects out-

lined above. The medical graduates, in particular, are respectfully invited to be up and doing.

THE FACULTY OF THEOLOGY.

Professor Macnaughton's lectures on Early Church History were much appreciated. So was Rev. Dr. Thompson's short course on Pastoral Theology, and Rev. Mr. Connery's on Elocution, both given freely, out of a spirit of generosity and of love for Queen's, for which we are most grateful. Pending the appointment of a much needed additional Professor, I would recommend that Professor Macnaughton and Professor Glover be "Hugh Waddell Lecturers on Church History" during the ensuing session, the first to deal specially with the influence of Alexandria on the Early Church, and the latter with the Early Apologists.

The Conference of the Theological Alumni last February was the most successful yet held. Dr. Watson has been re-appointed to the Chancellor's lectureship, and his course is the backbone of the Conference. His subject next year is "Christianity in relation to Modern Thought," and the text-book recommended to the Alumni is the second edition of *Christianity and Idealism*, to be issued by the Macmillan Company in September. The programme for next February has been printed in the QUEEN'S QUARTERLY of April last, to give time to all who intend to be present to prepare themselves on at least one of the topics set down for discussion.

The attendance in this Faculty was greater last session than in any previous session of the University's life. Rev. Dr. Smith, the General Secretary, is now giving his whole time to raising the endowment needed for an additional chair. It ought to be possible to take action, at the latest, in a year from this time. Such an addition to a Faculty which is recognized by all its friends as the crown of the University is indispensable. Nothing but hard necessity has caused it to be so long delayed.

FINANCE.

The Board last year made several economies to prevent expenditure exceeding revenue; and, as there was still the prospect of a deficit, I undertook to see that it was met. An appeal to a number of our friends resulted in an increased contribution to the General Assembly's College Fund, and in the following list of subscriptions, the donors of which have allowed their gifts to be converted into a nucleus to provide against deficit in the immediate future,—as the accounts for the year ending April 2nd, 1897, showed a small surplus instead of a shortage:

Mrs. Field, Winnipeg.....	\$25 00
Rev. James Rollins, B.A., Elmvale.....	10 00
Rev. R. C. H. Sinclair, B.A., Oliver's Ferry.....	5 00
Rev. Rod'k. McKay, Hemmingford, Que.....	3 00
Rev. John Fraser, B.A., English River, C. B.....	5 00
W. Clyde, B.A., Petrolia.....	5 00
Rev. Orr Bennett, B.A., Hawkesbury.....	5 00
Rev. E. J. Rattee, Noel, N. S.....	10 00

Rev. Alfred Fitzpatrick, Cape Vincent.....	\$20 00
T. A. Brough, B.A., Owen Sound.....	10 00
Miss Maggie D. Allen, B.A., Halifax, N. S.....	4 00
Rev. James Wilson, Perth.....	10 00
G. L. B. Fraser, B.A., Ottawa.....	5 00
Rev. Hugh R. Grant, Trenton, N. S.....	10 00
Rev. Neil McPherson, B.D., Hamilton.....	5 00
Rev. A. McColl, D.D., Chatham.....	20 00
Rev. R. J. Hutcheon, Almonte.....	5 00
P. C. McGregor, Almonte.....	5 00
Rev. Robert Campbell, D.D., Montreal.....	5 00
Rev. Dr. Watson, Beaverton.....	50 00
English River, C. B., Congregation.....	5 00
Rev. John McNeil, Cowall.....	7 00
Rev. Dr. Gray, Orillia	2 00
Cobourg Bible Class	10 00
Rev. John Hay, B.D., Cobourg	2 50
George Mitchell, B.A., Cobourg.....	2 50
Rev. D. O. McArthur, Melrose.....	10 00
Dr. H. W. Day, Belleville.....	25 00
Rev. John McMillan, B.D., Halifax.....	10 00
Richard Lees, M.A., St. Thomas.....	5 00
Rev. Dr. A. A. McKenzie, St. Stephen, N. B.....	20 00
D. V. Sinclair, Belleville.....	25 00
Principal Grant.....	50 00
Rev. J. M. Kellock, M.A., Morewood	10 00

The fact that there was no deficit this year is satisfactory, and the main reason for the fact, *viz.*, an increase in the amount received from fees, is even more satisfactory. I anticipate a steady increase of revenue from this source, which may balance the loss accruing from the lower rates of interest which our investments bring, and the steadily lowering rates which we must expect in the future.

The Treasurer has handed me the following statement of special subscriptions or amounts received by him during the past year:—

Hugh Waddell, Peterborough, for <i>interim</i> lecture-ships on Church History	\$ 250 00
Hon. Senator Gowan, LL.D. (additional)	400 00
(The fund for endowing the Sir John A. Macdonald Chair in Political Science, to which Senator Gowan has repeatedly contributed, now amounts to \$3,026.80).	
Doran Bequest (now \$16,500)	2,500 00
Various Subscribers in Ottawa towards Endowment Music Scholarship	475 00

CONCLUSION.

I submit herewith extracts from the Reports of the Treasurer, the Dean of the Faculty of Practical Science, the Librarian, the Curator of the Museum, and the Professors of Botany, Physics and Animal Biology.

G. M. GRANT, *Principal.*

Statement of Revenue and Expenditure for year ending April 2nd, 1897.

REVENUE.	
Temporalities Board	\$ 2,000 00
The Professors, Beneficiaries of Temporalities Board	1,050 00
Kingston Observatory, grant from Government	500 00
Rent of Carruthers' Hall	1,250 00
Rent of Grounds	110 00
School of Mining, &c., for Lecturer on Mechanism	500 00
Chancellor's Lectureship	250 00
Hugh Waddell Lectureship on Church History	250 00
Robert Waddell Tutorship in Physics	150 00
John Roberts Allan Chair of Botany	150 00
Fees	9,410 93
Interest on Mortgages and other Securities	18,319 30
General Assembly's College Fund--	
Church Agent's Balance, 1895-96	\$ 210 00
" " on account of 1896-97	1,794 67
Congregations contributing directly	1,103 20
Receipts for Scholarships	3,107 87
Interest on Jubilee Fund subscriptions	2,077 04
Balance Deficiency	4,382 29
	8,955 17
	\$52,462 60

EXPENDITURE.	
Deficiency 1895-6	\$9,015 14
Salaries--Professors and Lecturers in Theology	7,636 00
" Professors and Tutors in Arts	24,486 50
" Other Officers	2,309 25
Chancellor's Lectureship	250 00
Insurance	90 00
Library, Laboratories, Museum, &c.	2,683 12
Practical Science Department	448 56
Taxes, Repairs and Grounds	381 14
Scholarship Account	2,077 04
Travelling Expenses	109 35
Advertising, Printing and Stationery	1,807 62
Fuel, Water, Gas and Electricity	501 09
Contingencies	167 79
Contingent Account	500 00
	\$52,462 60

QUEEN'S COLLEGE, KINGSTON, 24th April, 1897.

J. B. McIVER,
Treasurer.

Examined and found correct.

J. E. CLARK,
D. CALLAGHAN, } *Auditors.*

REPORT ON FACULTY OF PRACTICAL SCIENCE.

Since my last report I have had a very busy year. The Board decided to erect a building which would serve the double purpose of providing for a gymnasium and a mechanical laboratory.

During the whole of the summer my time was taken up in superintending the new building, for as we resolved, in order to save money, to dispense with architects and contracts, I had to act as architect and contractor.

As a result of the limited means at our disposal, the building is very plain. But it has a good stone foundation, and is arranged for being veneered with brick.

In my own opinion, a good wooden building, on account of its elasticity, forms the best of workshops.

The building is 76 feet by 32, and is lined throughout with Rathbun terra-cotta studding blocks, and plastered in a single coat of sand finish; and to show the effectiveness of this arrangement, I may state that to keep this whole building, gymnasium included, and containing about 90,000 cubic feet of air space, comfortably heated during the whole of the past winter, has required only seven tons of coal and a cord of soft wood.

The building consists of three stories. The basement is $8\frac{1}{2}$ feet high, and is concreted throughout. A partition separates it into two parts. The smaller part contains the furnace and fuel room, and some mechanical arrangements, and it belongs to the mechanical laboratories. The larger part is in connection with the gymnasium, and contains students' lockers, a water heater, two shower baths and a closet, and ample space is available for a bowling alley.

The ground story of the building is wholly given up to the proper work of the Mechanical department. This flat contains four large rooms and a small storeroom. Of these rooms one is a carpenter's shop, and is furnished with three workbenches, and necessary tools for doing general work in carpentry.

Another room is set apart for wood-turning and finer kinds of wood-working. This contains two wood lathes and a small gear cutting machine for cutting wood and brass gear-wheels. And it is proposed to add to these a wood-carving table and a fret-work machine.

A third room is given to metal working. This room contains, besides workbenches and numerous small tools, a lathe by Muir, of Manchester, a $4\frac{1}{2}$ inch cutting Barnes lathe; a $\frac{1}{2}$ h. p. motor; a gear-cutter for iron wheels; a 20-inch drilling machine, and several smaller machines. Pieces of machinery made in the shops are added to this department, from time to time, but a shaping machine is sorely needed.

The fourth and last room is intended as a museum and model room, as well as a drawing room and a library. This room contains some beautiful models of mechanical motions, the work of Mr. McLennan, of Lindsay.

The upper story is wholly given to gymnasium purposes. The blacksmith shop stands between the main building and the mining laboratory, and is supplied with an anvil, tongs, and a few necessary tools, and a forge presented to us by the Buffalo Portable Forge Co. Thirteen students were in attendance during the session. They required a great deal of attention and oversight, and a great deal of thought and invention in order to devise work for them. As these things called heavily upon my time, I could not possibly have responded to the demands, had it not been for the aid of two students, Mr. Jackson and Mr. Anglin.

During the session we have added to our stock of appliances, partly by gift and partly by manufacture.

Mr. Barnard, of the Hart Emery-wheel Co., of Hamilton, gave us a valuable emery-grinder, consisting of six emery wheels, beautifully mounted and supplied with all the accessories of counter-shaft, etc.

John Bertram & Sons, the celebrated machine-makers, of Dundas, gave us a 20-in. drilling machine, new and complete in all its parts, and forming a valuable addition to our list of appliances.

As respects our own manufactures, we are necessarily as yet compelled to make various tools with which to make other tools, or to do required work; for we prefer making everything that we can make to buying.

The consequence is that our work does not bulk so largely in show as it does in usefulness and value. We have worked along a variety of lines, and have either finished or got far under way a number of useful machines. A list of these may not be out of place here:—

A reversible boring head, capable of boring cylinders 9 in. long and from $2\frac{1}{2}$ to 5 in. diameter; two boring bars for boring and finishing smaller holes; two sets of iron shift pulleys; four split pulleys, wood (in action); a 7-inch gear-cutting engine for iron and brass; a $\frac{1}{2}$ h. p. electro-motor, with resistance coils; four mechanical models; two carpenters' benches; two step-ladders; two saw-horses; a 6-in. wall-drilling machine, not quite completed; one gig-saw; one drawing-table; various small tools, hangers, shafting, &c.

Mr. Carmichael designed the motor; the most of the other things were designed by myself. The machines which we most need at present, and which we cannot hope to make, are a shaping machine, which will cost something less than \$300, and a No. 7 Barnes lathe, or an equivalent one costing about \$200.

We are trying to do good work in the mechanical department, although working under disadvantages arising from limited resources. And, with proper encouragement from the public, and from friends of the University who believe in this new departure, we have no fear for the success of the undertaking.

Besides my regular work as Professor of Mathematics in the University, I have given two sets of lectures on astronomy, one descriptive and the other practical; a set of lectures on the principles of mechanism, and in the latter part of the session as many lectures as I could manage upon the mechanism of the steam engine.

My assistant, Mr. Carmichael, besides doing a part of the mathematical work, has given courses of lectures on electricity and on thermodynamics.

N. F. DUPUIS, *Dean*.

THE LIBRARY.

To the Board of Trustees of Queen's University:

GENTLEMEN,—During the past year 1322 volumes have been added to the Library, obtained from the following sources:—

Purchased, 908; Donated, 308; Bound Periodicals and Pamphlets, 106; making a total of 1,322.

Abstract of financial statement from Auditors' Report—

Total Expenditure	\$1,872 85
Total Receipts	1,657 00
Deficit	\$ 215 85

Last year's deficit of \$538.33 has thus been reduced.

Included in the receipts is a donation of \$20 from Mr. Glashan, of Ottawa, his fee for conducting the University's local examinations at Ottawa.

During the past year the work of preparing the card catalogue has been continued, and is now almost completed. Nearly 40,000 cards have been prepared and placed in the case. About one-fourth of these have been devoted to the more important pamphlets and the leading articles in the standard periodicals. By this means a great deal of quite recent and valuable information, hitherto almost inaccessible, has been placed at the convenience of the students. During the past session 2,224 volumes have been consulted by the students.

The following is a statement of the expenditure during the past year in connection with the catalogue:

Balance on hand as per last Report	\$ 3 09
Received from the Treasurer	200 00
Total receipts	\$203 09
Thomas McAuley, 20,000 cards	\$ 46 50
J. S. Shortt, assistance in preparing index titles ..	56 00
Miss S. Gibson, type-writing	69 50
Total expenditure	172 00
Balance on hand	\$31 09

This will nearly serve to complete the work, and the expense of cataloguing the annual additions may be included in the ordinary library accounts for each year.

ADAM SHORTT, *Librarian*.

THE MUSEUM.

During the past year no additions have been made to the Zoological, Palæontological or Mineralogical collections. All specimens belonging to the two latter departments are now sent to the School of Mining and Agriculture. Specimens,

showing different grades of manufactured asbestos, were received from the Geological Museum at Ottawa, through the kindness of the Director.

When visiting Europe last summer I took with me between 1100 and 1200 specimens of our native plants, for which I secured exchanges at Oxford and Cambridge. Among these were a large collection representing the Flora of the British Islands; one from Anotobia, with a few specimens from different parts of Europe; one from Australia, and one from Tasmania. In addition to these, two packages have been received from the Provincial Herbarium of Natal, South Africa; one very fine collection of nearly 500 species from the National Herbarium at Washington, representing the Flora of Idaho; and one from the Biltmore Herbarium in South Carolina. Dr. A. T. Drummond has also furnished us with a large number of specimens of Lichens and Algæ, in addition to those he presented to the Museum last year.

The mounting and arranging of the specimens now on hand will occupy all the time I can devote to the work during the summer vacation. The Herbarium is now beginning to assume respectable proportions, but collections from the West Indies and the Pacific coast would greatly increase its value. Collections of Cryptogamous plants, especially Fungi, of which we have very few representatives, are very desirable.

JAMES FOWLER, *Curator.*

REPORT ON BOTANY CLASSES.

The summer medical class in Botany was attended by eight students, all of whom passed a most creditable examination.

During the winter session the number of students registered was: Junior Class, 29; First Year Honours, 14; Second Year Honours, 7; making a total of 50.

It is worthy of note that all these, with, perhaps, one or two exceptions, are teachers preparing for the position of Specialists in Science.

Last year I called attention to the fact that our supply of plants for the classes engaged in practical work was nearly exhausted. The students were asked to bring collections for the winter's work, but only one bundle was received, collected for the Gowan prize. J. Fletcher, LL.D., kindly furnished a couple of bundles, which were very helpful. Even with this help, it was necessary to confine the examination, in the Honour Classes, to half the number of specimens formerly used. In the Junior Class the difficulty was still greater, rendering it necessary to divide the class into two parts, which met on alternate days.

As each student in the Junior Class is required to analyse 50 plants, and each one in the First Year Honours 300, a large number of specimens is necessary. The Second Year Honour Class also requires collections of Grasses and Cryptogams, including material for microscopic work. In the United States excursion parties of students, accompanied by one or two Professors, or their assistants, are organized, and some special region is selected as the field of their operations. The localities chosen vary from year to year. Valuable additions are thus made to the Herbarium, and materials for the session's work provided. We cannot at present adopt this plan. Allow me to say that if no better arrangement can be made, I will endeavour to spend a few weeks collecting.

Last year a grant of \$150 for apparatus and \$50 for expenses was made by the Board. A number of articles were obtained in Paris, which, on application to the Department of Customs at Ottawa, were admitted duty free, thus leaving a balance on hand of \$23.35.

JAMES FOWLER, *Professor.*

PHYSICS.

Herewith are accounts of the expenditure during the past session and of balance in hand. You will observe that Prof. Fowler got \$200, and Mr. W. C. Baker \$100. Mr. Carmichael drew \$139 for apparatus in electrical engineering. It was a much needed improvement, having Mr. Baker all day in the laboratory to attend to laboratory students. There were 21 students who paid \$1 each for tickets and worked in the laboratory. I enclose Mr. Baker's detailed report of work done there. The rooms in the basement added to the Physics Department on the removal of Prof. Dupuis' mechanical engineering laboratory to more com-

QUEEN'S QUARTERLY.

modious quarters have been most desirable. An excellent room for developing photographs, a class-room and experimenting room for the students in electrical engineering, and a room for advanced experiments in Physics, have been made out of them, and well used during the past session. We are also already feeling the advantage of having engineering work-shops, where apparatus can be made and repaired by the students.

Receipts.

Balance.....	\$527 76
From Treasurer	382 00
Interest	5 83

\$915 59

Expenditure.

Prof. Fowler	\$200 00
Mr. Baker.....	100 00
Mr. Carmichael	139 00
Apparatus, &c	110 14
Balance in hand.....	366 45

\$915 59

D. H. MARSHALL, *Professor.*

REPORT ON ANIMAL BIOLOGY.

During the winter session the attendance in the Pass Class in Arts was 29; in the First Honours Class, 13; and in the Second Honours Class, 6. The Exramurals numbered 5. In the first year in medicine the attendance was 23; in the second year, 37, but eight of these were third or fourth year students, their attendance being voluntary. In histology the number was 42. The attendance of veterinary students was, in the first year, 8; in the second year, 8.

The following is an abstract statement of the receipts and disbursements in connection with our Physiological and Histological laboratory:

Receipts.

Laboratory Fees—	} Medical Students	\$104 00	
		Arts	250 00
		Advanced by me.....	42 18

\$396 18

Disbursements.

Balance due.....	\$ 6 94
Wages, Laboratory Boy	56 00
Apparatus, &c.....	280 68
Dissecting material, &c	52 56

\$396 18

During the past five years we have been slowly adding to our apparatus and facilities for teaching Physiology and Histology. It was in these two departments that the wants of the students—especially those in medicine—were most pressing. The fact that, at first, I had four students in medicine in my classes for one in arts pointed out that the duty nearest at hand was to provide the best possible facilities for the study of Physiology and Histology.

While our equipment for teaching Physiology and Histology is still far from perfect, yet it is so much in advance of our facilities for teaching Comparative Anatomy and the natural history of animals, that I must for the next year or two devote more attention to these subjects, and to procuring additions to our reference library. The necessity for this becomes more apparent when it is considered, (1) that the number of students in Arts now taking Animal Biology (46) nearly equals that in Medicine, viz., 52; (2) that the attendance of 16 veterinary students during the past session entails the obligation of providing them with better instruction

in the comparative anatomy of the domesticated animals; (3) that it is desirable to offer facilities to our Honour graduates to remain and undertake research work.

Our students in Honour Biology are chiefly those who are studying to qualify themselves as Science specialists in the high schools. Keeping their future needs in view, it becomes necessary to develop the museum side of our work. We need not discuss the question: "Should Zoology be taught in our high schools?" The subject is on the programme, and it is our duty to fit our graduates to teach it. Now the aspects of the subject which receive prominence in the high schools are the classificatory and natural history ones, and hence the necessity to add to the number of our charts, models, skeletons and specimens collected in the museum. The excellent set of charts, purchased a few years ago by Rev. Prof. Fowler, should be completed. The purchase of models was recommended in my previous reports. As regards skeletons, some of them should be provided by the School of Mining and Agriculture, as skeletons of all the domesticated animals are necessary for teaching Comparative Anatomy to veterinary students.

As regards museum specimens, it would be a convenience if the Zoological specimens in the present museum could be transferred to the building in which the teaching is done. Good organization in biological teaching requires a building in which all branches of Animal Biology, including human anatomy, should be taught.

As regards the wants of those of our past graduates in Biology, who wish to devote themselves to research work, the crying need is for works of reference. Nothing can be done in research until the literature of the subject has been mastered. The practice amongst all biological workers now-a-days when publishing original matter is to give a historical synopsis of previous work up to date. General text-books are of no use for this purpose. A considerable list of American, British, German and French magazines must, therefore, be added to our library.

During the next two months I shall, if called on, furnish a list of charts, skeletons, museum specimens, models and reference magazines necessary for meeting the more immediate wants of my department. The cost may be estimated roughly at \$2,000.

I cannot close my report without acknowledging the valuable contributions of marine fauna which my teaching museum specimens received last summer from Dr. E. W. Fillmore, of Spencer's Island, Nova Scotia, from Mr. Nelson Goodwin, of Baie Verte, N.B., and from Prof. Goodwin, while spending his vacation in New Brunswick last summer. All the specimens were unusually well preserved, and have been much helpful in teaching during the past winter.

Mr. Wm. Moffatt, M.A., acted as senior demonstrator, and Mr. A. R. Williams, M.A., as junior demonstrator. Each did his work very satisfactorily.

A. P. KNIGHT, *Professor.*

CURRENT EVENTS.

THE war between Turkey and Greece is already ancient history, to all except to the poor Greeks. They rushed on their fate when—after an intervention as wise as it was heroic—they refused to accept the promise of the Powers to secure complete self-government for Crete, and refused to withdraw Vassos and his two thousand. Their wisdom was turned into folly at the instigation of bluff. They must have Crete for themselves, and that without delay. The Athens mob clamoured for war as if for a pic-nic, or as if they were stronger and more magnanimous than all Europe *plus* Turkey; and the ministry risked war rather than risk their popularity, and staked the existence of the kingdom on the intervention of Powers whose urgent advice they were contemptuously rejecting. To make the national fit of "swelled head" complete, secret political societies—the curse of every free country in which they exist—undertook to play at the invasion of Macedonia, just as if no responsible government existed, and as if the Turk were a kitten instead of a tiger. The Greeks are, as in the days of Cleon and Demosthenes, a strange mixture; but our debt to them is too great to permit us to utter reproaches in their hour of defeat and humiliation. Their untrained militia fought well against heavy odds, and preserved their *morale* after repeated retreats. They stampeded to Larissa, but the history of every other army in similar circumstances supplies abundant parallels.

The attitude of the British Government has been and is such that the opposition cannot score a point against it or suggest a sane alternative policy, while it gives hope that the Turk will be forced to drop the prey the war enabled him to seize. Sir Philip Currie has told him plainly that the example of Germany, in keeping Alsace and Lorraine as the lawful prize of success, is no precedent for him. The Turk, having forfeited his right to be considered civilized, cannot be allowed to extend his rule over any more of Europe than he has held for centuries. Should he submit to this hard but just law, a period of grace may still be given him. Should he harden his heart, his end will be as sudden and overwhelming as Pharaoh's, no matter what the War Lord of Germany may say.

The celebrations of the great Jubilee passed off without a single hitch or cause for regret. So far as concerns the Queen herself, they were the wide world's tribute to the superiority of goodness above everything else which the world recognizes; though it may be added

The Diamond
Jubilee.

that goodness rises to the height of genius, when it takes such perfect form as Her morning message to the peoples of Her realm. So far as concerns the Empire, they mark an epoch. Recoil might be anticipated, according to the maxims that extremes meet; and that violent expressions of feeling provoke their opposite. But, as there has been no violence, there will be no recoil. Deep feeling, universally entertained, though existing in an unconscious or semi-conscious condition, received calm and fitting expression. The feeling thereby became clearer and stronger. All proposals to break up "that mysterious unity known as the British Empire" have consequently received their quietus; and public men will govern themselves accordingly. We are one people, in history and heart, in law and life, as well as in allegiance. When that is so, it cannot be beyond the power of constructive statesmanship to make us an effective political unity for common well-being and defence. We have a mission on earth, as truly as ancient Israel had; and when the United States raise their eyes a little higher than the level of the Monroe doctrine—which should rather be called by the name of Canning and which was very good doctrine for its day—they will claim a share in the glorious mission of establishing freedom, righteousness and peace upon earth; and their claim will be conceded without grudging. Meanwhile, Canada has to set her own house in order and do her own work, instead of indulging in tall talk about the shortcomings of her neighbour. We cannot remain content with a national life less full and vital than that enjoyed by our fellow-subjects in Britain or our neighbours across the line; for individuality withers when national life is incomplete. At present we are free at home, but dependents abroad. Mr. Laurier says that we are a nation. How can that be so, except figuratively or potentially, as long as we do not share in the supreme issues of nationhood? That Mr. Laurier recognizes this is evident from the general tenor of his language.

Taking his speeches in Great Britain as a whole, they mark the highest point he has reached as a statesman. Mr. Laurier in the Old Country. The manner was perfect, dignified and courteous; the touch light, as it always should be when high-bred men are addressed; while the thought was sincere, suggestive and suited to the time. Some of his supporters are disappointed at his accepting a title; but to refuse honours from the Queen on such an occasion would have shown pride akin to contempt. It was more generous to accept what was graciously offered; and that being so, no more need be said on the subject. He outlined the political and commercial situation, so far as the relations of Canada to the Empire are concerned, with due reticence and firmness. The tariff preference to Britain is given

from gratitude and on its merits ; and on the same good business grounds, almost to the same extent, a similar preference might well be given her by the United States ; but as Canadians are not prepared as yet to deal similarly with nations who erect high tariff walls against them, the whole situation will have to be re-considered, if it be decided that the Belgian and Zollverein treaties limit our freedom, and that those treaties are to be upheld in their entirety. As to the political situation, he admitted—and he must have made the admission reluctantly—that Canadians do not yet feel a grievance. When they do, he believes that the grievance can be redressed by means of the old-fashioned, well-trying principle of representation.

Our new Government shows that it has grasped the situation of the country. If the McKinley Bill and the Dingley Bill were not enough to prove to all men that our neighbours are wedded to their idols, their prompt rejection of our latest overtures for freer commercial intercourse settled the question, so far as Canada is concerned. The Government had to face, "not a theory but a condition." A reduction of the tariff on British products, (coal—strange to say—excepted), the acceptance of the fast line favoured by their predecessors—at a less subsidy and with changes which promise well, the deepening of the St. Lawrence Canal system, so as to give us within two years a maximum of fourteen feet at low water, all the way from the sea to the head of the lakes, provision for cold storage, and the bringing of the Intercolonial to the commercial capital of Canada, make up a well-conceived business policy to meet the condition. Details should be scrutinized, but the scheme as a whole is sound. We must increase our trade with Britain. We have no choice. The commercial unity of the Empire, gratitude, affection, self-respect, common sense, and our own interests, all point in the same direction, and the more vigorously we walk along that broad road the better. No detail of the scheme is so urgent as the deepening of the canals. What is the use of wasting money on Trent Valley and half a dozen other proposed canal systems, less or more in the moon, when, after more than half a century's vast expenditures, our great natural St. Lawrence route has only seven feet of water for transportation? The depth of a canal system is the depth of the shallowest canal of the series. We have 14 feet at one end—the Lachine—and 14 feet at the other end—the Welland, and in the middle no more than we had quarter of a century ago! Is that either business or statesmanship? Mr. Blair has grasped the situation, so far as plan is concerned. Now, let him "perform the doing of it" in the specified time, and then we shall know that a man is at

the helm. He has promised to do the work, the country has given him the money, and time is of the essence of the contract. Any one could do it in five years. He says that it shall be done in two. Let him show that a Government can keep its word, as well as the private company that built our railway to the Pacific.

The Drummond Counties
Railway and the entrance
to Montreal.

Whether the Government has taking the wisest plan in extending the Intercolonial to Montreal, or whether contractors and political friends have milked the Government in arranging "the deal," are questions that must be investigated. Why the opposition in the Commons did not insist on investigation, instead of leaving it to the Senate, is not quite clear. The Senate has no moral weight, and therefore even when it is doing the right thing, its action does not command respect. Sooner or later the necessity for its existence will be seriously questioned, and when that day comes its end is near. We are told that its position is impregnable, but there is no such thing as an impregnable fortress. Let a government pronounce against it and go to the country on the issue. The Government would be sustained enthusiastically, and then what British government would refuse an amendment to the B.N.A. Act, even to the extent of wiping the Senate out of existence? It is practically impossible, except in connection with a civil war, to amend the constitution of the United States, whereas there is no such insuperable difficulty in the case of our constitution. Had the Senate taken action, when a Conservative minister announced that he had accepted from a railway contractor \$20,000 for the party purse, and that he would do it again if he got the chance, it would have vindicated its right to exist, and no one would have questioned its right to inquire into what—according to the naive confession of the Minister of Public Works—seems like a transaction of the same class. Not having done so, its interference now—if the Government is innocent—is injurious to the country, and, if the Government is guilty, actually furnishes it with a good plea for drawing a red herring across the scent.

Once the charges were made and interesting revelations given to the Commons about the purchase of *La Patrie*, investigation had to come. Political campaigns may not be made "with prayers," but we want to know if they are still being made with money stolen from our pockets. The Government need not fear the Senate, but it dare not disregard the protests of veteran friends like Scriver, Bain and McMullen. What one of these speaks out in meeting is echoed, with unparliamentary variations, by thousands wherever voters most do congregate—Government by corruption must cease, no matter who may have to be sacrificed or how many coalitions may be required. G.

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