Technical and Bibliographic Notes / Notes techniques et bibliographiques

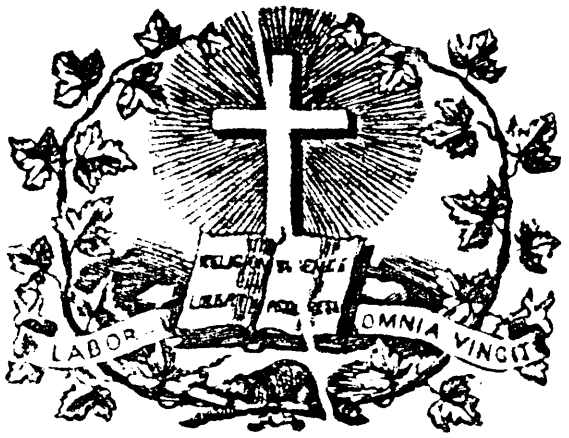
The Institute has attempted to obtain the best original copy available for scanning. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of scanning are checked below.

L'Institut a numérisé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de numérisation sont indiqués ci-dessous.

- ☐ Coloured covers / Couverture de couleur
- ☐ Covers damaged / Couverture endommagée
- ☐ Covers restored and/or laminated / Couverture restaurée et/ou pelliculée
- ☐ Cover title missing / Le titre de couverture manque
- ☐ Coloured maps / Cartes géographiques en couleur
- ☐ Coloured ink (i.e. other than blue or black) / Encre de couleur (i.e. autre que bleue ou noire)
- ☐ Coloured plates and/or illustrations / Planches et/ou illustrations en couleur
- ☑ Bound with other material / Relié avec d'autres documents
- ☐ Only edition available / Seule édition disponible
- ☑ Tight binding may cause shadows or distortion along interior margin / La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure.

- ☐ Coloured pages / Pages de couleur
- ☐ Pages damaged / Pages endommagées
- ☐ Pages restored and/or laminated / Pages restaurées et/ou pelliculées
- ☑ Pages discoloured, stained or foxed/ Pages décolorées, tachetées ou piquées
- ☐ Pages detached / Pages détachées
- ☑ Showthrough / Transparence
- ☑ Quality of print varies / Qualité inégale de l'impression
- ☐ Includes supplementary materials / Comprend du matériel supplémentaire
- ☐ Blank leaves added during restorations may appear within the text. Whenever possible, these have been omitted from scanning / Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été numérisées.

☑ Additional comments / Commentaires supplémentaires: Continuous pagination.



THE JOURNAL OF EDUCATION

Devoted to Education, Literature, Science, and the Arts.

Volume XIV. Quebec, Province of Quebec, May, 1870. No. 5.

TABLE OF CONTENTS

The Teaching of Science.

(Concluded from our last.)

If there be any lesson which is taught us by Science it is this—that to be helped we must help ourselves; and that which is a meaningless accident to some, is the material of a discovery to those from whose eyes previous thought has removed the scales. Whence, not only before but during the lectures too, it is well to recommend some reading, and continual observations and rude experiments on points connected therewith; for one thing done is worth a thousand heard; and there is a great solver of many difficulties and a great guide to truth in something looked at and investigated for ourselves, something experimental, upon which to base our argument. For there is no success in Science—nay, and I would fancy there is no success in anything—which is not based upon such a procedure. And it is a method which the world stands vastly in need of learning just now; for, though we boast of ours as being a very scientific age, the multitude therein are going under cover of the character of a few. But among the greater part of mankind there is a great evil, the evil of speculation unbridled by experiment; for experiment is the great tamer of wild theory. But hypothetical experiments may be bandied about easily, and hypothesis is grandly favorable to a pre-conception. Hence it is that many fair wits in the world, full of speculation and full of power and full of leisure, are all astray as to their knowledge of things, and tossed on the waves of their own theories, from the lack of that "fountain of the rivers of our arts," real experiment, the habit of which education is at present too little given to foster, and without which history tells us, and our own experience might show us, no question of Physical Science can be determined. It seems to me that the whole of our true knowledge of things, is founded on experiments;—that is, knowledge gained by ourselves, the immediate result of our own labor, free from preconception.

Much theory is founded on the imaginary results of hypothetical experiments; between which kind of theory and that which is founded on experiment actually made with our own hands, and seen with our own eyes, there is a difference so vast as to be comprehended in no argument, but to be learned only by the experience of that magic which there is in our recognition of the magnitude and reality of things as altogether apart from our views of them. There are two kinds of theorists. There are those who make a great frame work which is their theory, and into which they fit the facts; and there are those whose theory is like a map of the things, which are placed thereby more within the grasp of our immediate handling. For things are real and existing, and we wander among them and look; and the true spirit of Science recognizes the greatness of things as compared with our views of them, which views are fleeting, and moulded variously according to our vantage-ground.

What shall we say then of those who, destitute of the spirit of true Science, would compel a whole prospect within the limits of their theory, to those imagining the double-sided shield can only be the metal it presents? There is but one thing they want, which is humility; whence it is that there rise about us such mazes of man's conceptions, buildings of sophistries, concealed assumptions, and procrustean beds.

And lest any think that in these remarks I have sprung to too great a generality but too faintly connected with the subject in hand, it is to be remembered that it is from the lack of that which I would call the true spirit of Science that Science is sometimes objected to for the education of women. To deny to women the study of Science is a procedure which begets its own argument; as, if I were to beat a child for future crimes, the future would most likely justify that punishment, which vicious circle of action is bended round a preconception. And our

attempt to bend things to our preconceived notions of what they should be is the fundamental of many errors.

The absence of the true Scientific spirit in our day is nowhere more evident than in the popular judgment of this matter of the Education of women. There is scarcely any subject on which there is among men so much dogmatic assertion based on the imaginary results of a hypothetical experiment, and sometimes having not even so much basis as this. It has been affirmed; and not in this age and country alone, that women do not *need* to be taught Science, an immediate and direct utility being all that has been kept in view, and the true end lost sight of.

By some it is maintained that women do not need to learn Science to make them better women or abler to help and bless the world, and also that they are incapable of being scientifically educated. Those who make this double assertion are consistent, so far as their theory goes; for if their theory be true, God has done wisely in so far that He has limited the capacity to the need, as in the case of the lower animals, to whom He has given neither the need nor the capacity for a scientific education. But experiment, so far as it has gone in the education of women, has thrown these unscientific persons into an inconsistency. For they either have to prove in the face of experiment, by some arguments not yet discovered, that their position is a consistent one, or they have to keep up their position; the only other alternative being that they should accuse the Creator of women of a great folly. For when they confess (and now facts drive them to this confession) that women are very capable indeed of receiving a true scientific education, and while they at the same time declare that women do not need such scientific education, inasmuch as it will not, they say, make them better women, wives, and mothers, they traduce the wisdom of God, who gave to these women the capacity for Science, and who has adjusted every means to an end, as Science hath itself shown, and every gift to some good result to be wrought out by the use of it. And herein, they being not only theorizers on this head, but being the stronger, and therefore practically the awarders to women of such share in the means of knowledge and education as they think fit to grant to them, they are not only impugners of the loving wisdom of God, who adapted women's brains to the end which He designed for their exercise, but they create a great moral evil, and a sorrow, and a loss, by this shutting up of powers, and by this denial to women of the means of using and improving the good gifts which they have got. Truly those who will not base their theories concerning such weighty things on true experiment are continually driven to accuse God of folly, as palpably as a zoologist would who should shut up an eagle within a narrow cage for its life, and then assert that it never mounted into the air, could not do so, and did not need to do so, albeit he had found by examination that its pinions were so constructed as to lift it forward and upward with a great strength and swiftness.

Now, speaking from experience, I should readily say that there is as great an aptitude for the study of these things in the mind of a woman of average capacity as in the mind of a man of the same. For, of all things, that which is required to pursue the study of Science is that which that study doth itself generate — a certain humility of mind, which I think I have observed, at least in these matters, to be greater among women than among men—whereby they are led to hold their conclusions rather in suspense, which is the desirable state of mind for the pursuit of Science.

But there is one objection which I believe to lie near the heart of many people when it is proposed that Science should be taught to women, or at any rate when it is proposed that it should form an introduction to their education, and any large portion of it: that is, that it is a kind of study which unfits them for the duties which more particularly belong to them; it is, say they, a harsh, masculine sort of study; it is one opposed to woman's grace and woman's simplicity; to that noble character of a true woman, which is so fair a thing in the world. This is an objection to which, if it were valid, I would readily give place, very different from that unkindly one which would deny them the study of it because they do not clamor for it. Yet I do not fear but that Nature will ever vindicate herself, and the glorious character of true womanhood would rise from all the attacks of a false Science; for I have seen it rise hitherto above the lack of true Science. Nor am I so distrustful of the strength of woman's nature as to think it to be in such unstable unquilibrium. Nay, but there is in woman's nature that peculiar union of humility and of conviction which all Science is, as I would take it, God-sent into the world to teach, whereby she is led to assimilate those lessons therein to which her own heart is tuned, as in music those strings that are tuned to a certain note do vibrate when that note is sounded.

There are many women who are now saying, after but a short period of instruction in Science, that they look upon these studies as little less than divine. Whereby they mean that they have brought to their minds and hearts a degree of that help and strength, light and health, which they are accustomed to recognize as a direct gift from God, whether he sends them by means of these messages of his which are hidden up and down everywhere in the natural world, or in answer to the prayer of the humble soul without these things. They say that these studies supply them with a constant store of great thoughts; and in this they are a true blessing to them; for inasmuch as the thoughts which usually press most on the minds of women are of too personal and subjective a kind, and are connected with the troubled and unrestful life of man on earth, and with the small details and anxious cares of daily living, the thoughts engendered by the study of Mathematics and Physical Science, in most of its branches at least, are above all these, in a calm region wherein we find inexhaustible matter for wonder, and joy, and worship, and praise. And we do the duties of earth better when our minds dwell among the harmonies of God, and not always among the discords of human society. Women have often said that they were able to return with a calm mind to the right performance of domestic work after going out to gaze for awhile upon the great multitude of stars on a cloudless night; and they now say that the calmness and strength so attained is far more permanent and real when to the mere sentiment of beauty, which however may be a powerful aid, is added some knowlege of the wondrous working, in the laws which regulate the universe, of the Supreme will and control of Him who made them all.

The Value of Education.

There are few things about which people are so much agreed as on the value of education. Though they are not prepared very often to explain what they mean by education, and not very apt in determining what its value is, they assent to the general statement that it is of the highest value, without hesitation, and on all occasions. It is not difficult to explain why the precise appreciation of its value is rare, and why the precise signification of the word "education" is seldom arrived at. To make out, however, what each of these terms imports, is of prime necessity.

Education differs from information or knowledge. The latter is of a special character, the purport of which is to fit a man for bringing about certain definite results by the immediate operation of that knowledge which he possesses. We talk, indeed, of the education of a lawyer, a doctor, and a clergyman—of an engineer, a soldier, or a sailor; generally meaning by it the information or knowledge which he has acquired for the immediate exercise of his vocation. But law, medicine, divinity, mechanics, strategics and navigation are not education. A man may possess any one of them and be well nigh illiterate, though of course some can more possibly co-exist with want of education than others. One can conceive that a man may have a profound practical acquaintance with law, and be an uneducated person. Again to quote an instance, the first Duke of Marlborough was

one of the most skilful generals ever known, but he could not spell and hardly write. Some men who have had the most marvellous aptitude and quickness in mechanical science, have been unable from sheer ignorance to sustain a common conversation.

Education, on the other hand, deals with formalities. It does not aim so much at setting the mind right on particular points, as on getting the mind into the way of being right. It does not deal with matter, but with method. It purposes to train the thinking powers of man, not to fill the mind with facts. Hence, were it perfect, it would cultivate the intelligence so largely as to render easy the acquisition of any knowledge. It deals in short, either directly or indirectly, with logical order and the reasoning powers. That it falls short of effecting what it purposes, is due to defects in its system, to defects in man's mind, to defects in this or that man's mind. As, however, its operation is not immediate, but only indirect, its methods are frequently cavilled at as useless.

It may teach the logical method of thinking and reasoning. This however, is generally too abstract for most minds, except they be more or less matured, and more or less informed on one or two subjects. In place of this, then, it teaches ordinarily something, which is as exact an illustration of logical method as can be, and which, being unfailing in its references, trains the mind in method, and often stores it with facts. In a greater or less degree, but in some degree at least, this inculcation of an abstract method is necessary for any kind of education, and even, except it be a mere knack, for information.

Reading and writing even are educational methods. The letters of the alphabet are abstract and arbitrary signs, the comprehension of which requires a certain amount of attention, and a separation, for a time at least, between the thing signified and the sign. After a time the use and formation of letters become almost mechanical arts, though this is, to be sure, the case with all perfect methods; for what we call a mechanical process in the mind, means a habit, the exercise of which is so rapid, that we are unable to follow it, and so sure about it as not to need to follow it. Arithmetic, the science of abstract numbers, is an educational method of great and well nigh universal necessity, though it is also of great practical utility in its application to details and facts. By far the majority of people who learn arithmetic fully, never need use more than its simplest rules. So, in a still more marked way, is it with geometry, and certain other familiar educational processes. To illustrate these methods, however, we need the presence of a certain number of facts, and to arrange and classify these facts we need more or less of these methods.

Now, it is plain that some of these methods have so obvious and universal a practical application that they must be possessed by everybody who wishes to carry on, except in the lowest station, the commonest business of life. Hence they are looked on as pieces of knowledge or information as they have a direct result. Thus it is that the confusion commences between education and information. It is not difficult to put knowledge and method in strong contrast, but is is not easy to say where method ends and knowledge begins.

The value of education is measured by three rules. What is it worth to the individual possessing it? What is the worth which society assigns to it? What is its material worth, or, in other words, what advantages are connected with it, which may be reduced with greater or less exactness to dollars and cents? The first of these aspects of the value of education is apt to be measured by the other two; but unless a man is to merely live by other people's good opinion, or to merely follow that which will increase his balance at his banker's, the first has a fair claim to independent consideration.

All judgments which have been worked out by a man's own mind, all general principles which have influenced society, all directions of original thought, have come from the first of these values of education. In the worth of education to the individual who has it, lie all the facts of human progress, and all hope of human progress. And in it, too, are all the consolations of the man himself, whether they be escape from prevalent error, or relief from the toil of labor, or the shield of a rational self-respect.

The social worth of education is not so great indeed as it might be, but it is very large. It is true that the immediate product of certain branches of information is so visible and so tangible that the disposition of mankind would be to sacrifice method to knowledge, were it not for the urgency of competition among those who possess knowledge, and among whom the man who has at once method and knowledge is pretty sure to win the day. The influence of educated men on society, and the respect of society for educated men, would be more general, and more reciprocally beneficial, if more educated men applied their method to the ordinary business of life. That they do not so, is perhaps in great degree the fault of those institutions where the best education is given. I have not the slightest doubt that a person who has studied successfully, as he would do if he studied honestly, at the universities, would in trade, or any other business, speedily outrun competitors who had not the same advantages as himself. They do so ordinarily in those occupations which they undertake. They would do so in more, were not the expenses of the universities serious impediments to their popularity.

There is a popular, but I believe very shallow, notion that the course of academical instruction is not useful. It is not worth while to revive a discussion settled long since, about the relative advantages of what are called practical sciences, and what is called mere mental culture. It is sufficient to say that the world would go on very poorly without both. Exclusive cultivation of mere physical knowledge would leave a very intelligible gap in those moral and intellectual forces which for good or evil, but especially for good, have such weight for the collective destinies of mankind. That mere mental culture should supersede the development of the knowledge of the material universe is unlikely; the danger is and has been on the other side, and this with but one exceptional period from the beginning of history. The advantage of an acquaintance with some branch of practical philosophy is so obvious and immediate that one is perpetually reminded of the risks which educational method runs in either being confounded with the knowledge of facts, or of being ignored altogether, or of the experts in the one branch of human science disdaining and disliking contact with the other, and men being divided as to the most fundamental securities of progress and civilization. It was with reason that Bacon asserted that his logic of facts would equalize all intellects. But great as the vantage ground is which is promised for such learning by those simple rules of inference which he first called attention to, the result has been that the mere acquaintance with such a method has caused it to cease from being an engine of education properly so called.—*Prof. J E. T. Rogers, "Education in Oxford."*

Suggestions for the Formation of an Irish National Teachers' Mutual Insurance Association. (1)

(BY ROBERT M. CHAMNEY).

The scheme of "A Teachers' Mutual Insurance Association," which I wish to bring under the consideration of Congress, is not of my origination. It comes from the antipodes, stamped with the seal of success. I have, for some time past, been aware that a system of mutual insurance by teachers was established at Sydney, Australia, in accordance with a scheme adopted at a meeting of Government officers, under the Council of Education, on the 17th October, 1868; and being anxious to become acquainted with the Rules and Regulations of a body whose formation was attended with a very remarkable degree of success, I wrote to a friend in Australia requesting him to procure for me all the information possible relative to this "Teachers' Mutual Insurance Association." Happily I have not had to wait as long as I expected for the documents I

(1) A paper read at the Conference of Irish National Teachers held in Dublin, December 30, 1869.

required to see; for by a recent mail, I have received a copy of the rules and regulations of the association, from Mr. James Rutledge, the Hon. Secretary, who has been one of the most active persons in promoting its establishment. In Ireland, as elsewhere, there is much destitution every year in various parts of the country, when the teacher happens to be seized by the hand of death, and when the bereaved family is, as may be expected where the salary is low, left entirely unprovided for. Being convinced that a plan that is now working so well in Australia, cannot be unworthy of some attention on the part of the Irish national teachers, I venture to bring it under the notice of the present Congress for serious consideration, and as a plan which, if it be not acceptable asa final settlement of the "pension" question, will at least prove useful as a temporary boon until such time as the wisdom of Parliament may see fit to regard the Irish national teachers as civil servants, and entitled to all the privileges which other civil servants are now enjoying. It will be observed that under this Australian scheme of insurance, relief is afforded on the same principles as in cases of fire or marine insurance—simply such premiums as will cover risk for the time being. There is nothing eleemosynary in the system, nor can there ever be insolvency, or disproportion in the sums contributed to the amounts to be paid on the occurrence of deaths. It is self-adjusting, because as the risk increases by the accession of members, the sum to be contributed on every call diminishes in equal ratio.

The first step, supposing the scheme to be approved of, is to communicate with the Commissioners of National Education, in order to obtain their co-operation upon the following conditions:—

1—The Commissioners of Irish National Education, upon authority being given, will deduct the contribution, not exceeding 3s. 9d. in any one quarter, from salaries; it will also act as banker and make the payments on proof of death being furnished.

2—All correspondence from teachers must be through the Secretary of the Metropolitan or other Committee.

3—All Teachers, whether male or female irrespective of health or age will be entitled to enrolment within 60 days after a date to be fixed on, and all teachers who enter the service of the Commissioners will be entitled to the same privilege on making application within 60 days of their appointment; but those teachers who allow a longer time to elapse, before remitting their first contribution for this purpose, will not be eligible for enrolment till after the expiration of six months from the date on which their first contribution is received, and medical certificate furnished. Those who desire to withdraw may do so on giving three months' notice in writing.

4—The calls will be made as stated in this Scheme and upon proof of the death of any such enrolled teacher being given, the whole of the funds in hand will be paid to the person previously named to the Commissioners by the deceased, provided the sum does not exceed £125. The surplus, if any, will be retained to supplement the next call, which will be reduced so as to make with the amount on hand £125 for the annexed death, and so on with all succeeding cases.

5—The enrolment of teachers who leave the service of the Commissioners, either through resignation or dismissal, will be cancelled, but in cases where the retirement is occasioned by ill-health, the Committee shall have the power of allowing the enrolment to continue for two years, provided the necessary contributions are regularly paid to the Secretary who shall have them lodged with the funds in the hands of the Commissioners; and provided, further, that the moral conduct of those retired is, in the opinion of the Commissioners, of a satisfactory character.

6—The teachers enrolled shall, in December of each year, by their delegates in Congress, hold a meeting for the purpose of electing a Committee of Management for the following year, and for such other purposes as may be thought necessary. Notice of changes of a material character to be given a month previously.

The following are the salient features of this novel system of insurance:

It is assumed—1st—That in an establishment where parties are liable to removal, a system of mutual insurance which meets the cases as they arise, is far preferable to any system which relies on large accumulated funds, entailing heavy expense in the management, and causing anxiety from risk in their investment or custody, but which also carries with it a probability that a large proportion of the contributors will leave the service, and with it the amounts which they had contributed, to be shared among their successors.

2nd—That a system which has just funds enough to meet cases as they occur, is as honourable and legitimate as any other system of insurance at present in operation, and far more secure.

3rd—That in any establishment which demands the personal active service of those employed, the chances of death among them, as a rule, are equal, especially among teachers where the average age is considerably under 40.

4th—That of the teachers under the Commissioners of Irish National Education, 4000 at least would be disposed to become members of such a system of mutual insurance as is proposed, and to promise to fulfil its conditions for one year, from a certain date, when such contract might be renewed or not at the option of the parties themselves.

Hence it is proposed—1st—That a contribution of 3s. 9d. per quarter, from each intending member, be paid on enrolment, and a promise given to make a similar contribution each quarter, within a year from the date fixed on for commencing.

2nd—That the sum of £750 in this way be contributed in the first instance, to be paid to the legal representatives of the first six members of the association, who become deceased in that year, at the rate of £125 to each claimant; and that such sums be treated as assets of the personal estate of the deceased members, in the same way as the money he, she, or they, might have in the bank.

3rd—That as other deaths might be reasonably expected to occur within brief intervals during the year, a call be made for the second half-year's contribution as soon as it was ascertained that the first contribution was half exhausted, to be in readiness to meet the next claims whenever they might occur. These calls might be made through the medium of the IRISH TEACHERS' JOURNAL. In fact "calls" might be dispensed with altogether by taking each member's consent, as binding for the entire year, in which case the four quarterly instalments of 3s. 9d. each, might be deducted from his quarter's salary without any notice whatever, except an annual one at the expiration of the year for which he so consented to membership.

4th—That the contributions of those members in excess of 4,000, and below 6,000, be retained to meet the deficiency that might arise through any contingency whatever.

5th—That the sum of £750, which must always be kept in hand at the close of each year, be held to the credit of such of the old members as continue the contract, and be reckoned as their contribution until the next call be made.

The sum of £125 is fixed on as the amount which, when funeral expenses, &c., are paid, would leave a nett sum of £100 for widows or dependents, to commence other business with for support.

Respecting the rate of mortality, it is ascertained that the ordinary death rate of persons between the ages of 20 and 55, does not usually exceed 5 per 1000. Although the risk of life may be considered greater as age advances, yet calculations would involve such minute differences in the sums to be contributed as to render any but a uniform contribution impracticable. The younger teachers ought to bear in mind, that as they themselves grow old, their contributions will remain the same, while

the older ones, who may either die in the service or leave, will have their places supplied by young persons who will be to them what they are now to the older portion of the profession.

As it is desirable that the whole of the funds raised by contributions aforesaid be paid to the nominee of the person deceased, whatever expenses may be incurred in the management should be raised by special contributions; and as the printing of documents and legal expenses incurred in their preparation are the principal items of expense likely to occur for some time, it is necessary that a contribution of one shilling, in postage stamps, be enclosed with each reply to an invitation to join a movement having for its object the placing of teachers' families in such a position, that should their natural support be taken away by the hand of death, they will not be left in a state of destitution. With regard to the expenses of management it must be borne in mind, that the relations between the Irish National teachers and the Irish Commissioners, differ materially from those which obtain in Australia between the teachers there and their Board of Education. But there is good reason to think that, the time is near when the relations between the Irish National teachers and the Irish Commissioners of Education will become closer and more sympathetic than heretofore; and as regards the project of mutual insurance which I am placing before you, there will be this advantage, that if the commissioners approve of it and undertake any responsibility at all in the matter, they will most likely agree to defray all the expenses of management.

In the remarks I have made thus far I have merely given you the outlines of the Australian system of mutual insurance; but I find, that when we come to adopt such a system in Ireland, a necessity will arise for its simplification. In Australia there are but 1000 teachers, of whom it was estimated about 500 would avail themselves of this offered boon; in point of fact nearly 400 did avail themselves of it at once, and, no doubt, another 100 will follow their example. Upon this foundation of facts we may safely arrange a programme for our "Irish National Teachers' Mutual Insurance Association." But in doing so we must, as I said, simplify the mode of working upon grounds of economy. It is less expensive and troublesome to conduct this system with 400 than with 4000. In Australia, each of these 400 teachers has to pay 5s. on the occurrence of each death; with 4000 teachers in Ireland, the amount will be only 8d.; but on the other hand, as the deaths will be more frequent here, the amount paid within the year, by a teacher in Ireland or in Australia, will be just the same. If we take the mortality as 5 in 1000, then in Australia, with 500 estimated contributors, $2\frac{1}{2}$ would represent the number of deaths to be anticipated. But the number of members has only reached 400, or thereabouts at present; and I find that death, with his usual statistical accuracy, has taken away exactly two teachers during the period of one year. Now in Ireland, with 4000 contributors, we must expect 20 deaths in the year; and this fact has led me to suggest that, as it would be troublesome and expensive to make 20 separate calls for 8d. during one year, the better course would be to adopt the plan accepted in Australia, and make but one or two calls in the year, by which a sufficient sum would be raised to provide for 20 or more deaths, occurring within that period. It appears to me that the Australian committee has fixed on a rather low scale of payments; and I would suggest, that until we have had some experience of the working of the system in Ireland, it would be prudent to start with a somewhat higher rate of payments, which could afterwards be lowered, if circumstances warranted the Irish committee in taking that step. I find that one half-yearly payment of 7s. 6d. would, with 4000 subscribers, raise a sum of £1,500, which would provide a sum of £125 for widows, or representatives, within a period of six months. Two half-yearly payments will produce £3000, enough for 24 cases, which is certainly more than enough to cover all possible contingencies.

With regard to the mode of collecting the premiums, my proposal necessarily differs from the Australian method. There, one call is first made, by which £125 is raised, and no further call is made until a death occurs, which disposes of the money in hand and necessitates another call, and so on. This simple method answers very well where the contributors are few in number, but it could not be easily carried out in Ireland. In Australia, the members being few in number, two or three calls within the year would suffice; but in Ireland, with three or four thousand contributors, the trouble and expense involved in making twenty or more calls within a year would, as I have already said, be too great to be undertaken by an unpaid committee. Still less applicable to this country would be that gradual reduction of the amount of premiums coincident with the augmentation of the number of members, which is a feature of the Australian programme; for in point of fact there is nothing gained or saved by that method, as it is easy to see that although the sum payable at each call must diminish in the same ratio as the number of subscribers increases, yet the number of calls must be proportionately larger, in consequence of the greater number of deaths that will take place in the latter instance. By my proposal, however, the object in view may be accomplished with much less trouble and expense, by making only four quarterly or two half-yearly deductions from the salaries, by by which means the trouble of management will be lightened and the working expenses reduced to a mere nominal figure. There are, I may remark, certain sources from which not only may these working expenses be covered but a considerable balance remain in hand for the purpose of reducing the amount of calls or adding bonuses to the amounts granted to the representatives of deceased members; namely:—First, a surplus at the close of each year after providing for the expected number of deaths; and Secondly, an addition to the surplus from this source, arising from the resignation, removal or emigration of members during the year, whereby the unexhausted portion of their subscriptions becomes forfeited. But these sources are very uncertain, and to calculate beforehand how much will be derived from them would be quite impracticable. It is safer therefore to start on a sure foundation, independent of mere probabilities, and afterwards to rely on experience to enlighten us as to how far premiums may be abated from time to time and without risk to the prosperity of the institution.

In asking your attention to a matter of so much importance, I am influenced *first* by the necessity of taking immediate steps in this direction for the advantage of a numerous body of teachers at present wholly deprived of all benefits of this description; and 2nd, by the belief that the Government will not, at least for some time to come, be induced to give their attention to the question of pensions for Irish National Teachers, their time being fully occupied with other matters which they please to regard as of a more urgent and pressing character. In conclusion, I may throw out this further suggestion, that the system of insurance here described may, by means of the same machinery, be made available for other useful purposes, for the benefit of teachers; for example, to provide a fund for making allowances to teachers who require medical attendance, or who may be incapacitated from remaining in office through infirmity, protracted illness, or any other sufficient cause. A comparatively slight addition to each half-yearly payment would supply a fund of this description; and it might be left optional with subscribers to contribute for either or both purposes.

I have been induced to put these remarks on paper in compliance with the statement of the "central committee," who, in the November issue of the TEACHERS' JOURNAL, drew attention to this important subject, and suggested the propriety of making it a topic for discussion at the present congress. Hitherto, in consequence of the straitened means of the national teachers, the formation of a Benevolent Fund appeared to be impracticable; but now that there is a moral certainty that their salaries will be considerably augmented within a brief space of time, the origination of such a scheme naturally becomes a subject of deeper interest in proportion as its feasibility becomes apparent and practicable.

Those who are sanguine that pensions will be granted sooner or later to the national teachers may perhaps look with coldness on this proposal; but on reflection they will see that, "pensions or no pensions," the existence of such a fund is highly desirable. It would be improvident to postpone a matter of so much importance *sine die* upon the assumption that pensions are certain to be granted at an early date; for no one can predict with even tolerable certainty that pensions will be given within the next ten years, or even at all. I would be sorry to say that it is hopeless to expect pensions; on the contrary I believe that if the national teachers will but persevere steadily in their agitation, they will ultimately secure pensions as well as every other reasonable and just right which those who are termed "civil servants," with no better claim than themselves, now enjoy as unquestioned privileges. But while conceding all this I repeat that the existence of a benevolent fund, such as I suggest, is desirable as a temporary relief, and that there is nothing in its nature or objects that can possibly bar the way to the obtainment of pensions at a future period.—*Irish Teachers' Journal.*

Education and Crime.

An examination of the *Forty-first Annual Report of the Inspectors of the State (Pennsylvania) Penitentiary*, reveals some very curious and interesting facts. Among other things, it shows a marvellously small number of mechanics, tradesmen, or artisans among the convicts whilst a considerable number of would-be professional gentlemen make up a fair proportion of the Penitentiary population. Let us briefly review the statistics given. Since the institution was first opened, in 1829, the total number of convicts for larceny reached 3038, for burglary 590, for horse-stealing, 306, for passing counterfeit money 214, for forgery 200, for robbery 150, for burglary and larceny 134, for passing and having counterfeit money 44.

This gives alone for the crimes named, 4708. Five-sixths of all the prisoners who have been confined in this institution were convicted for crimes against property. The entire number of convicts of this class is 5484, or 83.89 per cent. The total number convicted of crimes against persons is 1053 or 16.11 per cent,—Total 6537. The majority of these unfortunate men appear to have had no positive knowledge of any *useful occupation.*

We will now turn to the educational statistics, based upon the number of schools in the school districts of each county. Of the above 6537 convicts, we find that 4151 or nearly two-thirds of them could *read and write*, (among this number are classified 32 "well instructed"); 1084 could *read* only; 1302 could neither *read nor write.*

The Report makes the following statement with regard to the education of the 621 convicts in confinement during the year 1869.

Educated in Public Schools	390
" " Private Schools	159
Never went to School	77
Total	626

This is certainly not very creditable to our Common School education. Now, if the great increase in the Common Schools has not brought about a corresponding decrease in crime, as the adherents of this system of education claim they do, it certainly shows a deficiency somewhere. Until a *free religious education* is incorporated into the Common School System, all the hopes based upon the idea that they will exert an influence for the diminution of crime in the rising generation, will prove false and delusive. A people who know not GOD, or who have only a vague idea of the existence of such a BEING, without understanding their duties to HIM, can never be truly virtuous. If parents will teach their children to know GOD, to love HIM and to serve HIM, they need never fear, whether those children be literate or illiterate, to find them in the Penitentiary.

Let us now examine the "Local Relations" of the convicts. The figures will, no doubt, surprise a great many. It is the general impression of a large number of our fellow-citizens that the majority of the inmates of our prisons and penitentiaries are foreigners. The Report under consideration shows 4940 Americans, against 1597 *foreigners.*

It may, perhaps, be interesting to some of our readers to examine into the causes of crime. The impression that intemperance is the one great cause of crime, is not fully sustained by the Report, although it cannot be denied that it exercises its baneful influences to a very alarming extent. The habits of the total number of convicts are summed up as follows:

Abstainers, 1551; moderate drinkers, 2713; sometimes intoxicated, 1159; often intoxicated, 1114.

The Industrial Relations for the year 1869, show how poorly represented are the tradesmen and mechanics: Unapprenticed, 268; apprenticed and left, 33; apprenticed and served until 21 years of age, 8—total 309.

Of these 309 we find that the pursuits before conviction prove beyond all question the justice of our frequent calls upon parents, especially those in moderate circumstances, to give their children *good trades.* Look at the Penitentiary Report. Nearly all the *trades* that men usually engage in have from 1 to 8 representatives, whilst we find *nineteen* clerks. Again of these 309 we find 108 who have occupations, whilst 201 may be said to have no occupation, or at least no *fixed* occupation.

Only one convict in fifteen appears to have served a regular apprenticeship, whilst the majority of those convicted were illy qualified to earn their own living. Education, moral and secular, can never be too highly appreciated, and they should be always the objects of a laudable ambition; but a determination to throw the possessors of a mere ordinary education into the professional callings of life, is a mistake that cannot be too highly deprecated. The long interval which elapses between the completion of an education and the time which a professional man must necessarily wait for a barely remunerative practice, is too long for a poor young man to wait. During this time he wastes the little that his parents may have economised for him; he too often falls into idle habits, which nearly always bring with them a desire for pleasures beyond his means to gratify, and draw around him dissolute companions, who eventually follow him to the prison door and there mock at his miseries.

Until the useful and industrial pursuits of life are more patronized in our country than they are at present, reports of prisons and penitentiaries will show the same large number of inmates. The Reports prove that men engaged in mechanical pursuits are exceedingly rare in these institutions.

This clearly shows the necessity of teaching boys and young men *good trades.* If in after life their means are such as to place them above their trades, they are not compelled to work at them; they may abandon them: but if good fortune fail, and the young man is thrown upon his own resources, he has a TRADE TO FALL BACK UPON, he is not exposed to fall into habits of idleness, to seek the company of *professional* and *confidence men*, and he saves the fair name of his family from appearing upon the Convict's Roll.—*Catholic Standard.*

Looking Forward.

(*Written for The Journal of Education.*)

(BY MRS. LEPROHON.)

How busy those little fingers soft,—
That within mine own are clasped so oft,
Have been throughout this bright summer day,
With pebbles and shells and leaves at play.
They have sought birds' nests—they've plucked wild flower—
Decked with mosses the garden bower—
Built tiny boats without helm to steer,
Yet floated them safe o'er yon lakelet clear.

Ah! a time will come, and that ere long,
When those soft hands will grow firm and strong;

When they'll fling all boyish toys aside,
In the dawning strength of manhood's pride;
Disdaining the prizes—treasures gay,
That they seize with eager haste to-day,
And parting with youth's joys, hopes and fears,
Seek to grasp the aims of manhood's years.

Be it, then, thy care, my gentle boy,
That new born strength to well employ,
Thine hand to raise in defence of right,
To protect the weak 'gainst unjust might,
Or in steadfast toil to spend its power,
That toil,—our birth-right—our earthly dower—
A God-given law from which none are free,
Whether of lofty or lowly degree.

And that childish voice so sweet and clear—
That like music falls on my charmed ear,
Waking the echoes with laugh and song,
Mid wood and field through the hours long
Mocking the warbling bird in yon tree,
Or lisping thy prayers beside my knee,
When thy voice shall thrill with manhood's deep tone,
Say, how wilt thou use it, my child, my own?

Raise it in cause of each sacred truth
Thou hast learned to prize in early youth,
In kindly word to the sad—the poor,
To those whose cross is hard to endure;
Raise it in telling thy maker's praise,
In winning souls to His Love and ways,
But never in proud or unholy strife,
Or in words with wrong to a brother rife.

And thy guileless heart, whose truth, my boy,
Is to me a source of purest joy,
Down in whose sinless depths I can see,
From thought of evil finding it free,
When Manhood's down shall first clothe thy cheek,
When pleasure shall tempt and passion speak,
When lured by snares that have others beguiled,
Ah! what wilt thou do with thy heart, my child?

Guard it as treasure of price untold,
In value beyond earth's gems and gold,
Guard it from breath—from shadow of sin—
No tempter must foothold gain within:
Let love of thy God and love of thy kind,
Like tendrils around it closely wind,
Blending those feelings of purest worth
With love for Canada, land of thy birth.

Ah! should it be so, with tranquil breast
I shall later sink to my final rest,
When Death's icy finger shall touch the brow
That bends above thee so fondly now:
Till then I will daily ask of heaven
That in manhood it may to thee be given,
To devote thy voice, thy heart and thy hand,
To God—thy kind, and thy native land.

The Attainment of Beauty in Commonplace Handiwork.

Is there any real advantage in having all that surrounds us beautiful, so far as may be, consistently with other requirements? Is man any the better or happier for cultivating the sense of the beautiful and gratifying that sense within reasonable limits? There have not been wanting those who have answered these inquiries with an emphatic "no," and who have even gone so far as to assert that all mere gratifications of sense are snares of the devil, to be shunned by all such as would keep their hearts pure and aspire to a better life hereafter.

On the contrary, there have been a large class of philosophers who have no less sincerely believed that the love of beauty in nature and art has a refining and elevating influence upon the mind and soul of man; and that its indulgence tends to draw him nearer to the great Author of all good, which term includes beauty. Whatever is beautiful, say these philosophers is so far good. To love and admire beauty is therefore to love and admire goodness; and therefore the man whose heart delights in the beautiful is so much the better for it. This belief we hold, and we therefore maintain that a proper attention to the attainment of the beautiful in every work of his hands is a duty which every man owes not only to himself but to others.

Most men feel themselves impelled to do something towards the adornment of any kind of handiwork, no matter how hnmble or simple it may be; but as the sense of the beautiful is, in the vast majority of minds, very imperfectly developed, their attempts too frequently rather result in forms and colors, repulsive to a refined and cultivated taste,

The really beautiful is only attainable through patient cultivation of taste. How then can ordinary mechanics whose time is mostly occupied in toil, and whose daily walk is among rude, rather than graceful, forms, ever attain such cultivation? This is a question which we find it quite difficult to answer satisfactorily. In France where—going or coming—every workman can scarcely fail to see and be impressed with some form of beauty, the art sense has become so highly developed in all classes of people, that the designs of French workmen and work-women, find ready acceptance in any market in the civilized world; and that country unquestionably now stands at the head of all nations in the arts of design.

There is always a singular appropriateness in French designs. You feel even while you are looking upon the box from which you eat your Paris *bon-bons* that the ornament on it is just the right thing in the right place.

While the art sense is so highly developed in the French mind, it manifests itself very faintly, indeed, in the American mind. The large majority of all designers, decorative artists, and makers of fancy and ornamental wares in this country are of foreign extraction. These facts will not be disputed, and therefore need no argument; but that we, with so few objects of taste to which our workmen can have daily access, are ever to elevate the taste of our working classes, seems, to say the least, problematical. New-York, the Paris of America, has it is true done something which will tend to produce this desirable result. Her magnificent Central Park, to which working men and working-women have free access, contains much that cannot fail to appeal to the artistic sense of the rudest workman. A small art collection exists in the Cooper Union building, which may be visited in hours of leisure by mechanics. The last twenty years have added much to the architectural beauty of the city. But beyond this all that is likely to cultivate the taste of working people is what may be seen in the shop windows. We have no magnificent art collections, to which artizans may have free access, and the metropolis is yet poor in the public art wealth which enriches all parts of the French capital.

Still, in the absence of such collections of art as may be found in the old world cities, it seems we might do something to stimulate the growth of a feeling for art. It does not seem essential that costly statues or paintings should be accessible, in order that such ideas of art as would be useful in handicraft may be obtained. Copies of rich and elegant designs in the various departments of the mechanic arts might be collected at a comparatively small expense, which would not only be very interesting and attractive, but very instructive to inspect and study. Such a collection would be a valuable, useful, and honorable addition to the facilities which private benevolence has bestowed upon the city for the instruction and improvement of the working classes.

It is to be hoped that some steps will ere long be taken to secure such collections, in all the principal cities of the United States, and to make them accessible at such hours as workmen are at leisure. They could be made made without very great cost, and certainly would greatly tend to improve all classes of mechanics, especially such as are engaged in those arts that require superior taste and appreciation of beautiful forms and combinations of color.—*Scientific American.*

The Best Family in England,

We extract the following paragraph from *Cassell's Magazine:*

We are often asked which is the best family in England? It is not an easy question to answer. What tests can we apply to determine it? Let us try these—length of descent, ancient renown, and historical importance. Length of descent throws out of competition many names, such as Howard, Russell, and Cecil. Ancient renown throws out such as Seymour, Talbot, and even Stanley, none of which were above the middle ranks five hundred years ago. But all the conditions

seem to be fulfilled by four families—Hastings, Feilding, Courtney and Nevil. The first has been more or less noble ever since the Conquest. The second is said, but on doubtful grounds, to have been of the imperial Hapsburg race, and to have settled in England in the reign of Henry III. The Courtneys claim to be descended from Pharamond, the founder of the French monarchy, whose date is placed by historians at the middle of the fifth century; and from Otho, some of whose family were Emperors of Constantinople, and previously Counts of Edessa and Kings of Jerusalem; they are also of very ancient nobility in England, and of considerable historical and political importance in our own day. Nevertheless, we think, all things considered, the best family in England is that of the Nevils. The ancestors of the Nevils were Earls of Northumberland when we first hear of them in Saxon times, nearly a thousand years ago. From Earl Cospatrick, a contemporary of the Conqueror, derived the Nevils of Raby. They received the name and estates of Nevil with the heiress of a Norman family: they could boast of sufficient importance during the wars of the Roses, to furnish one Archbishop of York, one duke (the Duke of Bedford, nephew of the King-maker), one marquis (the Marquis of Montacute, brother of the King-maker), Earls of Westmorland, and Salisbury, and Warwick, the Lords Fauconbrig, Latimer, and Abergavenny, from which latter the only remaining branch is descended. No other English family fulfils the conditions laid down above so satisfactorily as this one. The Courtneys run them very close, but the chief fame of the Courtneys is of foreign growth, whilst the Nevils are Anglo-Saxon, and have been here ever since they became a family. Their pedigree is as well authenticated as any pedigree of such length can be; and in ancient honor and historical importance, they yield to none. They were in the highest rank of nobles before the Conquest, and have continued noble ever since; and it may be said of one of them what can be said of perhaps no other English subject, that be could by his single voice control the succession of the crown."

The Last Moments of Count de Montalembert.

The eve of his death he spent like every other day. From five to seven he received some friends, and the evening he passed with his own family. Nothing was remarked about him, if it were not that he appeared more animated, more cheerful, and more visibly happy through the love and affectionate care of those around him. During the day he had written a long and beautiful letter to M. Champagny, on the subject of his eulogy of Berryer pronounced the day before at the Academy.

At ten o'clock he retired to his bedchamber. The length and loneliness of the nights, too often without sleep, were during his illness particularly dreary for him. He always had books beside his bed. That night he had read longer than usual, as if to bid by this last excess a last adieu to the passion which had devoured his life. At night the Sister who attended him said to him, "You will excuse me, Count, but really I can not leave you the lamp any longer." Sunday morning, at six o'clock, when she came to inquire after her patient before going to Mass, he answered her that he felt well and had passed a good night. He began the day as was customary with him, by taking up his prayer-book, which he wished to be always left within easy reach.

When the Sister returned, in less than an hour afterward, the invisible blow of death was struck; the patient complained of short and sudden pains in the region of the heart and of the head. Seeing his face become suddenly lived, his eyes dim, and his speech scarcely audible, the good Sister had only time to say, while falling on her knees, "Count, let us say together an act of contrition." "Pardon, my God," the great and firm Christian twice repeated with an inimitable accent of humility and tenderness; then he inclined his head toward the Crucifix placed between his hands and sank into the lethargy (which is the forerunner of eternity. Il tomba dans l'assoupissement avant-coureur de l'éternité).

Meanwhile, Madame de Montalembert, warned at the first signal of danger, had sent for the nearest doctor and priest. Thanks to her, the last prayers were said, and Extreme Unction administered, before life had departed. It is the last service, the last devotion of the Christian wife. At half-past eight the great soul of him who was Count de Montalembert ascended towards God.—*Correspondant.*

THE JOURNAL OF EDUCATION.

QUEBEC, PROVINCE OF QUEBEC, MAY, 1870.

An Act Further to Amend the Law Respecting Education in this Province.

[*Assented to 1st February*, 1870.]

HER MAJESTY, by and with the Advice and Consent of the Legislature of Quebec, enacts as follows:

1. Whenever the School Commissioners of either of the Cities of Quebec or Montreal, shall have determined to lay aside any portion of their revenues for the purchase of land or the construction of one or more school-houses, and shall have obtained the approval of the Lieutenant-Governor in Council, for the purpose, as provided in Section thirty-five of the Statutes of the Province of Quebec, Thirty-second Victoria, Chapter sixteen, the said School Commissioners shall notify the City Treasurer thereof, and of the amount so determined to be set aside, and may thereupon issue their bonds for such loan, in such sums, payable at such times, and bearing such rate of interest as to them shall seem advisable, and to the extent that such loan is authorized.

2. It shall be the duty of the City Treasurer, on the presentation to him of the said bonds, to acknowledge signification thereof, and he shall thereafter, from year to year, retain, on behalf of the Corporation, sufficient of the revenues levied for school purposes, which would become payable to such School Commissioners, to create a sinking fund for the redemption of the said bonds when they mature, out of which the holders shall be entitled to be paid by the Corporation.

3. On the amounts so retained the City Treasurer shall allow the said School Commissioners interest at six per cent per annum, which shall be capitalized annually, for the time the funds shall remain in the custody of the Corporation, and shall pay the revenues or accounts so retained, with the accrued interest thereon, in redemption of the bonds as they fall due, accounting to the School Commissioners for any remaining surplus or requiring of them payment in case of deficiency.

4. The signature of the City Treasurer, acknowledging signification of the bonds respectively, shall be evidence in favor of the holders thereof, that such bonds have been duly authorized, and will be provided for by such sinking fund.

5. Any agreement not conforming to the foregoing provisions, may be made between the Corporation and the School Commissioners to regulate the said sinking fund, and the manner in which it may be made up and retained by the Corporation; but, if no such agreement is made, the said provisions shall apply; and, in any case, the signature of the City Treasurer acknowledging signification of the bonds respectively, shall be evidence in favor of the holders thereof, that such bonds have been duly authorized, and will be provided for out of the sinking fund.

6. Nothwithstanding Section three of the Act,— Thirty-Second Victoria, Chapter sixteen, the Council of Public Instruction for the Province of Quebec may, from time to time, with the approval of the Lieutenant-Governor in Council, fix its quorum, and may also, from time to time, with the said approval, fix a different quorum for special meetings to be held for the purposes mentioned in the Twenty-Second Section of Chapter fifteen of the Consolidated Statutes for Lower Canada, concerning the revocation of diplomas.

7. The Minister of Public Instruction or the Superintendent of Education for the time being, may, from time to time, if sufficient cause is shewn to his satisfaction, alter, repeal or modify any decisions given by him on appeal from the decision of the School Commissioners or Trustees, under the eighth Sub-section of the Sixty-Fourth Section of Chapter fifteen of the Consolidated Statutes for Lower Canada.

8. The Fifty-Third Section of Chapter fifteen of the Consolidated Statutes for Lower Canada is amended by inserting after the words "in the County of ," the words "or in the Counties of , if a Municipality is situate partly in several counties.

9. The One Hundred and Twenty-Third Section of Chapter fifteen of the Consolidated Statutes for Lower Canada, is amended by inserting, after the words "Circuit Court," the following; "or the Commissioners' Court for the trial of small causes, for the Parish or Township, or before the Magistrates' Court of the District, provided the amount does not exceed the lawful jurisdiction of the said Courts."

Floral Months of the Province of Quebec.

(MAY.)

The following is the first of a series of articles proposed to be furnished for the columns of the Journal by Mr. S. Sturton, associate member of the Literary and Historical Society of Quebec, and now employed as a teacher. It came to hand too late for insertion in our issue for the month of April. It will be seen that Mr. Sturton, at the close of the present article, commends to his fellow teachers, the duty of placing themselves in a position to be able to *name*, and to give, at least, some little account of our wild flowers, for the advantage of their scholars. To this suggestion we would add the expression of a hope that his communications may be instrumental in helping them to acquire the requisite knowledge of the subject.

The articles themselves, we are informed, comprise, substantially, the contents of a paper communicated to the Quebec Literary and Historical Society, in December, 1860, which, as we are further informed by the President of that body, was highly approved of by those who heard it read. In fact, the paper was subsequently published in the fifth volume of the Transactions of the Society, under the heading of "The Wild Flowers of Quebec." (1)

The botanist like the soldier should prepare beforehand for his campaign and if a raw recruit should learn his drill from some simple flowers from a greenhouse where all the parts are very plain to the naked eye—perhaps a fuchsia which represent the Evening Primrose family is one of the best—or one of our own Trilliums, from either of these the calyx, corolla, stamens &c, are easily learned. Then with one of Gray's Works either, "How plants grow" or the "Manual" he will be able to gather and determine the plants to which we propose to call his attention.

The Mayflower (Epigea repens) Skunk Cabbage and Hepatica are our first flowers.

The Mayflower is a trailing evergreen that grows in all parts of the Province, the finest specimens I have seen are from above the racecourse at Three Rivers. I have found it at the Gomin Wood, Isle of Orleans and Montmorenci, near Quebec, the plant has rusty hairs on its leaves and pinkish white flowers which are very sweet-scented. This flower is to Nova Scotia what the maple leaf is to Canada.

The Skunk Cabbage grows everywhere in wet meadows, and sometimes completely occupies the ground—if that plant is compared with the Arum or Calla Ethiopica, which we all cultivate in our windows it will be found the same in shape and structure only differing in colour, the spathe of the Calla is pure white, that of the Skunk Cabbage is tortoiseshell, the odour of the latter is most abominable whence its name. The Indians are said to boil and eat it, which is probably correct as other plants of this family yield wholesome food when properly prepared though poisonous in their crude state.

The Hepatica is a pretty little flower which I generally gather at Levis, about the 20th of April and that with the catkins of the willow &c, are the first bontanical trophies I bring home. The Hepaticas grow in clumps and these are often crowded together so as to form a beautiful garden they are only wide open in the bright sunshine and of beautifully varying tint. pink, blue, and white. And while the acute lobed leaves and round lobed leaves are spoken of as constituting two distinct species, the diligent botanist can collect a series of leaves that so gradually pass from the round to the acute that it is impossible to divide the imaginary species and he has to reckon them as varieties of one species—the flowers precede the leaves in time of appearance.

On first landing in Canada nothing surprised me more than to see my English Garden Flowers growing wild, and I have before me now a catalogue containing the seeds of the Evening Primrose which is so commonly wild as to be a pest to the farmer. Just before leaving England, I had paid 3s 6d stg for a Trillium and on landing I found the country, not paved with gold, but full of my 3s. 6d. flowers. Its name distinguishes its characteristic, a whorl of 3 leaves, then 3 sepals, 3 petals twice 3 stamens and stigma divided in three, the common colour is purple, a few are found white. About the 20th of May the woods are full of the painted Trillium. The large flowered Trillium is found on the mountain at Montreal and Grosse Isle.

The Dog Tooth (Erythronium Americanum) is abundant in hedge rows &c, the spotted leaves and bright yellow flowers with recurved petals in the full sunshine and contrast beautifully with the fresh green of the grassy banks on which they commonly grow; the bulbs are deep seated and the general appearance will at once remind us that it belongs to the Lily family.

About the middle of May in wet places, may be found the Spring Beauty (Claytonia Virginica) it may at once be recognized as the most beautiful flower of the season, they are of a pale rose colour with veins of a darker hue, and a pair of linear lanceolate leaves.

The Marsh Marigolds with their bright yellow buttercup-looking flowers are now in the full luxuriance of bloom in wet places, or near running water, some may regard them as common, but let them be seen as I have seen them, a large flower bed of an acre or more one mass of golden yellow with a small clear stream meandering through them, the grand falls of Montmorenci rolling their nature's music across the river, the rising tide of the St. Lawrence beating its refreshing waves at my feet and the blue azure sky overhead and if he sees no beauty there—why?

The beautiful blood root first made me study Canadian Botany. I saw its starlike flowers of a pearly white, its blood like juice and I hurried down Mountain Hill to purchase Gray's Botany and was soon more deeply imbued with American than I had been with English Botany.

A little later in the season, while the Marsh Marigolds are still in flower, may be seen in their midst flowers which look like white Hyacinths, they are generally arranged in some regularity of distance from each other they are the Buckbean.

The Uvularias or Bell Wort with yellow pendant bell like flowers grow in wet meadows. The gold thread grows almost everywhere with its small white flowers and bright green leaves.

Many banks are now red with the Columbine their gracefully hanging red flowers and deeply cut leaves adorn any vase they are placed in.

Of violets we have commonly the blue without scent, the small white and tall pale Canadian violet which grows in woods have both a little scent, but would be termed scentless by those accustomed to the sweet scented violet of Europe.

The Fly Honeysuckle is a small bush that comes early into flower, each flower stalk bears a pair of greenish yellow funnel shaped flowers.

And in the middle or end of May will also be found on the wet banks of the wooded ravines the Arum Tryphyllum or Jack in the Box, it will be found like the Skunk Cabbage and Arum belonging to the same family.—in wet places and especially by the side of ponds will now also be found the Calla palustris which really appears like a dwarf Canadian variety of that splendid plant from South Africa.

The Smilacina bifolia (wood Smilacina) and Trifolia stellata and smilacina racimosa are now plentiful by the river banks. I would remark that the bifolia has 3 leaves and the trifolia only 2, so I have ventured to call the one bog and the other wood, and would suggest the corresponding Latin terms for the botanical names.

The Fairy Primrose (Primula Mistassinca) is the smallest of the Primrose family and easily recognized.

In swamps we find the Cassandra a small bush of the Heath family of pretty white flower and also the low growing Andromeda with its delicate rose colored flower. And scarcely have these swamp flowers begun to fade ere they are followed by Rhodora's and Kalmias of splendid tints, the former of a beautiful blush rose color and the latter of much deeper color, and a little later, but not so late as not to associate their flowers with them, comes the Labrador Tea with white flowers, its leaves rusty hairy beneath with their margins revolute. And about the same time the Lady's slipper (Cypripedium humile) with its flowers of all hues from deep rose to the purest white these swamp flowers all lovers of flowers should collect even if they do not intend to become botanists.

In May, we also collect the Caulophyllum, Actea, Leontodon, Dicentra, Strawberry, Mitre Wort, False Mitre Wort, Aralias, Trientalis, Cornus, Canadensis, Saxifrages, Streptopus, &c.

At the end of May, or beginning of June, will also be found the Wood Anemone one of our most delicate and lovely flowers, it is not very universally spread but where it does grow it grows in great quantities.

(1) N. B.—It may scarcely be necessary to repeat, that the Editors, while exercising a certain discretion as to the general suitability of original articles offered for the columns of the Journal, cannot be held accountable either for the literary style or for the strict accuracy of the technical and scientific terms employed, and for which the contributors themselves are alone responsible.

In conclusion I would suggest that all teachers should be able to name our wild flowers and give some little account of them to their pupils.

(JUNE.)

The flowers of May have in many instances disappeared, but still many of those which came into bloom at the end of May are still in bloom and perhaps in greater perfection.

The Ladies' Slippers (Cypripedium) are still the glory of the swamp and moist shady banks and the showy ladies' slippers may be found in cedar swamps at Levis and Charlesbourg, &c.

The Bunchberry (Cornus Canadensis) is now the most common flower by our wood sides and everywhere, but here the white flower is not a flower at all but an involucre enclosing a head of numerous small flowers which are succeeded by a bunch of red berries, commonly called the Pigeon Berry.

In ditches everywhere may now be found the Brooklime Speedwell (Veronica beccabunga) a strong growing plant with thick shining leaves and spikes of blue flowers in the axils. In Britain, this plant is always associated with the true water cress, which latter is very scarce in Quebec. I have only found it in the Domain at Levis, that which is sold in our market is the Barbaria vulgaris, but equally wholesome as a salad—the Thyme leaved Speedwell is also now very common in the fields.

The Blue eyed Grass is a very delicate flower growing in wet meadows; the leaves are grass-like and it has an umbel of very pretty blue flowers, that open and wither in a day but succeed each other for some time constantly.

In the bog the Labrador Tea is now putting forth its blossoms of pure white; the leaves are recurved and covered beneath with rusty down; it grows, to a good sized bush, and its white flowers form a pleasing contrast to the deep rose of the kalmia, growing by it side. The leaves are used as a substitute for tea and hops, and possess some narcotic properties.

The Oxalis stricta with yellow flower in ploughed fields and the Oxalis acetosella, with white, purple streaked flowers in the woods may almost be called our sensitive plants, they shut up their leaves at night and at the approach of rain clouds. These plants are used in Europe to give an acid flavour to soup. Oxalic Acid and Salt of Sorrel were formerly made from them, but are now made by the action of Nitric Acid on Sugar.

Linneus has given his name to our beautiful twin flower (Linnea Borealis) which is now in full bloom; it trails along in our woods in most luxuriant growth, bearing twin flowers upon one stalk from which they hang as roseate bells and perfume the air with their rich fragrance.

In the middle of June, the Ragwort, a composite flower of a rich golden colour and growing from one and a half to two feet high may be found in wet places, near running water.

The Anemone Pennsylvanica is so common in Canada that it ought to be called the Canadensis. I believe it is scarcely known in Pennsylvania yet the first specimen was discovered in that State and hence its name, the leaves are in whorls, and the flowers which look like white butter cups are from one to one and a half inches across;—the Anemone Virginica is also often massed together in thickets of flowers. I believe the Anemone would afford a good study in geographical Botany so as to generalize on the effect of climate on the Anemone in producing varieties of species, they are found from the middle States to the Polar Seas.

The Corydalis grows plentifully among the charred stumps of recently cleared land, growing about two feet high with beautifully cut leaves and a panicled raceme of white, yellow, red flowers. Late in May or early in June, may be found in wet places another Corydalis called the Dutchman's breeches, the flowers of which hang like a tiny pair of drawers. We also cultivate a splendid species in our gardens called Dicentra spectabilis.

Early, in June the Wood and Bog Smilacina may still be found and also the Smilacina Stellata and S. racemosa—it is instructive to gather all together of these and of all other genera, and to consider whether they may not all be one species varied by geologic and climatic influences. The Solomon Seal which the careless observer confounds with the Twisted Stem and S. racemosa may now be found in thickets, the underground stem bears the scars of former shoots and these scars were thought to be the seals of Solomon.

And now in bogs may be found that strangely beautiful plant, the Pitcher Plant (Sarracena purpurea) the leaves are formed into perfect pitchers to receive and store up the water of heaven; the flowers rise on a lordly stem, the purple petals ands sepals, and umbrella-like stigma give altogether a remarkable appearance to it, and as the observer lifts up the stigma he sees, the stamens safely housed beneath. As to the use of the pitchers we know that some plants (as the Water Lily) require that their leaves should rest on water or they cannot live—so it is with the Pitcher Plant its leaf cannot float therefore it folds up and retains the necessary water within itself.

The Forget-me-not (Myosatis palustris) is now in flower in wet places. I have found the finest at Lake Calvert nearly approaching the English but still of a variety to be termed "laxa,"—there can be no doubt it is a variety deteriorated by climatic influences.

In 1858, I heard of a beautiful flower at Levis not described in Gray's Botany. I was across the next morning at five o'clock and found an English Germader Speedwell—the stem is diffuse with a hairy line on each side, the leaves ovate serrated, the flowers in lateral clusters of a beautiful blue color. I have only found this on the South Shore of the St. Lawrence, it was introduced I believe 30 years ago but has found the River a barrier it cannot cross it grows profusely by many small streams which flow into the St. Lawrence, its seeds must float down, be often carried down on pieces of sticks, wood, leaves, &c., &c., and although I have searched carefully at the Island and on the north shore to St. Joachim, I cannot find that it has crossed to any spot,—so that I think conveyance of seeds to a distance by currents and Icebergs is very improbable—can any one inform me whether it is stopped in its progress eastward or westward by any of our large rivers that flow into the St. Lawrence?

At the Island of Orleans and on some other rocks of the St. Lawrence will be found the Astragalus alpinus and Oxytropis Lamberti, they belong to the pea family purple and white flowers—they are unknown in the States but common in Scotland.

Our Wild Roses are now very abundant and are far more fragrant than the common Wild Rose of England.

The Œnothera pumila, a kind of small Evening Primrose is now in flower and the true Evening Primrose is in flower from June to September it is so common as to be a troublesome weed in some of our meadows and yet the seed is imported from England to sow in our gardens. A tall plant 3 or 4 feet high with greenish yellow flowers is now to be found in wet places it is the Green Hellebore.

The Pyrola is a beautiful plant growing or rich leafy soil on shady banks and in rich woods, many kinds are described but they run so imperceptibly into one another that I regard them as varieties, the rotundifolia is our finest and very fragrant—the one sided pyrola has all its flowers on one side, the one flowered Pyrola or Monessis is a very beautifully delicate Alpine plant which grows very plentifully in the mountains below Quebec.

The Silene inflata or Bladder Campion which children crack on their hands grows in waste places, old wells, &c., everywhere as does the Yarrow with flowers in white tufts, not unlike the garden candytuft. The sweet scented yellow Mellilot is now plentiful as is also the Prunella and yellow Rattle.

The perforated St. John's Wort is now coming into flower everywhere and will continue till late in August, it is an upright plant from 1 to 2 feet high with clusters of yellow flowers; when the leaves are held up to the light they have the appearance of having been punched full of holes with a needle point; these seeming perforations are transparent vesicles full of the oil of St. John's Wort.

Wet meadows are now full of the purple Iris and as the Aster, and Solidago's are characteristic of the flora of our dry places, so is the Iris of our river banks and wet places, I have seen it extending for miles together it grows in company with the Forget-me-not and Blue eyed grass. The Yellow Iris of Europe is also found at Levis. I suspect that this as well as the Germander Speedwell has escaped from gardens, but it decidedly grows wild half a mile or more from the garden where it was probably first planted.

The Campanula rotundifolia will perplex the young Botanist—he has no difficulty about the blue bells but the "rotund" leaves are seldom to be found as they usually disappear before the flower—they grow plentifully on wet rocks on the St. Lawrence.

At the mouth of the St. Ann, opposite the Isle of Orleans grows plentifully Ranunculus Cymbalaria or Sea side crowfoot—showing that enough salt water comes up to the eastern end of the Island to allow some sea side plants to grow there.

Early in June and late in May, our trees are in blossom but they require a separate and more exact treatment— the former from their economic consequence and the latter from being such especial favorites.

Two medicinal plants grow very plentifully in Canada, the Henbane and the Hemlock—the dried leaves and the extract of both are imported from Europe whereas, they could be better gathered and prepared here.

The Carrion flower is also in flower towards the end of June. I once scented a foul dead horse—but no it was a flower, I had never seen it before. I seized the whole plant 5 or 6 feet long and carried it into town on my shoulder and passing through St. Roch's on a delicious summer evening offended the olfactory nerves of all loungers —they never suspected my flower and I walked on with the greatest gravity thoroughly enjoying the confusion I was creating.

McGill University.

CONVOCATION DAY.

The Annual Convocation of the Faculties of Law and Arts took place on the 2nd, inst, in the William Molson Hall. Mr. Peter Redpath, presided.

The proceedings were opened with prayer by the Venerable Archdeacon Leach, after which Dr. Johnson read the list of prize-takers and graduates in honours together with the standing of the students in the various classes in the

FACULTY OF ARTS.

PASSED FOR THE DEGREE OF B. A.

[In Honours.]

BLACKADER, ALEX, D., Brantford, Ont.
JOSEPH, MONTEFIORE, Quebec.
JOHNSTON, JAMES A., Onslow, N. S.
MORRISON, DAVID E.
MCINTOSH, JOHN, Montreal.
ROBERTSON, ALEXANDER, Montreal.

B. A. Ordinary.

Class I.—None.
Class II.—HOLIDAY, CALEB STRONG.
Class III.—MAJOR, GEORGE W.

PASSED THE INTERMEDIATE EXAMINATION.

Class I.—Hodge, Naylor, Ells, Maxwell, Crothers, Cross.
Class II.—Torrance (John F.), Whillans, Wallace, Allworth, Munro (Murdoch), Christie.
Class III.—Claris.

BACHELORS OF ARTS PROCEEDING TO THE DEGREE OF M. A.

Bancroft, Charles.
Hicks, Francis.
Morrison, John,
Stewart, Colin Campbell.
Wilson, John.

HONOURS AND PRIZE LISTS.

Graduating Class.

B. A. Honours in Mental and Moral Philosophy.

Johnston, James A.—First Rank Honours and Prince of Wales Gold Medal.

B. A. Honours in Natural Science.

Alexander Robertson—First Rank Honours and Logan Medal.
Alexander D. Blackader—First Rank Honours.
Montefiore Joseph—First Rank Honours.

B. A. Honours in English Language, Literature and Science.

John McIntosh—First Rank Honours and Shakespeare Gold Medal.
David W. Morrison First Rank Honours.

Fourth Year.

J. A. Johnston—Logan Prize of Twenty Dollars (surplus of Logan Medal Fund) for best collection of specimens in Zoology.

Third Year.

Cline, John D.—First Rank Honours and Prize in Classics; First Rank General Standing; Prize in Zoology.
Cameron, James—First Rank Honours and Prize in Mathematical Physics; First Rank General Standing; Thompson Prize of Fifty Dollars in Mathematics; Prize in Moral Philosophy.
Torrance, Edward F.—First Rank Honours in Classics.
Dey, William J.—First Rank General Standing; Thompson Prize of Fifty Dollars in Zoology.
Kelly, Frederick—Prize in Moral Philosophy and Rhetoric; Prize in German; Professor's Prize of Twenty Dollars in Botany for best collection of plants.

The Anne Molson Prize in Mathematics of Sixty-four Dollars, being value of Gold Medal, and not awarded last year, was won by James Cameron.

Passed the Sessional Examination.

Cline, Cameron, Dey, Torrance (E. F.), Tupper, Kelly, Munro, G.

Second Year.

Hodge, D. W. P.—First Rank General Standing; Prize in English Literature; Prize in French; Prize in Botany.
Naylor, Wm. H—First Rank General Standing; Thompson Prize of Fifty Dollars in Classics.
Ells, Robert W.—First Rank General Standing; Thomson Prize of Fifty Dollars in Logic and Modern Languages; Prize in German.
Maxwell, John—First Rank General Standing.
Crothers, William—First Rank General Standing.
Whillans, Robert—Prize in Logic; Prize in Hebrew.

Passed the Sessional Examination.

Hodge, Naylor, Ells, Maxwell, Crothers, Cross, Torrance [John F.], Whillans, Wallace, Allworth, Mnnro [M.], Christie, Claris.

First Year.

Tunstall, Simon J. [High School, Montreal].—First Rank Honours and Prize in Mathematics; First Rank General Standing; Prize in Classics. Thomson Prize of Fifty Dollars in English and Modern Languages; Prize in Logic; Prize in French; Prize in Chemistry.
MacDonnell, Richard I.—[Lennoxville Grammar School]—Prize in Classics.
Robertson.—Prize in English.

Passed the Sessional Examination.

Tunstall, Allan, MacDonnell, Hunt, Griffith, Robertson, Baynes, Reddy, Clarke.

Anne Molson Mathematical Prize (Third Year).

Cameron James.

Governors' Scholarship. (Third Year).

Cline John D. (For one Year-)

Jane Redpath Exhibition. (Second Year.)

Hodge, David, W. R.

CLASSIFICATION OF STUDENTS.

B. A. ORDINARY (LATIN). Class I.—Holiday. Class II.—Major. Class III.—None (HISTORY). Class I.—McIntosh, Holiday.

GREEK.

THIRD YEAR.—Class I.—Cline (Prize); Torrance [Ed. F.], Cameron, Dey; Kelly and McGregor, equal; Tupper. Class II. None. Class III.—Munro [Gus.]

SECOND YEAR.—Class I.—Hodge, Naylor (Thompson prize in Classics); Wallace, Crothers, Maxwell, Torrrance, [John Fraser.] Class II.—Ells; Allworth, Cross and Munro [Murdoch], equal; Christie, Whillans. Class III.—McLeod, Claris.

FIRST YEAR.—Class I.—Tunstall [prize]; MacDonnell, Hunt, Allan. Class II.—Griffith, Robertson, Baynes. Class III. — Mutch, Reddy, Moffat, Molson, Clarke Walsh,

LATIN.

THIRD YEAR.—Class I.—Cline [prize]; Cameron, Torrance [Ed. F.], Dey, Kelly. Class II.—McGregor and Tupper, equal; Munro [Gus.] Class III.—None.

SECOND YEAR.—Class I.—Hodge, Naylor, Maxwell, Crothers, Cross, Torrance [J. F.] Ells, Christie, Wallace, Allworth. Class II.—Munro [Murdoch]. Whillans, Wales. Class III.—McLeod, Claris.

FIRST YEAR.—Class I.—MacDonald [prize]; Tunstall, Hunt, Allan. Class II.—Griffith, Baynes. Class III.—Molson, Reddy, Robertson, Walsh, Mutch, Fleet, Clarke, Moffatt.

FIRST YEAR.—[HISTORY].—Hunt; MacDonnell and Tunstall, equal; Griffith, Robertson. Class II.—Baynes, Allan, Reddy. Class III.—Fleet and Molson, equal; Walsh, Clarke.

MENTAL AND MORAL PHILOSOPHY, ENGLISH LITERATURE AND LOGIC.

ORDINARY B. A. Class I.—Johnston, McIntosh, Morrison, Holiday. Class II.—Major.

MORAL PHILOSOPHY AND RHETORIC.

THIRD YEAR.—Class I.—Cameron [prize]; Kelly [prize]; Dey, Torrance, Cline, McGregor. Class II.—Munro, Tupper.

SECOND YEAR.—[Logic.] Class I.—Ells [prize] and Whillans [prize], equal;—Hodge, Naylor, Maxwell, Torrance, Wallace, Cross, Crothers, Munro. Class III.—Claris, Wales.

(English Literature.) Class I.—Hodge (prize); Naylor, Ells, and Maxwell, equal; Wallace, Cross. Class II.—Whillans, Crothers, Torrance, Munro, Christie. Class III.—Allworth, Claris, Wales.

FIRST YEAR.—Class I.—Tunstall (prize in Logic); Allan, Griffith, Class II.—Robertson (prize in English); MacDonnell, Reddy, Clarke, Baynes, Mutch. Class III.—Fleet, Molson, Hunt, Walsh.

FRENCH.

FOURTH YEAR.—Class I.—Joseph, Robertson. Class II.—Holiday. Class III.—None.

SECOND YEAR.—Class I.—Hodge [prize]; Crothers. Class II.—Ells, Allworth, Maxwell, Christie, Torrance. Class III.—Munro.

FIRST YEAR.—Class I.—Tunstall [prize] Class II.—Hunt and Robertson, equal; Class III.—Baynes, Molson; Allan and McDonnell, equal.

GERMAN.

THIRD YEAR.—[Advanced Course]—Class I. Kelly [prize.]

SECOND YEAR.—[Ordinary Course]—Class I.—Ells [prize]; Nighswander.

FIRST YEAR.—[Ordinary Course]—Class I.—Hunt.

MATHEMATICS AND NATURAL PHILOSOPHY.

B. A. ORDINARY.—[Mathematical Physics.]—Class I.—Johnston, Class II.—Joseph, Major, Holiday. Class III.—None.

B. A. ORDINARY.—[Experimental Physics] Class I.—Morrison, Blackader. Class II.—Robertson [Alex.] Class III.—McIntosh, Major.

THIRD YEAR.—[Mathematical Physics]—Class I.—Cline, Cameron, Dey. Class II.—None. Class III.—Torrance [Edw. F.], Munro [G.], Kelley, Tupper.

THIRD YEAR.—[Experimental Physics]—Class I.—Cameron, Dey. Class II.—Cline, Torrance [Edw. F.]. Class III.—Munro [G.] and Brodie, equal; Kelly, Tupper.

SECOND YEAR.—[Pure Mathematics]—Class I.—Crothers, Naylor, Ells. Hodge, Torrance [John F.], Maxwell, Cross. Class II.—Whillans, Munro [Murdoch], Wallace, Allworth. Class III.—Christie, Wales, Claris.

FIRST YEAR.—[Pure Mathematics]—Class I.—Tunstall, Allan, MacDonnell. Class II.—Griffitn, Hunt, Baynes, Brodie. Class III.—Reddy, Mutch, Robertson [A. H.], Clarke.

NATURAL SCIENCE.

FOURTH YEAR.—[Geology].—Class I.—Blackader, Joseph and Robertson, equal; Morrison, Johnston. Class II.—None. Class III.—Balch, Brodie.

THIRD YEAR.—Zoology.—Class I.—Cline [prize]; Dey, [Thomson] prize; Torrance and Tupper, equal; Kelly, McGregor. Class III.—None.

SECOND YEAR.—[Botany]—Class I.—Hodge [prize]; Maxwell, Christie, Cross. Class II.—Naylor, Allworth, Ells, Torrance, Whillans. Class III.—Wales, Nighswander, Crothers, Claris. Munro. Balch.

FIRST YEAR.—[Chemistry]—Class I.—Tunstall [prize]. Class II.—Hunt, Robertson, Allen, MacDonell, Reddy, Molson. Class III.—Moffatt, Clark, Griffith, Baynes, Mutch, Raynes.

HEBREW.

JUNIOR CLASS.—Class I.—None. Class II.—Griffith, MacAlister, Class III.—Sinclair, McIntyre, Clarke, Nighswander, McLeod.

MIDDLE CLASS.—Class I.—Whillans [prize]. Class II.—Naylor, Cross. Class III.—Claris, Wallace.

The prizes having been given to the winners,

Mr. BAYNES administered the usual formula to the graduates, after which the Vice Principal "capped" them and presented each one with his diploma.

Mr. G. W. MAJOR delivered the Valedictory, which went to prove that youth was no barrier to great achievements.

The following received the degree of M. A., in course—Messrs. J. C. Bancroft, (absent), F. Hicks, J. Morrison, Colin Campbell Stewart and John Wilson.

The VICE-PRINCIPAL then delivered an address in which he contrasted the past with the present history of the University.

The honorary degree of D. C. L., was conferred upon Mr. Wurtele, B.C.L., one of the acting lecturers in Law, and the degree of LL.D., upon Rev. C. Bancroft, M.A,, D.D.; Rev. W. Bond, M.A.; Rev. John Cordner, Mr. Henry Aspinwall Howe, Rev. Geo. Douglas, Rev. D. H. McVicar, Rev. H. Wilkes, M.A., D.D. A dispensation was granted to the Rev. G. Douglass on account of illness.

FACULTY OF LAW.

Prizes, Honours and Standing—Elizabeth Torrance Medallist, in special examination, covering the whole course.

JOHN SPROTT ARCHIBALD.

RANKING OF STUDENTS AS TO GENERAL PROFICIENCY.

THIRD YEAR.—1st, John Sprott Archibald; first in four classes, second in one class; 2nd, Thomas P. Foran, first in one class, second in three classes.

SECOND YEAR.—1st, Donald McMaster, first in three classes, second in one class; 2nd, John Calder, first in two classes, second in two classes.

FIRST YEAR.—1st, William de Montmolin Marler, first in three classes, second in one class; 2nd, William Guild Cruickshank, first in one class, second in one class; and Lewis William Poitras Coutlee, 2nd, three classes—equal.

BEST THESIS.

EDWARD CORNWALLIS MONK.

COMMERCIAL LAW.

Professor Abbott and Mr. Jonathan S. C. Wurtele, Acting Lecturers upon Commercial Law.

THIRD YEAR.—1st, John Sprott Archibald; 2nd, John Wesley Merry.

SECOND YEAR.—1st, John Calder and Donald McMaster, equal; 2nd, Leon François Sarrazin.

FIRST YEAR.—1st, William de Montmolin Marler; 2nd, Lewis William Poitras Coutlee.

ROMAN LAW (C. C. GIFTS, WILLS, EVIDENCE).

Professor Torrance and M. Treholme, B.C.L., lecturers upon Roman Law.

THIRD YEAR.—1st, John Sprott Archibald; 2nd, Thomas P. Foran.

SECOND YEAR.—1st, Donald McMaster; 2nd, Michael L. S. Lonergan, John Calder, equal.

FIRST YEAR.—1st, William de Montmolin Marler; 2nd Lewis William Poitras Coutlee and William Guild Cruickshank, equal.

JURISPRUDENCE AND CIVIL PROCEDURE.

Professor LaFrenaye.

THIRD YEAR.—1st, John Sprott Archibald; 2nd, Thomas P. Foran.

SECOND YEAR.—1st, Donald McMaster; and John Calder and Michael L. S. Lonergan equal.

FIRST YEAR.—1st, William de Montmolin Marler; 2nd, Lewis William Poitras Coutlee.

CUSTOMARY LAW AND LAW OF REAL ESTATE.

Professor LaFlamme.

THIRD YEAR.—1st, John Sprott Archibald; 2nd, Thomas P. Foran and John Wesley Merry, equal.

SECOND YEAR.—1st, John Calder; 2nd, Joseph Louis Calixte Archambault and Donald McMaster, equal.

FIRST YEAR.—1st, William Guild Cruikshank; 2nd, William de Montmolin Marler.

COMMERCIAL LAW,

Professor Carter.

1st, Thomas P. Foran; 2nd, John Sprott Archibald.

Professor CARTER, B. C. L., read the list of Prize-takers and Graduates, and intimated that the Elizabeth Torrance Medal had been adjudged to Mr. John S. Archibald, and that the best thesis had been written by Mr. E. Cornwallis Monk.

These having been "capped" and presented wtth their diplomas,

Mr. MONK, read the valedidtory, which was a vindication of the Profession of Law.

Mr. LAFLAMME then addressed the Graduates in French.

Rev. Professor CORNISH pronounced the Benediction.

Donations to McGill University.

The Corporation of Mc-Gill University have pleasure in acknowledging the following donations to the Faculty of Arts during the quarter ending April 27th, 1870:—

TO THE LIBRARY.

From the Provincial Government, Q.—Sessional Papers. Nos. 1—26 to Vol. I. Session 1869. 8vo.

From the Lords Commissioners of the Admiralty—Greenwich Observations in the year 1867. 4to.

From the Geological Survey of Canada—Geological Map of Canada.

From the Government of the Dominion of Canada, 1869. 8vo. Journals of the House of Commons of Canada. Session 1869. 8vo. Journals of the Senate of Canada. Session 1869. 8vo.

From the University of Toronto—Examination Papers, 1869. 8vo.

From the Royal Society of London—Philosophical Transactions. Vol. 159. Part 1st. List of Fellows of the R. S. Nov. 30th, 1869. 4to. pam. Proceedings, Nos. 109—115. 7 pam. 8vo. Catalogue of Scientific Papers. Vol. 3d. 8vo.

From the Norwegian University—Norges Officielle Statistik. 1 vol., and 20 pam. 4to. Thomas Saga Erkibysbups. 8vo. Materials for the history of the symbol of baptism (in German). pam. 8vo. Miscellaneous Papers. 7 pam. 8vo.

From Messrs. MacMillan & Co.—Harcourt & Madan's Exercises in Practical Chemistry. 8vo.

From Miss Gale—Encyclopedie, ou Dictionnaire Raisonné des Sciences, des Arts et des Metiers. 35 vols. fol.

From J. L. Peyton, Esq.—Peyton's American Crisis. 2. vols. 8vo. Adventures of my Grandfather. 8vo. Over the Alleghanies and across the Prairies. 8vo.

Visit of H. R. H. Prince Arthur to Villa Maria.

Wednesday, the 4th inst., was a gala day at the Convent of Villa Maria under the charge of the Nuns of the Congregation; for on that day these accomplished and devoted ladies, and the pupils under their charge, were honoured by a visit from the son of the Queen whom we all love and delight to honour. The approaches to the Convent were gay with flags. At 3 p.m. as the Prince accompanied by Col. Elphinstone, Lady Cartier, and others of our most distinguished citizens drew up at the door of the Convent, where the Prince was received by the Ladies of the Institution. There were present the Very Reverend G. V. Truteau and several of the Catholic clergy, besides many of the parents of the pupils who had been specially invited to assist at the Fete. On entering the *salle* in which, all tastefully arranged in white, the young ladies were prepared to receive him, the Prince was greeted by a well executed Grand March, after which the Programme was presented to him by Mlle Archambault; Mlles Macdonald and Salaberry had also the honour of tendering to the Prince a very beautiful bouquet. An address in French, the composition we believe of the pupils themselves, was then read, and very elegantly read too, by Mlle Honorine Chauveau, which Mlle Leblanc had the honour of presenting to H. R. Highness. The same address in English was next read gracefully by Miss May Reilly and presented to the Prince by Miss Donnelly. The illustrious visitor replied in both languages, giving feeling expression to the sentiments with which the scene inspired him. Music vocal and instrumental followed—a charming piece with piano and harp accompaniments "*Les Oiseaux du Bocage de Villa Maria*," and the scance concluded with *God Save the Queen*. After this, and a short address from the Grand Vicar, the party visited the new Chapel, and other parts of the large establishment, with all which they were highly pleased.

Here follows the address in English.

TO HIS ROYAL HIGHNESS PRINCE ARTHUR WILLIAM PATRICK ALBERT:

May it please Your Royal Highness.—Canada, exulting in the honor which has been done her by Her Gracious Sovereign, greeted the arrival of Your Royal Highness with an enthusiasm which loyal devotion and gratitude alone, can inspire. The City of Montreal is justly proud of having been chosen as the place of residence of a Son of Great Britain, during His sojourn in the Colony, and will ever rejoice in this privilege.

As for us, the happy inmates of this peaceful retreat, concealed beneath the fostering shades of Mount Royal, around whose noble brow linger the glorious associations of the past, we too, have shared in our Country's Jubilee, cherishing the sweet hope that these precincts, once the seat of Her Majesty's Representatives, would likewise be honored by the visit of the Illustrious Prince, whose presence sheds happiness around.

Your Royal Highness sees here assembled, pupils of various national origin, and belonging to governments differing entirely from one another yet, as members of the same family, all unite on this happy occasion, to tender to their August Sovereign in the person of Her noble and worthy Son, their respectful devotion, and ardent wishes for Her happiness.

May this feeble tribute prove agreeable to our Beloved Queen—She who enjoys the two-fold glory of governing the most powerful of empires, and reigning over the hearts of Her subjects by the charm of every virtue.

May we be here permitted to make known to Your Royal Highness, the modest origin of the Congregation de Notre-Dame. This order was founded in the age of Louis XIV, who favored it with His protection. During the reign of this illustrious Monarch, Marguerite Bourgeois, of immortal memory, left France in order to labor for the civilization of this Country, by the education of young females. The work of this admirable woman progressed beneath the fostering influence of Heaven's blessing, and it now comprises, including those of Canada and various other provinces of America, sixty-nine establishments, attended by fifteen thousand pupils.

The kind interest which Your Royal Highness has to day condescended to manifest in this Institution, will be considered by all the children of the heroic Marguerite Bourgeois, and by the pupils of this establishment in particular, a favor never to be forgotten, and which the annals of Villa Maria will proudly transmit to future generations.—*True Witness.*

Current Exchanges and Books Received.

The Rhode Island Schoolmaster, May 1870.

The Northampton Educator, May 21, 1870.

The Illustrated Educational Bulletin, devoted to a Uniform National Standard in text Books and Methods of Teaching.—New York, May 1870.

Kansas Educational Journal, the organ of the State Teachers' Association, April, 1870.

Littell's Living Age, Nos. 1352, 1353, 1354, 1355, and 1356, the only ones received since Jan. 22nd, 1870.

American Educational Monthly, devoted to Popular Instruction and Literature, June, 1870.

The National Normal, an Educational Monthly, Edited and Published by R. H. Holbrook, Cincinnati, O., May, 1870.

The Maine Journal of Education, May, 1870.

The Minnesota Teacher and Journal of Education, May, 1870.

The Young Crusader, May, 1870.

Good Health, May, 1870.—Vol. 1., of this excellent monthly is now ready, with a carefully prepared index, and bound in cloth extra. This volume is valuable as a book of reference, and should be in every household Price, $2 50. Now is the time to send your subscriptions to. Alexr. Moore, Publisher, 11 Bromfield St., Boston.

The California Teacher, A Journal of School and Home Education, and Official Organ of the Department of Public Instruction, May, 1870.

The Printer's Register, London, May 6, 1870.

The Mirror of Typography, March, 1870. This publication does not belie its title, "Mirror."

Typographic Messenger, April, 1870.

The Technologist, especially devoted to Engineering, Manufacturing and Building, May, 1870. March No. missing.

The Manufacturer and Builder, May, 1870.

Sabin and Sons' American Bibliopolist, A Literary Register and Monthly Catalogue of Old and New Books, and Repository of Notes and Queries, March, 1870.

Bibliotheca Occidentalis, A Catalogue of Books relating to North and South America and the West Indies,—Bernard Qaritch, 15 Picadilly, W. London.

Trübner's American and Oriental Literary Record, A Monthly Register, April 25, 1870.

Arkansas Journal of Education, May, 1870.

Appleton's Journal, June 4, 1870.

Whitney's Musical Guest, May, 1870. Single numbers, 25 cents or $1.00 per an. Contents of present No ,—Song and Chorus—"I have something sweet to dream of," Shattuck, 50 cents. Do.—"I heard a wee Bird singing," Linley, 30 cents. Instrumental—Oriole Polka, Davis, 40 cents.

Hitchcock's New Monthly Magazine of Choice Music, Art Notes, and Select Reading for the Family Circle, containing Illustrations, Biographical Sketches, Choice Musical Compositions, arranged for the Piano, Poetry, and Notes on Painting, Sculpture &c., issued on the 20th of each month. Contents of No. 8 (May) Clara Louisa Kellogg, Portrait and Biography; Robt. Burns, Old Songs, Time's Soliloquy, Taglioni and the Dog-stealer, Reviews, Musical and Dramatic; A night at the Old Olympic, J. Lester Wallack, Portrait and Biography; Chorus Singing, The Interrupted Offering,—Piano Music,—"Bright be the place of thy Soul," by James B. Taylor, "Queen of my Heart," by Dr W. J. Wetmore; Emily Galop, by James M. Deems; "Pensée du Moment," by R. Barnekor. Price $3 00 per an. in advance, specimen copies mailed, 25 cents each. Address Benj. W. Hitchcock, Publisher, 24 Beekman St., New York.

Peters' Musical Monthly. Contents of May No. (the first received since January) Nobody's Darling, Song and Chorus, by Will. S. Hays; Darling. Tell me Yes, by C. Kinkel; Drinking Gin, Temperance Song and Shorus; Floating Down the Stream, by George Cooper; Heaven claims her as an Angel; or Laura Liee. by Will S. Hays; Sweet Melanie, or Smiling she passed away, by W. L. Gardner; In the Grave-Yard softly sleeping, by G. W. Bungay; Spirit! Thy Labor is o'er, Quartett, by Mrs. L W. Trowbridge; There is a Land Immortal, Quartett; Rose Bud Mazurka, by J. Becht; Perpetual Rose Schottisch, by E. Mack; Solfaterre Polka (Yellow Rose) by A. P. Wyman; Messenger of Love (Morceau Elegant), by C. Kinkel; Chimes of Angels, Reverie, by Charles Kunkell. Terms $3.00 per annum or single nos. 30 cents. J. L. Peters, Publisher 599 Broadway, New York.

Howe's Musical Monthly. Contents of No. 10. Instrumental: — Berlinder Kinder Watzes, by Këler Bëal; Leben and Leiben, by C. Faust; Merchant's Casino, by Zungl: Trumpeter Polka, by C. Faust; Country Coquette Polka Mazurka, by Herman; Pictures in the Air, by J. Straus; Faschings—Freuden Galop, Strebinger; Plaisir Polka, by Zikoff; Sometimes Here and Sometimes There Galop, by C. Faust; Wild Flame Galop, by Herman; Bilse Polka, by Parlow; Minni Polka, by Bach; Morning Star Scottisch, by Held.—Songs, Piano Accompaniment: Be sure you call as you pass by, by Williams; I saw Esau kissing Kate, by Davis; Far, Far upon the Sea, by Russell; Rock the Craddle, John, by Caribel; Put it Down to Me... Shabby Genteel, by Clifton; Building Castles in the air, by Ballantine; Happy Thought, by Lloyd; He Giveth his Beloved Sleep, by Benedict; Paddy Blake's Echo, by Lover; Robin Adair (*Scotch*); Golden Shore, by Blamphin.—Terms, $3.00 per year, single copies sent by mail post paid for 35 cents.

Now, our readers will please just note the *contents* and the *price* of these musical publications and see what they lose by purchasing sheet music instead of subscribing for one or more of these *Monthlies*.

The Last Three Bishops, Appointed by the Crown for the Anglican Church of Canada, by Fennings Taylor, Deputy Clerk, and Clerk Assistant of the Senate of Canada.

From Dawson Bros, Montreal: *The Life of Bismark, Private and Political, with deseriptive Notices of his ancestry*, by George Louis Hesekiel, author of "Faust and Don Juan," &c. Translated and Edited, with an Introduction, Explanatory Notes, and Appendices, by Kenneth R. H. MacKenzie, F. S. A., F. A. S. L, with upwards of one hundred Illustrations. New York: Harpers & Brothers, 1870.

Annual Report of the Board of St. Louis Public Schools, 1868–9.

Cleveland Public Schools. Thirty-third Annual Report of the Board of Education for the School year ending August 31, 1869.

Our thanks are due Hon. W. D. Henkle, State Commissioner of Common Schools for the State of Ohio, for a copy of *Sixteenth Annual Report of Common Schools* for the year ending August 31, 1869.

MISCELLANY.

Education.

— *French Canadian Commercial High School.*—The R. C. School Commissioners are putting up a Commercial High School building, which promises to be a substantial, capacious and handsome edifice. Its situation, too, is good, being in a respectable yet populous part of the city and upon elevated ground. It will have two façades, one upon Ontario and the other upon Plateau street—the latter, we presume, being the principal one. The style is the early Gothic, and the material our Montreal lime stone. There will be a tower, with pointed roof, in the centre, and what is technically called a pavilion at each end. The whole structure will be two and a half stories in height, with high pitched roof and dormer windows. It is 125 ft. long, and calculated to accommodate three hundred pupils, but will not be opened until August of next year. There is also a large play ground, and a house corresponding in style and contiguous to the school has already been erected, and will be the residence of the teachers. The building is to be heated with hot water, have a complete system of ventilation, and be, as we are told, in general style similar to the better class of educational edifices, that at the present day, are being built in England. The cost of the ground was $16,000, and the estimated cost of the building is $50,000; the aggregate expenses, including fencing, &c., will, probably, not be less than $70,000 to $80,000. A school smaller in size, and intended to be somewhat of a more preparatory nature, is being put up in Fullum street, Quebec suburbs, and will be opened next Fall.—*Montreal Witness.*

—*Lord Lyttelton on Education and Endowed Schools.*—Lord Lyttelton, one of the three commissioners appointed under the endowed schools act, writes from Hagley, Staffordshire, in order, as his lordship explains, to remove certain exaggerated views existing, especially as to the powers of the commissioners. He says:—"The understanding about boys not being allowed to remain at school beyond a certain age proceeds on a misapprehension of the intended organization of schools. We conceive that each school ought to be complete in itself; and that the school education for boys who leave at 18, at 16, and at 14—three clearly defined classes of society, as we believe—is distinct. We intend, therefore, that boys of the third grade shall have, by the constitution of the school, completed their education at that school by 14, and that that school will have nothing further to offer them. Parents will almost always know to what kind of life they destine their boys, and whether they will wish them to leave school for active life at 14—say before their fifteenth birthday. If in the course of his school-life the boy developes unusual faculties such as show him to be fitted for a higher education, we say he ought not to remain at that school, which by its constitution, will not answer the purpose; but that facilities should be given to promote him on to a higher one. All this will be found in the report, and in the evidence of Mr. Canon Morris. The schools act has nothing to do with private schools. I have the strongest opinion that Greek ought not to be taught to boys who are to leave school at sixteen; and if a boy seems likely to profit by the higher schools, he may be removed into them at any time."

— *The Art of Thinking.* — One of the best modes of improving in the art of thinking is to think over some subject before you read upon it, and then to observe after what manner it has occurred to the mind of some great master. You will then observe whether you have been too rash or too timid, what you have omitted and in what you have exceeded, and by this process you will insensibly catch a great manner of viewing a question. It is right in study, not only to think whenever any extraordinary incident provokes you to think, but from time to time what has passed; to dwell upon it; and to see what trains of thought voluntarily present themselves to the mind. It is a most superior habit of some minds to refer all the particular truth which strike them to other truths more general, so that their knowledge is beautifully methodized; and the general truth at any time suggests all the particular exemplifications at once leads to the general truth. This kind of understanding has an immense and decided superiority over those confused heads in which one fact is piled upon another without the least attempt at classification and arrangement. Some men always read with a pen in their hand, and commit to paper any new thought which strikes them; others trust to chance for its reappearance. Which of these is the best method in the conduct of the understanding must, I suppose, depend a great deal upon the particular understanding in question. Some men can do nothing without preparation; others little with it; some are fountains, some reservoirs.—*Rev. Sydney Smith.*

Literature.

— *Baptismal Names and their Signification.*—For the benefit of those curious on this subject, we give a partial list of female names, with their meanings:

Adelaide, Adèle, Adelina, Alice, Aline, *noble maiden.*—Adrienne, *virile courage*—Agatha, *good*—Agnes, *pure, innocent*—Alexandria, *protectress of warriors*—Amanda, *amiable*— Amelia, *powerful above all*—Anne, *graceful*—Anastasia *resurrection*—Angela, *messenger of the sun* — Antoinette, *inestimable*— Augusta, *venerable* — Aurelia, *sun*—Aurora, *daybreak*—Barbara, *stranger*—Beatrice, *ever happy, blessed*— Berenice, *victory*— Bertha, *bright, illustrious*— Blanche, *fair-skinned* — Bridget, *strength*— Camilla, *free maid*— Caroline, *valiant, celebrated*—Catharine, *pure, sincere*—Cecilia, *blind, small eyed*—Celeste, Celestine, *celestial*— Charlotte, *valiant*— Christine, *Christian*—Clara, *famous*—Claudia, *lame*—Clementine, *merciful*—

Constance, *firm*—Coralie, *young and beautiful*—Cordelia, *jewel of the sea*—Cornelia, *crow, bird of augury*—Cyrilla, *lordly*—Dagmar, *Dane's joy*—Diana, *goddess*—Dolores, *sorrows*—Dominica, *Sunday child*—Dorcas, *gazelle*—Dora, Dorothea, *gift of God*—Drusilla, *strong*—Eleanor, *disguised perfume*—Eliza, Elizabeth, *oath of God*—Ella, *elf-friend*—Elvira, *white*—Elsie, *noble cheer*—Emily, *gentle*—Emeline, *melody*—Emma, *protectress*—Ernestine, *earnest*—Esmeralda, *emerald*—Estelle, *star*—Eugenia, *happily born*—Eva, *life*—Evangeline, *happy messenger*—Fanny, Frances, *free*—Faustina, *lucky*—Felicia, *happy*—Fenella *white-shouldered*—Flora, *flowers*—Florence, *flourishing*—Gabriella, *hero of God*—Genevieve, *white maid*—Georgiana, *husbandman*—Geraldine, *spear power*—Gertrude, *spear maid*—Gwendoline, *white-browed*—Harriet, Henrietta, *home ruler*—Helen, *light*—Heloise, *famous holiness*—Hortense, *gardener*—Ida, *thirsty*—Inez, *pure*—Irene, *peace*—Isabel, *oath of Baal*—Jacintha, *purple*—Jane, Jenny, Jessie, Johanna, *grace of the Lord*—Josephine, *addition*—Judith, *praise*—Julia, *downy bearded*—Justina, *just*—Laura, *laurel*—Leonora, *light*—Letitia, *gladness*—Letty, *truth*—Lilian, Lillas, *lily*—Lilla, *oath of God*—Louise, *famous holiness*—Lucy, *light*—Margaret, *pearl*—Martha, *becoming bitter*—Mary, *a tear*—Matilda, *mighty battle maid*—Melanie, *black*—Melissa, *bee*—Mildred, *mild threatener*—Muriel, *myrrh*—Nathalia, *Christmas child*—Nora, *honor*—Octavia, *eighth*—Olympia, *Olympian*—Ophelia, *serpent*—Paulina, *little*—Philippa, *lover of horses*—Phœbe, *shining*—Phyllis, *foliage*—Portia, *of the pigs*—Priscilla, *ancient*—Rachel, *ewe*—Rebecca, *noosed cord*—Regina, *queen*—Rhoda, Rosalie, *Rose*—Rita, *pearl*—Rosalind, *famed serpent*—Rosamond, *famed protection*—Salome, *peaceful*—Sarah, *princess*—Selina, *moon*—Seraphina, *seraph*—Sophia, *wisdom*—Stephania, *crown*—Susan, *lily*—Sylvia, *wood maiden*—Tabitha, *gazelle*—Tamar, *palm*—Thomasine, *twin*—Teresa, *corn bearer*—Ulrica, *noble ruler*—Urania, *heavenly*—Ursula, *bear*—Valeria, *healthy*—Veronica, *true picture*—Victoria, *conqueror*—Viola, *violet*—Virginia, *flourishing*—Wilhelmina, *helmet of resolution*—Yolanda, *violet*—Zenobia, *father's ornament*—Zillah, *shadow*.—*Canadian Illustrated News.*

—MRS. ALFRED GATTY has undertaken to contribute to *Mission Life* a series of articles for children, to be entitled "Little Workers and Great Work."

Science.

The Science of Plants.—Boussingault some years ago discovered that flowers and leaves separated from a plant went on evolving carbonic acid, which he accounted for by supposing that the separated leaf continued to take oxygen from the air and give off carbonic acid just as when attached to the plant. But Mr. Broughton has found, the *Globe* asserts, that various parts of plants will evolve considerable quantities of carbonic acid after they have been deprived for days together of all access of oxygen. The same happens with growing plants and with cut portions of plants, both of which evolve considerable quantities of carbonic acid, and quite independently of direct oxidation; and this evolution goes on in the daylight as well as in the dark. It appears to be due to the previous absorption of oxygen, which results after the lapse of time in the production of carbonic acid, and also to changes which take place in the proximate principles of a plant during its growth. In any case we have learned a new and interesting fact in connection with vegetable physiology.

—In a summary report of the progress of Geological investigation made in 1868, Sir W. E. Logan, says:—

"As much interest has recently been excited by the reported discoveries of gold bearing rocks in New Brunswick, Mr. Robb visited some of the lands in Victoria county which had been leased for gold mining purposes. He also visited and made special examination of those localities, within the general area designated, which have been supposed to be productive of other minerals of economic value, or in which mining operations had been instituted. Quartz veins, forming apparently lenticular masses and running in the strike, characterise the slates in many parts, and several in Victoria county were pointed out to Mr. Robb, as having yielded the precious metal. None of it was visible to the naked eye, and specimens of the quartz were therefore brought to the Survey Office for assay. They have been analysed by Dr. T. Sterry Hunt, but no gold has been found in them. This, however, is not to be taken as an absolute proof of the absence of the precious metal in every part of these veins, for the presence of gold in quartz is so capricious that of several specimens taken from the same vein, some may yield a fair quantity and others none at all. The slates in which most of the auriferous quartz occurs in the Eastern Townships of Quebec, are classed as Upper Silurian, and they appear to have some resemblance to those of Victoria. The discovery of alluvial gold also in Victoria, asserted by several respectable persons is a further evidence on the subject, though none of it rewarded the trials of Mr. Robb."

—*Transit of Venus.*—The Queen has sent a message to Parliament that due provision has been made for observation of the transit of Venus in 1874. Transits of Venus are as rare as they are important. They occur in couples in June and December, about eight years apart, and then not again for several generations. Kepler was aware of the phenomenon, and as early as 1604 announced that one would take place in 1761, but young Horrocks, of Liverpool, with better tables and additional data, calculated that there would be a transit on the 4th of December, 1839. He let a friend into the secret, and these two, on the day named, for Venus was punctual, were the first ever known to observe it. It was soon calculated that one must have taken place on the 16th of December, 1631, and another in June, 1826, and that the next would not occur till the 5th of June, 1701. But of all the transits, past and to come, the climax would be that of the 3rd of June, 1769, when Venus passed across the disc of the sun very near the centre. The next one, but not visible in this country, will take place five years hence, on the 8th of December, 1874, which will be a grand one for science considering the great advance in scientific instruments, but far inferior to the last. If, however, it produces only kalf-a-dozen Cæsars it will be a godsend to this rapid century. Let young folks take note of the date, 1874. Another will occur on the 6th of December, 1883, but not again till nearly five quarters of a century later, on the 7th of June, 2004; to be followed eight years after, on the 5th of June, 2012; to be repeated in December, 2117, and so on. The last *Transit of Venus* was a conjunction of planets coincident with the birth of twelve imperial men of nature, more renowned than the twelve Cæsars. No other single year, probably before or since, ever produced such men as Napoleon, Wellington, Soult, and Ney; Brunel, Mahomet Ali, Turner, Sir Thomas Lawrence, Chateaubriand, and Castlereagh; Cuyler and Humboldt; men who upturned the world and set it right again; who revolutionized science, art, politics, states, and affairs of mankind.

Art.

—*A New Process in Lithography.*—"Messrs. Maclure, Macdonald & Macgregor, of this city," writes the *Manchester Guardian*, "have recently perfected a simple process whereby every artist can become his own lithographer. It consists in a peculiar preparation of the surface of the paper and the provision of prepared chalk. With a solid sketching pad of this paper an artist may draw what he please and the sketch is itself transferred to the stone, whence any number, can be struck off. In this way the many inconveniences of the old transfer paper are avoided. No intermediate draughtsman is required, and thus the expense of multiplyiug a portrait or sketch of any kind is reduced to the cost of the paper and of working off the copies. We have seen architectural drawings, groups of figures, portraits, ornamental designs, and landscapes that have been lithographed in this way, all were good. Indeed the print is necessarily a *fac-simile* of the original drawing. The paper is made of various degrees of fineness, and the prints are correspondingly of broad or fine stipple. By the aid of the india-rubber pentagraph, these lithographs may be reduced in size almost indefinitely.

Two Curious Needles.—The King of Prussia recently visited a needle manufactory in his kingdom, in order to see what machinery combined with the human hand, could produce. He was shown a number of superfine needles, thousands of which, together, did not weigh half an ounce, and marvelled how an eye could be pierced in such minute objects. But he was to see that in this respect even something still finer and more perfect could be created. The borer—that is, the workman whose business it is to bore the eyes in these needles—asked for a hair from the monarch's head. It was readily given, and with a smile. He placed it at once under the boring-machine, made a hole in it with the greatest ease, furnished it with a thread, and then handed the singular needle to the astonished king.

The second curious needle is in the possession of Queen Victoria. It was made at the celebrated needle manufactory at Redditch, and represents the column of Trajan in miniature. This well-known Roman column is adorned with numerous scenes in sculpture, which immortalize Trajan's heroic actions in war. On this diminutive needle, scenes in the life of Queen Victoria are represented in relief, but so finely cut and so small, that it requires a magnifying-glass to see them. The Victoria needle can, moreover, be opened; it contains a number of needles of smaller size, which are equally adorned with scenes in relief.

Meteorology.

—From the Records of the Montreal Observatory, for April, 1870,—By CHAS. SMALLWOOD, M.D., LL.D., D.C.L.

DAYS.	Barometer corrected at 32°			Temperature of the Air.			Direction of Wind.			Miles in 24 hours.
	7 a.m.	2 p.m.	9 p.m.	7 a.m.	2 p.m.	9 p.m.	7 a.m.	2 p.m.	9 p.m.	
1	30.521	30.317	30.201	34.7	52.3	40.0	N E	N E	N E	94.11
2	.139	.124	.101	55.2	61.0	40.0	N E	N E	N E	77.24
3	.164	.289	.175	32.0	50.1	30.7	N E	N E	N E	241.10
4	.101	.076	.000	28.0	35.1	33.0	N E	N E	N E	219.29
5	29.811	29.874	29.900	31.9	36.1	32.4	N E	N E	N E	340.71
6	.969	.952	.950	35.0	41.0	35.1	N E	N E	N E	90.41
7	.897	.874	.948	34.7	42.1	39.0	N E	N E	N E	65.17
8	30.000	.999	20.001	35.0	62.3	47.0	W	W	W	89.12
9	.074	30.099	.112	38.1	66.0	36.1	W	W	N	77.00
10	.199	.174	.125	40.2	69.8	49.2	W	W	W	56.74
11	.050	29.900	29.911	43.0	76.0	47.7	W	W	W	54.10
12	29.782	.897	.900	43.1	66.9	44.0	N	N	N	31.42
13	30.060	30.001	.991	34.7	50.0	45.2	N	N by W	N by W	29.24
14	29.850	29.834	.887	47.0	63.7	32 2	W	W	W	51.14
15	30.201	30.311	30 327	37.0	46.7	37.3	N E	N E	N E	297.10
16	.300	.271	.184	41.3	44.0	43.9	W by S	W	W	314.27
17	.100	.061	.000	40 1	63.9	49.1	S W	S W	S W	204.00
18	29.952	29.911	29.849	41.3	58.0	44.1	N E	N E	N E	89.12
19	.762	.750	.700	42.7	45.0	40.1	N E	N E	N E	241.10
20	.676	.711	.750	41.1	45.2	39.7	N E	N E	N E	174.10
21	.800	.827	.850	38.1	48.0	41.1	N E	N E	N E	89.12
22	.861	.900	.927	39.7	64.1	50.4	N E	S W	S W	66.21
23	30 001	30.002	30.000	48.0	65.7	54.0	S W	S W	S W	55.20
24	29.961	29.982	29.980	65.4	66.9	54.1	S W	S W	S W	77.94
25	30.100	30.165	30.200	39.6	71.4	50.2	N E	N E	N E	89.29
26	.067	29.996	.016	41.0	64.7	56.1	W	W	W	104.29
27	29.901	.852	29 800	49.3	71.7	50.2	W	W	W	311.17
28	.576	.779	.861	58.4	67 0	50.1	W	W	W	209.10
29	30 081	30 112	30.000	39.1	62.3	46.8	W	S W	W	89.24
30	29.969	29.814	29.798	41.7	66.2	53.7	W	W	W	99.00

Remarks.—The highest reading of the Barometer (15th), indicated 30.327 inches; the lowest (20th), 29.576,—monthly range 0.741 inches. The highest temperature (11th) was 76° ; the lowest reading of the Thermometer (4th), indicated 28°, monthly range, 48°. The mean temperature of the month was 47° 07, which is 7° 07 higher than the *isotherm* for Montreal for the month of April. Rain fell on six days, amounting to 0.313 inches. Snow fell on two days, amounting to 0.45 inches.

—Meteorological Observations taken at Quebec, during the month of April, 1870 ; by Sergt. John Thurling, A. H. C., Quebec.

Barometer, highest reading on the 16th	30.215	inches.
" lowest " " 28th	29.341	
" range of pressure	0.874	
" mean for month (reduced to 32°)	29.738	
Thermometer, highest reading on the 27th in shade	73.0	degrees.
" lowest " " 2nd	26.8	
" range in month	46.2	
" mean of highest	50.6	
" mean of lowest	32.8	
" mean daily range	17.8	
" mean for month	41.7	
" highest reading in sun's rays	108.0	
" lowest temperature on the grass	24.6	
Hygrometer, mean of dry bulb	43.8	
" " wet bulb	38.4	
" " dew point	32.0	
" elastic force of vapour	.181	
" vapour in a cubic foot of air	2.1	grains.
" " required to saturate do	1.1	
" mean degree of humidity (Sat. 100)	63	
" average weight of a cubic foot of air	548.3	
Cloud, mean amount of, (0-10)	6.2	
Ozone, " " (0-10)	4.4	
Wind, mean direction of " North	4.25	days.
" " " " East	12.00	
" " " " South	4.50	
" " " " West	7.25	
" " " " calm	2.00	
" " force by estimation	3.1	
" " daily horizontal movement	166.5	miles.
Snow fell on	5	do.
Rain fell on	7	days.
Amount collected	0.82	inches.