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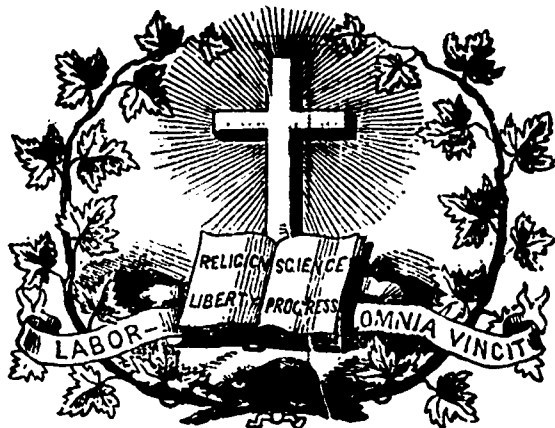
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JOURNAL OF EDUCATION.

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SUMMARY.—**EDUCATION:** British statesmen and public education.—Primary schools.—Teachers library.—Question for the self-examination of teachers.—School days of eminent men in Great Britain, by John Timbs, (continued).—**LITERATURE:** The Nativity, by Campbell.—Christian endurance, by Milnes.—**EDITORIAL:** Notice to teachers.—Penalty under the amended school act.—School furniture.—**CANADIAN BIOGRAPHY:** Memoir of the late Robert Baldwin.—Memoir of the late Jacques Viger.—**NOTICES OF BOOKS:**—The temple of Serapis at Pozzuoli, by Sir E. W. Head.—On the ventilation of schools, by H. Miles, Esq.—**MONTHLY SUMMARY:** Miscellaneous intelligence.—Literary intelligence.—Scientific intelligence.—Statistical intelligence.—**WOOD CUTS:** Models of chairs and desks.—View of the interior of a school house.

EDUCATION.

British Statesmen and Public Education.

During the present Parliamentary recess, members have been according to annual custom, lecturing at Mechanic's Institutes, presiding at agricultural, and various local and general meetings, expressing rather freely their opinions on all topics of public interest. The following are the opinions of some of the more prominent actors upon public education.

LORD JOHN RUSSELL in his inaugural address before the National Association for the Promotion of Social Science, just held in Liverpool, expressed himself thus:—

"I will not waste your time in examining and refuting the objections which have been made to the general education of the people. It may suffice for me to say that it is education which enables the Scotch labourer's son to compete with the most favoured of his contemporaries, to rise to the highest posts of dignity and power, and to scale the loftiest eminences of science. It is education which enables the United States of America to proceed in their wonderful career, upheld by the most popular institutions, without serious disturbance of law and order. It is education which in England has mainly prevented such tumults as forty years ago broke the peace and alarmed the minds of this country; it is education which has bound the mass of the people to the Throne by the links of an enlightened loyalty. On the subject of education there appears to me to have been a change somewhat similar to that which took place many years ago on the subject of geology. At that period geologists were divided into Neptunians or Vulcanians, Wernerians or Huttonians, and hot was the dispute regarding the best theory of the formation of the crust of the world. Some wise men said, however, "Let us first investigate the facts without troubling ourselves what theory they may confirm or invalidate." This diminished, science has gained by the change. In like manner popular or national education has been a matter of warm contention among sects and parties till the present year. Sir J. Pakington, who presided in the Department of Education last year, and who deserves the highest credit for his labours on this subject, proposed in the late session of Parliament, with the concurrence of the best friends of the cause, that an address should be presented to the Queen in

favour of the appointment of a Royal Commission, to inquire into the present state of the education of all classes in England and Wales. The late Government acceded to this proposal, and the present named commissioners of high reputation and weight in the country, of whom the Duke of Newcastle is the president. From this Commission we look for a fair and impartial display of facts, upon the bearing of which Parliament and the nation can decide. Opinion is still in the gristle upon this subject. For my own part, I confess that, anxious as I am for the progress of education, I am quite willing to renounce any desire to establish in this country the system of France, Austria, or Prussia. The freedom of choice in our modes of popular instruction, the noble fountains of literature, sacred and secular, which are open to the youth thirsting for knowledge, the power to range over the writings of Bacon and Shakespeare, and Milton and Addison, seem to make our national education, imperfect and incomplete as it is, still far superior to those continental models. I must not omit to mention the great efforts which have been recently made to improve the education of the middle classes. The examinations instituted by the University of Oxford do honour to that venerable body. Nor ought we to pronounce hastily on the result of the first of these examinations. It seems to me apparent that at a time, when not only degrees and honours are attached to successful competition, but the very entrance to the civil service and the scientific part of the military service in India is guarded by examiners, it is of the utmost importance to understand rightly what the nature of the prescribed inquiry is to be. I hope that while all honour is paid to attainments, while quickness and self-possession on the day of trial have their due reward, the qualities of diligence, and fidelity and steadiness in a clerk, of a ready perception and a prompt judgment in a soldier, will not escape the judging eye of our chief examiners. Even in awarding a degree much discrimination is required, and a failure in one branch of knowledge may be balanced by excellence in another. Some severity at the commencement of such a system itself must be carefully watched, and the experiment must often be repeated before it can be said that the strength of our new machinery has been fully tested."

LORD JOHN MANNERS before the Waltham Agricultural Association, advocates more earnest attention to physical training:—

"We all know how the education of the children of the peasantry of this country has received a great and sensible influence from the speeches which have been made and the suggestions which have been thrown out at meetings of this kind. But so much has been said on that subject, and so certainly do I think the progress of education in its common and hacknied sense to be secured in the country, that I will dwell no longer upon it further than to say that I hope in our zeal and our endeavours to promote the education of the intellect we shall not altogether lose sight of the education of the bodies of the children of the labouring classes. I attach such importance to the manly and athletic games and pastimes, which have heretofore characterized all classes of our English community, that I would say to all men, however wise, however stupid, however

rich, however old, stimulate and foster every manly and athletic game, commencing from marbles and ascending unto fox hunting, and if there be anything above and beyond fox hunting, then teach the labouring classes that. Tend them religiously, and from the lowest and the humblest, up to the maturest and the highest of our national sports and pastimes, let us endeavour to promote them one and all. I say this because I have noticed with pain and concern a heresy, as it seems to me, growing up and spreading in this country, the upshot of which will be that England will be divided into two great classes—those who spin and those who study.”

SIR JOHN FAIXINGTON before the Worcester Union of Mechanics' Institutes, thus gives his opinions of the merits of such institutions:—

“He highly approved their general objects, but particularly that for the encouragement of evening classes. These classes well organized would lead the working men to value these institutes, and impress upon them more fully their advantages: they would also afford the means of bestowing good sound educational principles upon those whose early education had been neglected: and they would complete the education of those who had got no further than the schools had led them—too commonly the fate of the industrial classes. He regarded these institutions for the working classes much in the same light as he regarded the Universities in the higher ranks of life viz., as a means of carrying the knowledge already possessed by the students further than it had reached, and preparing them for taking higher and more honourable, as well as more useful positions in the particular condition of life for which they were destined. He hoped those who had established this union of institutes would persevere in the good work which they had begun. It was a work of great importance, and one which deserved and would receive the gratitude of the public. He thought the necessity for the extension of education was now generally acknowledged. The only question was how that could be best promoted. No one now would think of impeding the progress of such a national movement. Every reflecting mind acknowledged that it could not be the will of God that man should be allowed to live in ignorance of things past and to come; things human and divine, great and small, on the earth or in space; or that the noble gifts given to man should be left uncultivated, any more than it could be the will of the Almighty that the soil of the earth should remain untilled and barren. It was our duty, therefore, as citizens, philanthropists, and politicians, to promote education and the extension of knowledge, and no man would in this age, and in this free country, discourage the objects which these institutions had in view. He had no fear of knowledge, and without pretending to the expounding of any scheme of political reform, he would say that one of our first duties was to see that those who had to exercise civil rights were made by education first and competent to discharge them. It was said that “a little knowledge is a dangerous thing”; he was not afraid of knowledge, but was afraid of ignorance, with its headstrong passions and prejudices, and it was their duty to extend as far as they could the spread of knowledge, and to put an end to ignorance.”

MR. SOTHERON ESCOTT, President of the Poor Law Board, in his presidential address before the Hants and Wilts Education Society, made the following observations:—

“By the cause of education generally, in common parlance, we mean teaching children from the first day they enter an infant school until the age at which they go to work—that has during the last fifty years been popularly called the cause of education by the people; and there is no doubt whatever about the interest which the people of England take in that part of the question. But, if we come to consider the cause of education in reference to that period of life when the intellect has become more matured, when it has obtained the power of appreciating and understanding the ideas suggested to it, then we must all admit that in this country the cause of education has been much neglected. What has been the course which we have been pursuing? We have had large sums of money distributed by private enterprise, and by the State at large, for the promotion of education. Many gentlemen have devoted their time, their energies, and their substance to the establishment of schools all over the country. We find that the question has been made the subject of party discussion and party competition—a thing which can never be avoided in this country, and which, upon the whole is, perhaps, rather a good than an evil. I say, although we have the State and individuals competing with each other, and striving to do all they can for the establishment of schools, and although we are expending an amount of nearly £1,000,000 out of the public funds of the country for the same purpose, yet we cannot blink the result that, as respects the great masses of the country exactly at that moment when ideas begin to take the place of mere sound, when memory, which is one of the earliest faculties of the mind, begins to carry away

something like the substance, instead of sound, we find the whole body of our schools withdrawn from our ken by the necessity which is cast upon the parents of sending the children out to work. Now, the question is, what shall that remedy be, and as on former occasions the subject has been discussed by us, the same course will be continued until we arrive, as I hope we shall, at a solid practical result. I am not so presumptuous as to wish to put in my own remedy, but I must be permitted to say what I think we cannot do. I am persuaded that anything like an attempt to catch hold of young men and young women after they leave school, and by holding out either a pecuniary reward or in any other manner attempting to persuade them to take a deeper interest in the subject of education than their own minds naturally induce them to take, will end in failure. I know that it is a most tempting thing for any clergyman or country squire, who has taken the trouble to establish a school in his parish or his estate, to offer an artificial stimulus of that kind, for the purpose of inducing them to attend the school and give more attention to their mental culture. But anything of that kind has a tendency to draw them away from their natural employment, and can only be carried out in very exceptional cases. What we ought to do is to devise some means of attracting and keeping a hold on the young after leaving school, without interfering with their ordinary occupations or interfering in any way between the employers and employed. It is rather too much to expect that an employer will consent to keep a boy at school at the time when he ought to be at work; and indeed, even in that case, I doubt very much whether such a plan would be successful. I can give you an instance in which it was not. Some years ago I was very desirous of doing something of the kind in my own parish, and I engaged two boys to do a certain amount of work; but I made an engagement with them that I would not pay them unless the boy who was not employed in labour attended the school. I, however, totally failed, for the boys preferred labour to school, and both of them left my employment as soon as they could find others to give it to them. I attempted to interfere artificially with their natural desire and I deservedly failed. I think, therefore, we may lay it down as a general principle, that the only enduring mode by which we can hope to effect the object we have in view is to adopt some system which shall produce in the minds of the boys when they are leaving school a desire to continue the improvement of their minds. To speak plainly, I see no other remedy for the evil. Much good may, I think, be done by evening schools, nor do I think that in all instances paid masters will be necessary, for I think it very probable that many young men of from twenty-five to thirty years of age, competent to fill the situation, would do so for a comparatively small addition to their ordinary earnings, and I know that such is the case in my own district; but after all the main thing is to interest the people themselves, and I take the liberty of mentioning that at the time of the Crimean war and the Indian mutiny the greatest desire was evinced in many of the rural parishes to know what was going on. In my own district I endeavoured to supply the want by establishing a news-room, to which the subscribers paid one penny a-week, but at the end of it many of them came to me and said, “Sir, we cannot go on; we have all been to school and can read, but we cannot read these newspapers; the print is so small, and they are so hard to read.” By my advice they chose a reader for them, and by that means were enabled to meet the difficulty and great good was effected. I think it very desirable that some other name than that of schools should be given to the establishments which adults frequent for the purpose of education, because I think oftentimes the very name of *schools* would deter men from going there, as they would fear the gibes of the younger persons. If once an interest is created among them some way will be found to effect our object, and perhaps no means would be more useful than that of employing readers. I also think the introduction of drawing into such establishments most desirable, for nothing tends to form the mind and give the first elements of instruction to a man more than drawing, however roughly it may be done. Let us, however, always remember that we must not interfere with the ordinary active occupations of those men whose business in life will be to earn their own livelihood.”

THE RIGHT HON. W. E. GLADSTONE, M.P., at the Liverpool meeting (in St. George's Hall, Oct., 17th.) for awarding prizes to the successful candidates in the recent Oxford Examination, in proposing a resolution embodying an expression of gratitude to the Universities for the establishment of these examinations, after some preliminary remarks spoke as follows:—

“I trust we feel that the gift which has been offered to us in this matter is a real gift—that these examinations are to be a real and substantial good. There are some, perhaps, who are sceptical upon

that subject. There are some who will tell us—and tell us truly—that a perfectly disinterested love of learning, a love of learning which needs no spur or incentive from without, but which is led forward by the intrinsic charms and graces of the subject, that that is the love of learning which is most truly valuable. This may be so in the abstract; and there have been cases in which poverty itself has proved no insurmountable obstacle to that thirst for instruction which, in earlier times of less material development, led men from the very ends of the earth to the sources where knowledge was to be acquired. But we are to consider the wants and the exigencies, the dangers and the temptations, of the particular age in which we live; and I appeal to you whether it is not true, that, in a time of great commercial enterprise and of rapid commercial development, there is such an increase of the danger that all the higher aspirations of our nature will be overborne that it becomes us, as wise men—as practical men—to seek the aid of every instrumentality which may assist us in keeping alive that culture of the human mind and of the human intellect which has done so much for this country and for Christendom; which so greatly contributes to the adornment and enjoyment of life, and without which no great society can discharge its highest and most sacred duties. The system of examinations which has been organized is no novelty. Those who come from the Universities have had long experience upon that subject; and if you are told that the effect of competition is to introduce an ungenerous rivalry into the minds of youth, if you are told that the stimulus given to schools will lead to the neglect of the mass of the pupils, in order that there may be more time and greater opportunity in the higher cultivation of a favoured few—if you are told, as you are sometimes honestly, but erroneously told that the effect of competition is to give an undue preponderance to the intellectual, as compared with the moral elements of character—rely upon it that those who speak from an experience which has extended now over centuries, will tell you that you may safely dismiss from your minds at once all such apprehensions. I say frankly and fearlessly that there is nothing more generous than the sentiments which are inspired into the breasts of youths by rivalry such as that to which I am now referring. It is in itself essentially incompatible with selfish ideas and objects. Learning is not a limited quantity in such sense that he who obtains it becomes a standard-bearer for others; and the treasure to which he invites them is a treasure which is acceptable to all mankind. And as to schools, depend upon it that that is an idle apprehension, and that the schools which pay the greatest attention to their best boys will, as a general rule, pay the greatest attention to all their boys. As to the apprehended preponderance of the intellectual over the moral qualities, I will venture to say to those who make such an objection, that they are under an error as serious as can well be conceived; for if there is one more fact more generally and conclusively established than another, by examinations of the teachers of youth, it is this, that diligence, and the self-denial which diligence involves, are in themselves a test of moral qualities, no less than the promise of intellectual distinction. I must say a few words in explanation of the main consideration which induces me to urge this resolution on your notice. I see in this resolution, and in the subject to which it relates, not the close and consummation of the examinations which have lately been held, but the beginning of greater things. I see in them the resumption by the ancient Universities of the country of their true relation to all classes of the community, as institutions which have been the pride and glory of Christendom, and which ought to dispense their benefits to all ranks of our fellow-citizens. This was the true aim of the Universities upon their first foundation. They never were intended to be the monopoly of the rich. They were intended to work the deep mines of capacity and of character which exist throughout the whole of every great civilized community; they were intended to draw forth from hidden corners and recesses, wherever they existed, the materials of genius and excellence for the glory of God and the advantage of the country; and that they fulfilled. Go back to the periods when the great movements of the human mind commenced, and see where it was that those processes were elaborated, and whence it was that 400, 500, 600, 700 years ago, light flowed in England. It was from the Universities; and as one great poet, Milton, has called Athens the "Eye of Greece," so well and truly may it be said, in reference to their early history, that the Universities of Oxford and Cambridge were the eyes of England. I do not say that at present that function is fully discharged. On the contrary, we see that for several centuries those universities have performed duties most important indeed and most useful, but comparatively limited. In the main, their utility has been chiefly confined to the rich. They have educated the clergy, and in so doing have performed a great service to the country. They have educated the greater number—almost the whole, indeed—of the sons of our high nobility. They have educated the princi-

pal part of the sages of the law; but that is not the whole of their duty; we have in England vast classes of men who are not comprised in the category to which I have referred—vast classes of whom the great assembly now before me is a specimen—and I must confess that I have never come into South Lancashire, whether into this town of Liverpool, or into the great and intelligent community of Manchester, without feeling deeply what a blank there was—what a void existed requiring to be filled up—and how the connexion between the Universities and this great community of South Lancashire had so dwindled away that it would make but little difference in the Universities if South Lancashire were in ruins. This shows that we have fallen far short of that which our forefathers designed. Am I to be told that because Liverpool is a great commercial community, therefore the higher culture of the human mind is to be banished from its boundary? There cannot be a grosser error. Commerce and learning have been united in many communities, and Florence was among the first of commercial cities at the very time when it gave birth to a greater amount of intellectual force, and did more for the civilization of mankind than any other community at any period of Christian history. Do not, therefore, let us submit to the degrading belief that if commerce is to flourish and grow in Liverpool, Liverpool must of necessity lie behind in reference to those pursuits which do so much to refine and elevate the human mind, and which form the principal subjects of our consideration to-day. And permit me to say that if I have spoken strongly on the subject of competitive examinations, and been sanguine in my expectations of beneficial results from them, I am free to admit that I have perhaps something in the nature of local sentiment, withal respect, because I feel assured that in any system of competition that may be established—and provided that it be a fair and open system—South Lancashire and Liverpool will hold their own. My Lord, in urging on this meeting that they should hail the occasion which has called us together to-day, and should consider the present proceedings as only the very beginning of what is henceforth to be accomplished; I do so because I feel that those proceedings promise the renewal and the re-establishment of that relation between the old Universities of the country and the great commercial and manufacturing communities of the country, which is not, indeed, altogether in abeyance, but which has been feeble, which has been languishing, and which requires to be reinvigorated and restored. The Universities cannot afford to dispense with the aid and moral influence which they would derive from striking their roots deeper among you. They are at present engaged almost entirely although not exclusively, in providing education for the rich—for a class which will, if the Universities do not provide it for them, contrive in virtue of their riches, to provide it for themselves. We desire to see them providing education for those who are not able to provide it, at least in the highest form, from their own resources. I am sanguine enough to believe that these local examinations will not end with local examinations, but that those who are brought into contact with the culture of the University, through the medium of local examinations, will in great and increasing numbers desire to partake of the benefits of residence in the Universities, themselves. On the other hand, I entertain a sanguine hope that the Universities, finding this disposition existing, will not be wanting either in skill or promptitude in adapting their arrangements to the existing wants of the community; that they will so frame them as to enable the youth of Liverpool, and of other places similarly circumstanced, to resort to them for the benefit of the training which they give without making a sacrifice of those years which it is impossible for them to devote to the pursuit of learning without a departure from the absolute and necessary purposes of a commercial community. All this we have before us in hope, and in prospect it forms a pleasing picture; and depend upon it that if we will only in detail each in his own private circle, in this family and in society—endeavour to give it effect, there is nothing contained in it which reasonable men may not hope to see speedily achieved for the benefit of the country. The work, allow me to say, is one which, if successfully carried on, will not be the least important of the performances of the remarkable age in which we live, and will contribute, in modes and degrees—far more than any among us can distinctly reckon—both to increase female happiness and virtue, likewise to the maintenance of England, and the discharge of the duties of England, as one of the very foremost among those nations which lead the cause of civilization in the world. The right hon. gentleman concluded by moving a resolution conveying thanks to the University of Oxford for instituting these middle class examinations.—*English Journal of Education.*

Primary Schools.

From the port of Rochefort, in the west of France, on the 17th of June, 1816, there sailed an expedition, bound for the colony of Senegal, on the western coast of Africa. This colony had been captured from the French, by British power, in 1809, and ceded back again by the conditions of peace which were agreed upon in 1815. The squadron fitted out for this expedition consisted of four vessels; the principal of them was the *Medusa*, a frigate of forty-four guns. On board this vessel were the governor, his chief associates in office, a considerable number of soldiers, besides a large number of women and children. The whole number of individuals in the frigate was four hundred. The command of this vessel was entrusted to Captain Lachanmareys. He was remarkable for his ignorance of seamanship, cruelty of disposition, and a firmness, which, coalescing with his other qualities of mind and heart, was nothing less than wilful obstinacy. Wise in his own conceit and indisposed to heed the advice and warnings of others, as ignorant men are prone to be, he persisted in a careless management of the frigate. Paying no attention to the admonitory signals, which were given by another vessel of the squadron, and intended to warn him that the course which he was pursuing would bring him upon dangerous shoals, he soon lost sight of the other vessels of the expedition, and, in a few days, the dingy, sandy coloring of the water gave unmistakable evidence that real danger was close at hand. The stupid captain, being at length aroused from his stolid and reckless indifference, gave orders to change the ship's course. But the time when human effort and skill could avail had passed. A sudden shock assures all on board that their worst fears are realized; deep in the sands of the shoals the vessel is immovably fixed. Then followed a catalogue of woes, that makes the heart shudder to read—watery graves, starvation, maddening thirst, mutinies, and the development of fiendish passions to which human beings fall victims by scores.

I have thus briefly sketched this historical incident because it seems to me to illustrate, truthfully, the almost reckless indifference, with which, in educational matters, the most sacred trusts are committed to incompetent and inexperienced hands. With a skillful captain, one, who by tact and education had become master of his profession, the *Medusa* would, doubtless, have sailed safely into her destined port. The dreadful wreck was the result of no defect in the ship, and of no violent storms. How many men are wrecked upon the shoals and quicksands of life, because of the wrong direction given them in the earliest years of life's voyage!

The foundation of the character of the future man is laid while the boy is attending the Primary school. Every one knows that susceptibility to the influences which affect the conduct decreases with the increase of years, but all do not so fully believe that the influences which operate upon the child of a few years are wont to give decided and permanent direction to character. I doubt whether parents often think it possible, that the intellectual habits which their child may form before he is eight years of age, may practically determine whether that child shall be a dolt or an enthusiast in science. Yet all this is often true; I do not say always. This, however, cannot be controverted; all the teachings of the Primary school will inhere in the future character, intellectual, moral, and religious; they can no more be eradicated than the crooked and ungainly oak can be straightened so that its fibres and layers shall tell no tale of the early bending of the pliant twig. Is it, then, a trivial question, who shall have the training of twenty, thirty, fifty, or a hundred pliant men and women twigs? Is it just, is it rational, that any one should thoughtlessly, without fitness and without experience, assume a trust so laden with momentous consequences? No one ought to commence a Primary school without an adequate appreciation of the great responsibilities that are to be assumed, and of the controlling and far-reaching influences, for good or for evil, which he will inevitably exert.

If it be absolutely necessary that one should have clearly before him a high and correct standard, in order that he may secure any kind of excellence in his own personal attainments, it is equally indispensable that teachers should keep continually before themselves a high, correct and symmetrical standard of the combined excellences, such a combination of excellences as will constitute a noble and influential character; to this standard they should aim to bring all their pupils.

The next indispensable requisition in the teacher, is, ability to govern properly. I think it doubtful whether the qualities which constitute such ability can be very satisfactorily presented by any method of sharp analysis and synthesis. It seems to be a spontaneous force of manly development and symmetry. A very eccentric person is rarely, if ever, a good disciplinarian. We may

safely assert, then, that the teacher must have genuine integrity, or, as it is sometimes termed, weight of character, and a sound, practical mind. The whole list of virtues is very needful, but without some of them, which may be readily named, the teacher can do nothing. There must be patience to endure perplexities; patience to repeat and unfold truths that appear very simple, until sleepy minds are awake enough to catch a glimpse of them; patience to work and wait months for results that you wish to accomplish in a day. To patience we must add firmness, that healthful, wholesome kind which is not liable to be mistaken for obstinacy; a steady, persistent adhesion to a carefully considered purpose, which is based upon a settled conviction that the end sought is the Good and the True. To firmness we must add cheerfulness. This is spontaneous when, within self, evil has been overcome and moral harmony restored. It is certain that moroseness or ill-humor, in any degree, is contagious, and if its opposite is not equally so, experiment has already proved that it is not entirely incapable of diffusion. Cheerfulness lubricates both the physical and mental systems, causing both to run much more swiftly, smoothly, and with exemption from harsh grating and wear. To cheerfulness add kindness. This virtue is more active and positive than the preceding. Let the teacher but make an unmistakable impression on a school that their happiness, as well as their highest excellence, is heartily desired, and that teacher wields over those scholars a wand more magical than birch or hickory.

A good teacher will possess a ready faculty of imparting knowledge in such a way as to create and stimulate a healthful mental appetite. To be lavish in the presentment of valuable truth, when there is no inclination to receive and devour it, argues a lack of sense, to say nothing of economy. Such ability implies some knowledge of mind, some understanding of the order in which the mental faculties are naturally and properly unfolded, some acquaintance with the relative capability of these faculties in the different stages of their development. If all teachers entered the school-room thus prepared, great evils, that are now very prevalent, would be rapidly corrected. In the young child both body and mind are exceedingly active, but both alike are incapable of constrained and protracted exercise; variety and activity are indispensable to the healthful condition of both. The teacher who attempts to keep the young child in a single rigid posture, for any considerable length of time, sins against the laws of nature; it is an equal violation of the same sacred laws to attempt to chain the young mind to continuous intellectual effort. It has been said that this is an age of compromises. Perhaps this prevalent spirit of the times has exerted an influence in the schools. Many teachers seem to have let themselves half-way down to childhood, and are expecting that childhood will meet them there. They are willing to be simple in their behavior, and to use simple text-books, but they require their youngest scholars, unaided, to abstract their lessons from the printed page, while the recitation is merely a dry, verbal repetition of the contents of the book, unqualified by any comment or illustrations. To expect that youthful minds will develop healthfully and thrifflily under such treatment argues a lack of reason and common sense. You might as well expect that the delicate plant that demands your daily nursing, would still thrive and produce its beautiful blossoms, when transplanted from the green-house to the arid sands of the African desert. Children love to learn, and are quick to perceive and grasp new truth, if it be rightly presented. The power of abstraction is not developed, but the senses are all awake, and their exercise affords peculiar pleasure. Before the child we should hold up truth in its objective forms, not enveloped in mist, but clear and bright, fresh from an appreciative mind. Curious and wonderful facts culled from the book of nature, facts about stones, trees, plants, flowers, insects, birds, fishes, animals of every species, are proper and useful themes for familiar discourse. Let the teacher be intelligently communicative upon such topics, adopt such methods of review and examination as will fasten in the mind the information given; then may he expect that his pupils will be bright scholars, and parents will be relieved from the task of driving their children to school.—*N. H. Journal of Education.*

The Teacher's Library.

Every profession needs its apparatus and means for information to insure success, without frequent mistakes that may impair one's usefulness, and prove injurious to the interests of others. A man to be an accomplished jurist and a reputable lawyer, after having completed his prescribed course of study and qualified himself thoroughly for his profession, needs, as a preliminary, a judiciously selected library that he may have all the legal decisions and au-

thorities at his command, ready for use whenever he may require them. The divine cannot be a profound reasoner, nor a sound metaphysician without a thorough knowledge of the points of doctrine he is called to discuss, and of the system of divinity he is accustomed to teach; he cannot compare his own with different systems of theology without access to books where such doctrines are fully explained by those who believe them. Without these means of obtaining knowledge, he often becomes illiberal, and a bigot in his profession. Narrow-mindedness is the result. One idea is the all-absorbing theme of life. Devotion to one thing, or small things, narrow the scope of thought, and incapacitates the mind for comprehensive views of subjects contemplated.

In the medical profession, one must possess the best books, must be thoroughly versed in their contents and subjects, must possess a definite knowledge of the human system, and of all the parts that compose it. With perfect scientific knowledge, he must be an accurate observer of the nature and type of disease, and note carefully each successful remedy. Theory and practice are here combined. The reports of cases of others, men of keen perceptions, and grasping minds of what has come under their observation, may be called in to great advantage; and thus the united wisdom of the experienced may become the common property of all. The lawyer, the minister, the doctor, each needs his library, and the Literary and Scientific Journals that expound the principles of his profession. No class of men need access to the books and journals of their profession, more than teachers. Those engaged in teaching are commanding a higher compensation than formerly, for their services; and rightly too. They cannot continue to merit public confidence, or be deserving of patronage unless they are advancing in a knowledge of the principles and requirements of their profession. The tendency of teaching is to egotism: and self is too frequently the motive power of action. When this feature displays itself prominently, we may reasonably infer that the teacher is on the retrograde, instead of advancing in a knowledge of the duties of his profession. Teachers, without social intercourse and frequent interchange of views and sympathies, become prejudiced, iron-bound, uncourteous, and illiberal. Associations, Journals, and Libraries are among the teacher's implements of expansive improvement. County Teachers' Associations should be attended. Educational Journals should be patronized, and let me here commend to the favorable consideration of every teacher in the country our own Journal of Education. The books of our profession contain valuable lectures and instructions, the experiments and experience of practical teachers, in conducting recitations, in the government and discipline of schools, illustrating the manner and methods of imparting instruction. By carefully conning the pages of such books, new ideas will be acquired; a fresh impulse will be given to the teacher in the performance of his onerous duties; his mind will become vigorous and active, and his usefulness enhanced. Thoughts thus gained become one's own property; by a systematic digestion of them, they can be carried into successful operation in the school-room. Works treating of all the studies taught in schools have been accumulating for some years past. A choice selection of these should occupy a space in every teacher's Library. The too common remark, "that every one must be his own original, and cannot be benefited by the methods and experience of others," is absurd in the extreme. This sweeping conservative apology for non-improvement carried into practice would be striking at the root of every species of progress. By it the argument in favor of Normal Schools would fall to the ground. The teacher can be an artist, his own artificer, and, at the same time, use to advantage the tools of others. Methods and systems can be acquired and used; and perhaps, by the inventive powers of the teacher, improved. The talent of the teacher may not be so much wanting as his skill. The latter may be greatly increased by a knowledge of the thoughts and experience of others. This may be obtained from the writings, (books of others,) exhibiting their views, and the *modus operandi* of their schools. The teacher should be conversant with history, ancient and modern, and with the classic literature of the age, if he would be intelligent, magnify his office, and be an ornament to his profession. The frequent perusal of model writers purifies and elevates, furnishes aliment for conversation, and polishes language.

Men of experience have laid the foundation upon which we may erect the superstructure of surpassing beauty. Their toils have enriched the soil from which we may derive essential nutriment. Let us, then, as teachers, avail ourselves of their labors, with a spirit of commendable enthusiasm, emulate their virtues, equal their industry, and surpass their progress in a knowledge of the science of teaching. Man's usefulness is augmented in proportion to his increased capacity. The faithful teacher's impressions are indelibly imprinted upon the minds of his pupils. Unborn generations

will possess them, and strangers will bless the honored instruments of good to them. Judicious reading is the key of immortality, that unlocks the treasures of human and divine wisdom.

"O books, ye monuments of mind, concrete wisdom of the wisest: Sweet solaces of daily life, proofs and result of immortality; Trees yielding all fruits, whose leaves are for the healing of the nations; Groves of knowledge, where all may eat, nor fear a flaming sword; Gentle comrades, kind advisers, friends comforts, treasures; Helps, governments, diversities of tongue, who can weigh your worth?"

N. H. Journal of Education.

Questions for the Self-Examination of Teachers.

1. Have I been strictly truthful in thought, word, and deed?
2. Has my heart been in my work?
3. Have I been uniformly pleasant in manner?
4. Have I been uniformly affectionate in feeling?
5. Have I been sufficiently calm and self-possessed?
6. Have I exercised sufficient patience and perseverance?
7. Have I governed with firmness and decision?
8. Have I been serious and earnest?
9. Have I talked too much or too little?
10. Have I endeavored to be conscientious and just?
11. Have I been duly sensible of my responsibility?
12. Did I begin the work to-day in the right spirit?
13. Were my scholars punctual to-day.
14. Have I tried to interest parents in the punctuality of their children?
15. Do the scholars improve in this respect?
16. Are my scholars regular in their attendance?
17. Do they absent themselves without good cause?
18. Can I not make absence disreputable?
19. Have my scholars been studious to-day?
20. Do I make the scholars feel that idleness is wrong?
21. What have I done to create a love for study?
22. Has the school been orderly and quiet to-day?
23. Have I governed by the right motives?
24. Have I instructed the scholars in good manners?
25. Have I given the scholars proper exercise?
26. Have I carefully regulated the temperature and ventilation?
27. Have I made the school-room pleasant?
28. Have I insisted on neat and cleanly habits in my pupils?
29. Is the school supplied with apparatus, &c.?
30. Do I see that children do not injure the house or their books?
31. Have I been a good example for my pupils?—*Mass. Teacher.*

School days of Eminent Men in Great-Britain.

By JOHN TIMBS, F. S. A.

(Continued from our last.)

XVI.

SCHOOLS IN THE AGE OF CHAUCER.

Chaucer, traditionally born in 1328, of a wealthy and respectable family, received the education of a gentleman; he is believed to have studied both at Cambridge and Oxford; he was well acquainted with divinity and philosophy, and the scholastic learning of his age, and displays in numerous passages an intimate knowledge of astronomy, and most of the sciences as far as they were then known or cultivated. "Chaucer's language," says Mr. Bell, "is that of the good society in which he lived, and into which a large accession of Norman blood, usages, and idioms, had been infused." Heretofore, Norman-French had been the language of education, of the court, and of legal documents; and when the Normanised Anglo-Saxon was employed by literary men, it was for the special purpose, as they were usually very careful to mention, of conveying instruction to the common people. But now the distinction between the conquering Normans and subjected Anglo-Saxons was nearly lost in a new and fraternal national feeling, which recognised the country under the name of *England*, and the people and language under the simple appellation of *English*. Scribes at this time were chiefly employed in copying books. Chaucer thus addresses his scrivener:—

Adam Scrivener, if ever it befall
Boice or Troilus for to write newe,
Under thy long locks thou mayst have the scalle,

But after my making thou write more true ;
So after a day I more thy werke renewe,
It to correcte, and eke to rubbe and scrape,
And al is thorow thy negligence and rape.

Such was the affectation for speaking French in this reign, that it became a proverb—"Jack would be a gentleman, if he could speak French." It was, however, often very corrupt, in allusion to which Chaucer says in the *Prologue to the Prioress' Tale* :—

"And French she spak ful fayre and fety saly
After the schoole of Stratford at the Bow,
For French of Paris was to her unknowe."

It was, nevertheless, so necessary, that Robert of Eglesfield, who founded Queen's College in Oxford, directed by his statutes that the scholars should speak either French or Latin.

Female education at this period consisted in needlework (especially), and reading. Boccaccio describes a wife as "young and beautiful in her person; mistress of her needle; no man servant waiting better at her master's table; skilled in horsemanship and the management of a hawk; no merchant better versed in accounts." Chaucer mentions reading and singing as the education of little children.

XVII.

SCHOLARSHIP OF EDWARD THE BLACK PRINCE.

Edward the Black Prince, the eldest son of Edward III, was born at Woodstock, in 1330 :

Nursed at the bosom of his mother (Queen Philippa), he received health and strength from the same pure blood that had given him existence; the gentle impress of her own sweet mind fixed upon her child, caring his early education, those kindly virtues which tempered in his nature the fierceness of his father's courage. Never, perhaps, in the world's history, do we find so strong an example of the qualities possessed by both parents being blended in the child, as in the case of the Black Prince, in whose heart the generous and feeling nature of Philippa elevated rather than depressed the indomitable valour and keen sagacity of Edward III.—*James's Life of the Black Prince.*

Holinshed tells us that Philippa herself selected for the Prince's tutor a person of whose talents and virtues she had possessed the opportunity of judging; this was Doctor Walter Burleigh, a well-known scholar of Merton College, Oxford, who had been appointed almoner to the Queen, and had remained from that time attached to her household. Simon Burleigh, "a near kinsman of the Doctor's, (says Bames), was admitted, with other young gentlemen, to be schoolfellows with this hopeful Prince." Before the Prince was seven years of age, he was girded by his father with a sword, and saluted the first English Duke; and immediately, in exercise of his new dignity, he dubbed twenty knights. In his thirteenth year he entered upon the chivalrous training of the time, which, by inuring the body to fatigue, and the limbs to the continual use of arms, gave skill and great power of endurance to his active and robust figure. In 1343, he was created Prince of Wales, upon which the knightly feast of the Round Table was appointed to be held in an ample theatre near Windsor Castle; at the age of sixteen, the Black Prince led an army to the field of battle, and in a few years grew to be "the flower of the chivalry in the world."

XVIII.

WINCHESTER COLLEGE FOUNDED BY WILLIAM OF WYKEHAM.

In the reign of Edward III, lived the celebrated William of Wykeham, who was born at the village of Wykeham, in Hampshire, in 1324. By the liberality of Sir Nicholas Uvedale, governor of Winchester Castle, the boy Wykeham was sent to "the Great Grammar-school in Winchester," originally an institution for education founded before the Conquest. Uvedale next presented Wykeham to Edward III, for his skill in architecture. In the short space of four years he was promoted through civil and ecclesiastical grades, to be Bishop of Winchester and Lord High Chancellor of these realms. He had already commenced the building of New College at Oxford; and in the following year, with the view of taking the early education of youth out of the hands of the monks, "it was his admirable thought to raise a nursery school, preparatory to his co-operating with a higher course in his college; and thus to raise the standard of education in the country, to that stamp and character which has ever since (through his institution and the copies which were drawn from it,) distinguished the English gentlemen amongst the families of Europe." Thus arose Win-

chester College, the scholars of which are designated to this day *Wykehamists*. The novelty and merit of the plan were imitated by Chicheley, at All Souls, Oxford; Henry VI, at Cambridge; and Waynflete at Magdalene. "Twenty years before his hives were built (1373), Wykeham had gathered his swarming bees under temporary roofs, with masters and statutes; which with parental solicitude he watched, altered, and amended from time to time, by his daily experience. So long before his colleges were built was his institution effective." Wykeham died in 1404, at the age of eighty years, with the respect and admiration and gratitude of all; and like the spirit which he had ever sought throughout his amiable life, "length of days were in his right hand, and in his left riches and honour." He is buried in Winchester Cathedral: "beneath the spot where the schoolboy prayed, the honoured prelate sleeps."—*(Walcott.)*

Wykeham's College buildings stand immediately adjoining the main street of Winchester, a city of kindred quiet. The Middle Gate Tower has under three canopied niches, the Angelic Salutation, and the Founder in prayer. This gateway leads to a truly noble quadrangle of Wykeham's architecture. On the left side is the dining-hall, with an oaken roof finely carved with the busts of kings and prelates; and in the centre is a louvre, through which the smoke ascended in old times, when the scholars gathered round the hearth to sing and listen to the tales of the chroniclers. Here also plays were acted in the days of the Tudors; the boy-bishop custom was observed as at Eton: and monarchs, prelates, and nobles have been feasted. On the south side of the quadrangle is the chapel, with an oaken roof of fan tracery; the large window, forty feet in height, is filled with painted glass, as are also the side windows. Next are the cloisters, surrounding an area, in the centre of which is the former chapel, now the library. Beyond is the Public School; it was built in 1687, chiefly by subscription among Wykehamists, and is the noblest structure of the kind in the kingdom. Upon the walls are inscribed in Latin the admonitions and rules for the government of the scholars; on the west wall are painted upon a large tablet, a mitre and crozier, the rewards of clerical learning; a pen and inkhorn and a sword, the ensigns of the civil and military professions; and a Winton rod, the dullard's quickener: beneath each symbol is its apt legend: "Aut discere," "Aut discere," "Manet sors tertia cædi."—"Either learn; " "or depart; " "or in the third place be flogged; " underneath is the flogging-place. On the east wall is a corresponding tablet, bearing the School laws, in Latin. The Chamber walls are carved with the names of many an illustrious Wykehamist; but, the most interesting memorial is the Seventh Chamber and the adjoining passage. This "was the ancient school wherein Waynflete taught, and was called by the founder, '*Magna illa domus*;' the stone 'books' in the embayed windows still remain; it could accommodate scarcely more than ninety boys." At present, the foundation scholars at Winchester are limited to 70; and the commoners are in general about 130. The College and its Grammar School differ little in management from Eton. Among its characteristic customs is the chanting of the Latin song "*Dulce Domum*," to which justice cannot be done in any English translation. It is sung in College Hall on the six last Saturdays of the "long half" before "evening bells; " and at the July festival :

Nations, and thrones, and reverend laws, have melted like a dream,
Yet Wykeham's works are green and fresh beside the crystal stream;
Four hundred years and fifty their rolling course have sped,
Since the first serge-clad scholar to Wykeham's feet was led:
And still his seventy faithful boys, in these presumptuous days,
Learn the old truth, speak the old words, tread in the ancient ways:
Still for their daily orisons resounds the matin chime—
Still linked in bands of brotherhood, St. Catherine's steep they climb;
Still to their Sabbath worship they troop by Wykeham's tomb—
Still in the summer twilight sing their sweet song of home.

Roundell Palmer's Anniversary Ballad.

As Chaucer was the Morning Star of our poetry in the reign of Edward III, so Wickliffe, who first translated the Scriptures into English, has been called the Morning Star of the Reformation; whilst his works being written in English, and dispersed among the people, greatly contributed to the progress of the English tongue. John Wickliffe was born in 1324, in a little village in Yorkshire, was educated at Oxford, and was one of the students who attended the lectures of the pious Bradwardine at Merton College. At that time he was in the flower of his age, and produced a great sensation in the university. He was elected in 1364 warden of Balliol, and in 1365 warden of Canterbury College also. His biblical and philosophical studies, his knowledge of theology, and his penetrating mind, were extraordinary.

XIX.

EDUCATION OF RICHARD II.—HIS PATRONAGE OF GOWER.

This distinction of literature extended through the reign of Edward's successor, Richard, the son of Edward the Black Prince, born at Bordeaux, in 1366, and who succeeded to the throne when only in his twelfth year. His government and education were committed to Simon Burleigh, a schoolfellow of the Black Prince, who had been by him made a Knight of the Garter.

In a manuscript of the year 1385, we read that English began to be the language into which schoolboys construed their lessons in the reign of Richard the Second,

One of the bright lights of this reign, Gower, was patronized by Richard. Gower the poet was born a few years later than Chaucer, though he is believed to have been his college friend. Gower studied law; he possessed considerable landed property in the counties of Nottingham and Suffolk. He wrote his principal work, the *Confessio Amantis*, in consequence of Richard II. meeting him in his state barge on the Thames, and asking him to "book some new thing;" his gravity led to his being called "the moral Gower." He stands half-way between the minstrel of Normandy and the English poet, and he seems to have transferred the faults of a declining literature into the language of one newly arisen. "Gower prepared for his bones a resting in the monastery of St. Mary Overie, where, somewhat after the old fashion he lieth, right sumptuously buried, with a garland on his head, in token that he in his life-days flourished freshly in literature and science."

Richard, during childhood and youth was committed in succession to the charge of several guardians; and, like children (says an historian) whose nurses have been often changed, he thrived none the better for it. He did good or evil according to the influence of those around him, and had no decided inclination, except for ostentation and licentiousness. In his reign, laymen, among whom Chaucer and Gower are illustrious examples, received occasionally a learned education; and indeed the great number of gentlemen who studied in the halls of court is a conclusive proof that they were not generally illiterate. The common law required some knowledge of two languages. Upon the whole, we are inclined to think, that in the year 1400, or at the accession of Henry IV, the average instruction of an English gentleman of the first class would comprehend common reading and writing, a tolerable familiarity with French, and a slight tincture of Latin; the latter attained, or not, according to his circumstances, as school learning is at present.

XX.

HENRY IV.—HIS ACCOMPLISHMENTS.

Of Henry IV of Bolinbroke, eldest son of John of Gaunt, and born in the ancient castle of Bolinbroke, in Lincolnshire, in 1366, few early traits are recorded; and as his father was a subject, nothing of material interest was at the time associated with his appearance in the world. Blanche, his mother, survived the birth of Bolinbroke not more than three years; he thus early lost the benefit of maternal care, which, with his father's subsequent life of profligacy, may account for the excesses of Prince Henry. Richard II presented him, on his father's second marriage, with a costly ring. Froissart reports that Henry Bolinbroke was a handsome young man; and we read that he excelled in music. It was his custom every year, on the Feast of the Lord's Supper—that is, on the Thursday before Easter—to clothe as many poor persons as equalled the number of years he had completed on the preceding birthday. Henry was a gallant young knight, often distinguishing himself at jousts and tournaments, and in the Pell Rolls of 1401 is recorded the payment of 10*l.* "to Bartolf Vanderlurey, who fenced with the present lord the King, with the long sword, and was hurt in the neck by the said lord the King." Henry was of an active, ardent, and enterprising spirit; but we have no ground for believing that he devoted much of his time and thought to the education of his children. In this reign was built a library in Durham College, (now Trinity College,) Oxford, for the large collection of books of Richard of Bury, said to consist of more volumes than all the bishops of England had then in their possession.

XXI.

HENRY V AT QUEEN'S COLLEGE, OXFORD.

Of Henry V. of Monmouth, the childhood and youth are chronicled more nearly contemporarily than those of his predecessor. Henry was born in 1367, in the castle of Monmouth, of which the crumb-

ling ruins are now a few vine-clad walls, washed by the Monnow. From this castle, tradition says, that being a sickly child, Henry was sent to Corafield, six or seven miles distant, to be nursed there; and the cradle in which he was rocked was shown thoro some thirty years since. In the Wardrobe Accounts of Henry's father we find an entry of a charge for a "long gown" for the young Lord Henry; and we further learn that very shortly after he ascended the throne, he settled an annuity of 20*l.* upon his nurse, Johanna Waring, "in consideration of what was done to him in former days." In the records of the Duchy of Lancaster, in the year 1397, is the charge of 8*d.* paid "for harpstrings purchased for the harp of the young lord Henry;" 12*d.* "for a new scabbard of a sword;" and "1*s.* 6*d.* for three-fourths of an ounce of tissue of black silk for a sword of young Lord Henry." In 1396, we find a charge of "4*s.* for seven books of grammar contained in one volume, and bought at London for the young Lord Henry." There is reason to believe that so early as 1399, Henry was placed in Queen's College, Oxford, under the superintendence of his half-uncle, Henry Beaufort, then chancellor of the University; so that even the above volumes of grammar may have been first learned under the direction of the future Cardinal.

In the old building of Queen's College, a chamber used to be pointed out by successive generations as Henry the Fifth's. It stood over the gateway opposite to St. Edmund's Hall. A portrait of him in painted glass, commemorative of his residence there, was seen in the window, with an inscription (as it should seem of comparatively recent date) in Latin:—

To record the fact for ever,
The Emperor of Britain,
The Triumphant Lord of France,
The Conqueror of his enemies and of himself,
Henry V.
Of this little chamber,
Once the great Inhabitant.

The tender age of Henry at this period does not render the tradition improbable; for many then became members of the University at the time they would now be sent to school. Those who were designed for the military profession were compelled to bear arms, and go to the field at the age of fifteen; consequently, the little education they received was confined to their boyhood. Hence it may be inferred that Henry (though perhaps without his uncle being enrolled among the regular academicians) lived with his uncle, then chancellor, and studied under his superintendence. It is nearly certain that before the October term, 1398, Henry had been removed to King Richard's palace, carefully watched; whilst in 1399 he accompanied that monarch in his expedition to Ireland. Shortly after his return, on his father's accession, he was created Prince of Wales; and had he subsequently become a student of the University, its archives would have furnished evidence of the fact; but, as the boy of the Earl of Derby, or the Duke of Hereford, living with his uncle, the omission of his name is not remarkable. In all probability his uncle superintended his general education, entrusting the details to others more competent to instruct him in the various branches of literature. Among his college associates was John Carpenter, of Oriol; and Thomas Rockman, an eminent astronomer and learned divine, of Merton. Among other pious and learned persons much esteemed by Henry was Robert Mascall, a Carmelite friar, confessor to his father; and Stephen Partington, a popular preacher, whom some of the nobility invited to court. It is impossible to read Henry's letters, and reflect on what is authentically recorded of him, without being impressed by a conviction that he had imbibed a very considerable knowledge of Holy Scripture, even beyond the young men of his day; whilst chroniclers bear testimony that "he held in great veneration such as surpassed in learning and virtue." Here we take leave of Henry, since an event in the autumn of 1398 turned the whole stream of his life into an entirely new channel, and led him by a very brief course to the inheritance of the throne of England.

Prior to the reign of Henry V, specimens of English correspondence are rare; letters previously to that time, were usually written in French or Latin, and were the productions chiefly of the great or the learned. The letters of learned men were verbose treatises, mostly on express subjects; those of the great, who employed scribes, resembled, from their formality, legal instruments. We have nothing earlier than the 15th century which can be termed a *familiar letter*. The material, too, upon which letters were written, up to the same period, was usually vellum; very few instances, indeed, occurring, of more ancient date, of letters written on common paper. The earliest royal signature known in this country is the signature of Richard III.—*Ellis's Original Letters*, 1st series, p. 8.

LITERATURE.

POETRY.

THE NATIVITY.

When Jordan hush'd his waters still,
And silence slept on Zion hill;
When Bethlehem's shepherds through the night
Watch'd o'er their flocks by starry light:

Hark! from the midnight hills around,
A voice of more than mortal sound,
In distant hallelujahs stole,
Wild murmur'ing o'er the raptur'd soul.

Then swift to every startled eye,
New streams of glory light the sky;
Heaven bursts her azure gates to pour
Her spirits to the midnight hour.

On wheels of light, on wings of flame,
The glorious hosts of Zion came;
High heaven with songs of triumph rung
While thus they struck their harps and sung:

O Zion! lift thy raptur'd eye.
The long-expected hour is nigh;
The joys of nature rise again,
The Prince of Salem comes to reign.

See, Mercy from her golden urn
Pours a rich stream to them that mourn!
Behold, she binds, with tender care,
The bleeding bosom of despair!

He comes! to cheer the trembling heart,
Bids Satan and his host depart;
Again the Day-star gilds the gloom,
Again the bowers of Eden bloom!

O Zion! lift thy raptur'd eye,
The long-expected hour is nigh;
The joys of nature rise again,
The Prince of Salem comes to reign.

CAMPBELL.

CHRISTIAN ENDURANCE.

Mortal! that standest on a point of time,
With an eternity on either hand,
Thou hast one duty above all sublime,
Where thou art placed, serenely there to stand.

To stand undaunted by the threatening death,
Or harder circumstance of living doom;
Nor less untempted by the odorous breath
Of Hope, that rises even from the tomb.

For Hope will never dull the present pain,
And Time will never keep these safe from fall,
Unless thou hast in thee a mind to reign
Over thyself, as God is over all.

'Tis well on deeds of good, though small, to thrive,
'Tis well some part of ill, though small, to cure,
'Tis well with onward, upward hopes to strive,
Yet better and diviner to endure.

What but this virtue's solitary power,
Through all the lusts and dreams of Greece and Rome,
Bore the selected spirits of the hour
Safe to a distant, immaterial home?

What but this lesson, resolutely taught,
Of Resignation, as God's claim and due,
Hallows the sensuous hopes of Eastern thought,
And makes Mohammed's mission almost true?

But in that patience was the seed of scorn—
Scorn of the world and brotherhood of man;
Not patience such as in the manger born,
Up to the cross endured its earthly span,

*Thou must endure, yet loving all the while,
Above, yet never separate from, thy kind,—
Meet every frailty with the gentlest smile,
Though to no possible depth of evil blind.*

This is the riddle thou hast life to solve;
But in the task thou shalt not work alone;
For, while the worlds about the sun revolve,
God's heart and mind are ever with his own!

MILNES.

JOURNAL OF EDUCATION.

MONTREAL, (LOWER CANADA) DECEMBER, 1856.

Notice to Teachers.

We deem it our duty, once more, to direct the attention of teachers to the notice heretofore published with reference to the teachers pension fund. Those who desire to be inscribed on the register with the benefit of having all the years passed in teaching since 1858 accounted, should transmit their demand of inscription to this office, before the 31st December instant, enclosing therewith \$8, amount of premium for years 1857 and 1858, deduction to be made for premiums of previous years out of first year's pension to be paid after their retiring from teaching. Teachers whose names were enregistered in 1857, and who shall not have paid their premium for 1858 before the 31st December instant, will be struck off the list.

Penalty under the Amended School Act.

Mr. Isaie Perrault, of the parish of St. Paul, in the county of Joliette, having obstinately refused to deliver up to the School Commissioners, certain papers belonging to them, and which he retained after he had resigned the office of Secretary, was condemned, by the Superior Court, to a penalty of £33 5 0 with costs, amounting to £7 19 5. We mention this fact as a caution to other parties who might feel inclined to follow the same course.

School Furniture.

The interior distribution and the nature of the furniture of a school-house are of such importance that on these two points alone, depend not only the advancement of the children in a great measure, but also their health and consequently their very existence.

If parents were only to reflect, notwithstanding the value they attach to the education of their children, they would still consider it too dearly bought, if paid for at the expense of their lives. It is, however, unfortunately too frequently the case, not only in a great number of our common schools, but also in some of the colleges and academies that the children are shut up in narrow close classes and dormitories, heated to excess, while the passages and corridors are left without any heat whatever. Again, it is evident that the small size of the class rooms, the low ceilings, the absolute want of all proportion compared with the number of pupils that frequent them, together with the absence of all

means of ventilation, necessarily obliges the teacher to open the windows, which, whatever may be the state of the exterior atmosphere, but more especially in bad weather, must cause too sudden a change in the heat of the room, and which though perhaps unfelt by those who have been accustomed, by exercise, to all degrees of heat and cold, must prove detrimental, if not fatal, to children of feeble health and constitution.

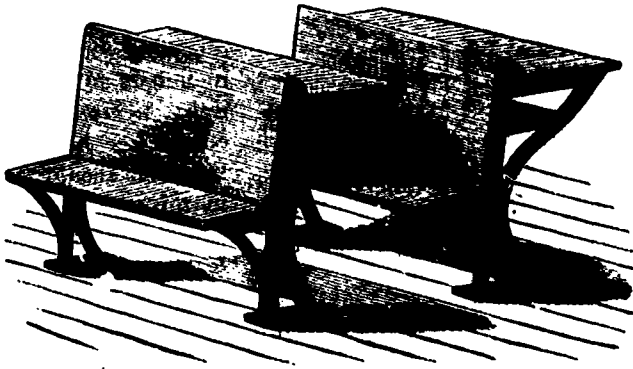


Fig. 1.

It is evident that the cause of this evil arises from the defective distribution and interior arrangements of the classes in the schools. The first thing remarked by a

stranger in visiting, not only the common schools, but also some of the colleges and academies, in Lower Canada, is the defective construction of the seats and forms, which, having no backs, prove a continual source of inconvenience and even pain to the pupils.

The teacher sits in his chair, or perhaps in a comfortable arm chair, but let him only attempt to sit for any length of time on a form without a back, during the whole time of his teaching the class, and he will soon find out whether the uncomfortableness of his position, and the weariness consequent upon it, will not affect both his body and mind, and unfit him for the task he has to perform. The teacher should not therefore be astonished, or give way to anger, when he sees a poor child nailed as it were to a form, bound to remain in such a forced position, begin to swing his body backward and forward, and attempt by every possible means to seek relief, sometimes with his hands behind his back, sometimes kicking about with his feet, thus, withdrawing the attention of his schoolfellows from their lessons, and frequently bringing punishment on himself.

The bench or form without any back to it, is sometimes placed in the middle of the floor, and at times without either table or desk. In the latter instance, the children frequently draw their benches near the wall or partition

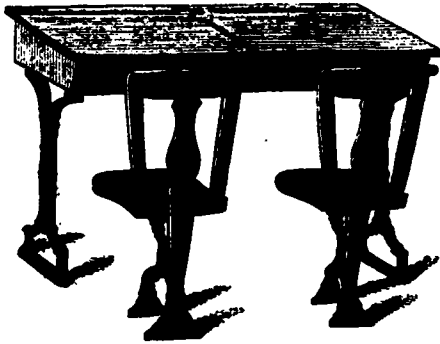


Fig. 2.



Fig. 4.

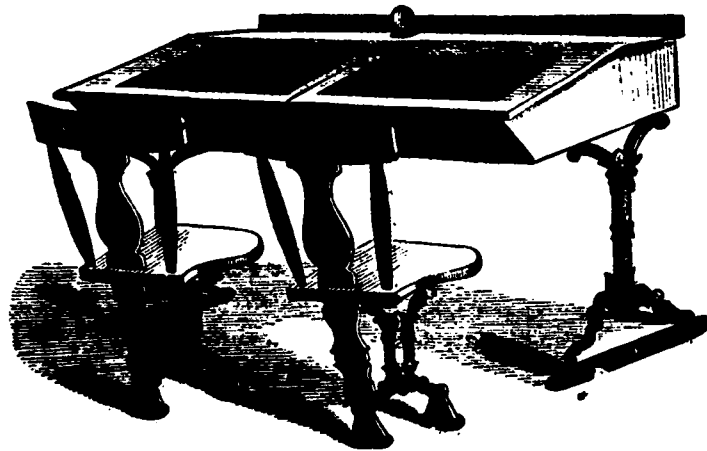


Fig. 3.

for the purpose of obtaining a more easy position; this of itself proves the necessity of having backs to forms and all other kinds of seats. It were needless to mention how very uncomfortable and even painful must be the position

of a child sitting on a bench in the middle of a school room: The wall or partition being necessarily perpendicular, can scarcely be considered as a back, and can give but very insufficient support to the spine. The pupil must naturally

lean forward supporting his elbows on his knees, and his head in his hands, inclining either to the right or to the left; and sometimes one or two of the pupils who have pre-arranged their plans, will perhaps, unperceived by the others, draw the form from the wall, thus causing the fall of one or two of the children, or even of the whole form.

If the form is near a table or desk, the pupil will lean on them, and thus continually remain in an ungainly and unhealthy posture affecting his lungs, and capable of producing on feeble constitutions, weakness and distortion of the spine. (1).

Many young persons, when leaving their schools or colleges, are high shouldered on one side, which can only be attributed to this cause, and several physicians of high standing in their profession, have assured us that in their opinion, to this may be also partly attributed the progressive increase of consumption, in this country.

In the United States, throughout the greater part of Upper Canada, and in the Normal schools in Lower Canada, desks and seats, made after a plan intended to remedy all the evil tendencies above enumerated, are now in general use; and we think that we cannot do better than to transfer to our pages, for the benefit of our readers, the wood cuts which we have had copied from those in the excellent work, by Mr. Barnard, on *School Architecture*.

The high price of these desks and seats may, in some instances be objected to, but those made after the design in the first model may be had at a very reasonable price, especially if, instead of the iron supports for the seats, a block of wood be substituted, care however being taken, to have them well fastened to the floor.

The backs of these seats, will, according to this design,

(1) Horace Greely, Esquire, the celebrated editor of the *New York Tribune* goes even farther; he pretends that we should not lean forward when writing, and that the table or desk on which we write should be as high as the chest; he attributes the excellent health which he now enjoys, notwithstanding the arduous nature of his occupation, to the habit that he contracted when young, of writing at a high desk. We not only heard him make this remark, ourselves, but we also saw him when delivering a lecture at the Mechanic's Institute, at a high desk, which had certainly a most singular effect.

form the supports for the desks of the ranges next behind them, and are particularly adapted for elementary schools. The seats should be so made as to allow the feet of the pupil to touch the floor, and that his leg and thigh be kept in a rectangular position. The back of the seat should also have the inclination necessary to allow the pupil to lean back while in the position above indicated. The seats and desks should be arranged in amphitheatral form, the lowest seats

nearest the teacher, gradually increasing in height to the last row. In elementary classes the height of the seats should vary in the manner above mentioned, from 9½ to 17 inches.

The next wood cut represents a double desk with two seats fixed on iron supports. Instead of a plain slope for the pupil to place his books, &c. on, there is a desk. This second cut represents as nearly as possible, the seats and desks used in our normal schools, which have, however, an immovable inkstand fixed in the front, as represented by figure 3. In the model school the pupils have neither drawer nor desk,

but a board underneath to hold their slates and books. Some professors are averse to using desks that open perpendicularly, as shewn by Nos. 2 and 3, because when lifted, they hide the pupil from their view, who frequently takes this opportunity of amusing himself and neighbours; for this reason they prefer those represented by No. 4.

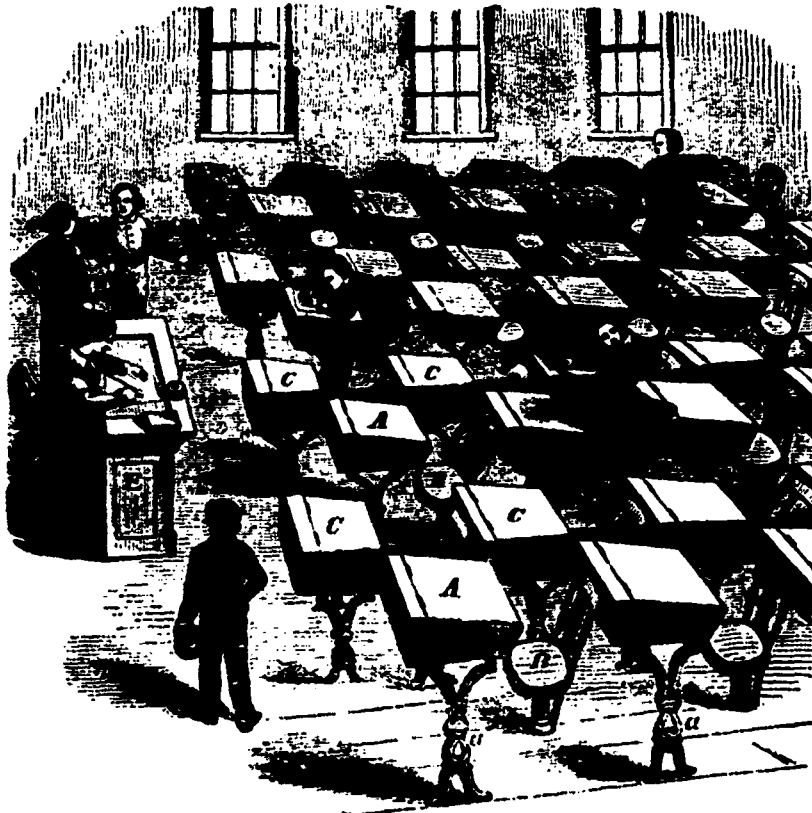
The next wood cut represents the moveable seat of chair

No. 4. It is fixed on a pivot of wrought Iron, three quarters of an inch in diameter and three inches long, surrounded by a band of leather to prevent creaking; the chair

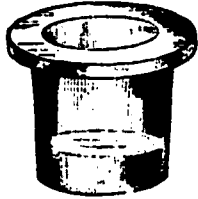


turns with ease and can be easily removed when required for the purpose of washing the school room.

The fixed inkstand, as shewn in figure No. 3, should also be added to all school desks. There is nothing so troublesome, or from carelessness so frequently a cause of quarrel, as the kind of inkstand generally brought to the schools by



the pupils, which, placed as they generally are, upon an inclined desk, scarcely ever fail to spill, or fall and be broken. The general use of fixed inkstands, would save much trouble and inconvenience to teachers and to the scholars, many little quarrels and frequently punishments. The inkstand is covered, to prevent the ink from evaporating and also from receiving any dust or dirt.



The seats should be placed so as to face the teacher, and also, they should not front any of the principal windows of the school room. On reference to the following wood cut, representing a common school in Massachusetts, the importance of this advice will be readily understood. It will be perceived that there is a desk and chair for each scholar, which is certainly preferable, when the means of an institution will permit it. These seats are placed alternately, at right angles. The scholars are thus less exposed to amuse themselves during school hours either by conversing with each other, or by playing those little tricks which cause so much disturbance and are so subversive of school discipline. The rows of seats are separated by a division board running the whole length of the school; but if this arrangement permits the teacher to pass along the several rows of desks, without incurring the risk of upsetting the inkstands or deranging the books of the pupils, it presents one great disadvantage, that it greatly cramps their position while writing. We are of opinion that for some time yet, the double desks, as shewn in figure No. 2, will be found sufficient, and that the *bench-desks* as shewn in figure No. 1, will answer for schools with smaller means at their disposal. The cost of the double desk with two seats supported on iron, and a fixed inkstand, such as used in the Normal schools, is six dollars. They could no doubt be made cheaper if more generally used in Lower Canada; and we feel assured that if some, among the many ingenious mechanics to be found in our country parishes were to undertake to copy the models we have given in this number of our journal, using cheaper materials, they would be found so beneficial and so cheap that they would be taken into general use. The seats and desks of the Montreal Normal schools were made by Mr. William Allan, St. Gabriel Locks, Lachine Canal, and those for the Laval Normal school, Quebec, by Messrs. Peters.

CANADIAN BIOGRAPHY.

Memoir of the late Honorable Robert Baldwin.

We regret to announce the death of the Honorable Robert Baldwin, which took place last evening, at his residence in Spadina. Mr. Baldwin was born in this city, in 1802. His family, father and grand-father, came to this country in 1798. His father, the Honorable William Warren Baldwin, was the son of Robert Baldwin, Esq., of Summer Hill, otherwise Knockmole—near Corogolino, in the country of Cork, Ireland. When the family came to this country, they originally settled in the township of Clarke, on Lake Ontario, where they were among the earliest settlers. They afterwards removed to this city—then the Town of York—where they took up

their residence in Spadina; and there the family resided till the death of the father of the subject of this notice, which took place on the 8th January, 1844. The Hon. W. W. Baldwin, was a medical man; having taken his degree of M. D. at Edinburgh. After removing to York, however, Dr. Baldwin betook himself to the profession of law, which he practised with success for a number of years. He (father of the Hon. R. Baldwin) had represented the County of Norfolk in the Parliament of Upper Canada; and been called to the Legislative Council about six months before his death. On the occasion of the death of Dr. Baldwin, Mr. Hincks wrote: "Our country has lost a friend; and the country, it may be said, will follow him as mourners to the grave. By the removal of one so worthy, so disinterested, so excellent, we have sustained a loss, the magnitude of which it is difficult to appreciate, much more, in this community to repair. It is not Toronto only that will feel the privation, or drop tears of submissive sorrow over his honored tomb. The sad tidings, like an electric shock, the less convulsive in its effects because expected, will widely extend an awakened interest over regions sufficiently enlightened to appreciate his worth, and sufficiently grateful to deplore his loss." To his son, a sketch of whose life we are called upon suddenly after midnight to write, these words might with equal truth be applied. No public man, in Canada, perhaps, in his day, commanded such general respect as the Hon. Robert Baldwin, who yesterday evening departed this life. His integrity was so far above suspicion that the breath of calumny itself never uttered a word against his fair fame. He commanded the respect of all parties: the affection of his own was willingly accorded. His name, even to the last hour of his life, was a tower of strength: it might easily have been made the nucleus of a party round which the scattered elements of the Reform ranks would have rallied, till union was once more restored.

In stature Mr. Baldwin must have been about five feet nine or ten inches. His frame was of stout build; but the work of disease appears to have begun to undermine his constitution eight or nine years ago. In the Spring of 1850 his health had visibly declined; and there being no hopes of a speedy improvement, he was the more anxious to retire from public life, in the following year.

He was of a mild and affable disposition; but he lacked that peculiar style of address which characterizes the man easy of access and of familiar manners and habits. He had few of the characteristics which usually make a man popular with the crowd. He scorned to bend to those petty arts which inferior men find so useful, and indeed so indispensable, to their success in dealing with the public. He paid small court to even the most prominent of his constituents; and by this means lost something of that ephemeral and local popularity which are necessary to the statesman who wishes to retain undiminished the full strength of his position. His name is, however, inseparably interwoven with the brightest period of our history; the period in which constitutional principles triumphed over the oligarchical system on which the Province had previously been ruled. His was a career that will be the more valued according to the increasing distance at which it is seen; his a lustre that will shine the brighter as time continues to roll on.

Following the profession adopted by his father, he entered on the practice of the law; and the firm was long carried on under the name of Baldwin and Son—till he retired on the 28th July, 1848, when the business was continued by Mr. Adam Wilson. His father and he built up an extensive and lucrative practice; and he must have left behind him a fortune or something like a million of dollars. He owned an immense amount of property in this city. Of the large amount of wealth which he leaves behind, a part went to his father, by request, from the Hon. Peter Russell.

Mr. Baldwin inherited the liberal principles of his father. He was first elected to the Upper Canada Assembly in 1829, in opposition to Mr. Small; having in the previous year made an unsuccessful run against Mr. Mackenzie, for the County of York. This election took place on the resignation of Chief Justice Robinson; Mr. Baldwin came forward as the liberal candidate in opposition to Sir John Colborne's Administration. His opponent was then Deputy Clerk of the Crown, and many of his friends were well provided for, in one way or another, out of the public. The whole influence of the placement was cast against Mr. Baldwin. While the election was pending, Mr. Mackenzie wrote:—"Our earnest wish, is that the election of Mr. Baldwin may prove to the world that the capital of Upper Canada has burst her fetters, and followed the praiseworthy example of her sister city, Quebec, which sent to Parliament an independent citizen; a few months ago, in spite of all the military and civil influences of all the constituted authorities." Sir John Colborne, before his retirement from the government, recommended to the Colonial Secretary, the appointment of Mr. Baldwin to the Legislative Council, of which body, if we mistake not, an uncle of

his was a member. The appointment was, however, not made; and a subsequent Governor wrote to England to discourage the recommendation of Sir J. Colborne.

The Opposition to which M. Baldwin, the newly elected member for York—now Toronto—had allied himself, had a Parliamentary existence as early as 1820. Even at that time it was respectable, if not formidable, both in talents and numbers: but as yet it could not count a majority of the representatives. But after the election of 1824, the scales were turned; and the Government found itself perpetually in a minority in the popular branch of the Legislature. The election of 1828 brought no additional strength to the Executive Government; and the same anomalous spectacle of a Government ruling in defiance of the constantly expressed wishes of the Legislative Assembly presented itself to the eyes of Mr. Baldwin, when in 1829 he entered Parliament for the first time. It was one well calculated to impress upon his mind the necessity which existed for changing the system of Government. Subsequent events were not calculated to remove that impression; for although the Executive did contrive to secure the return of a majority of supporters in the elections of 1830, events soon showed that this was but a passing accident; for the elections of 1834 again left them in a minority in the Legislative Assembly for eight years. During the whole of this time, the Legislative Assembly were constantly passing bills which were as constantly rejected by the Legislative Council. For these evils Mr. Baldwin declared that he saw no remedy but that of placing the "Executive Council permanently upon the footing of a local Provincial Cabinet, holding the same relative position with reference to the representatives of the king and Provincial Parliament as that on which the king's imperial cabinet stands with respect to the king and Parliament of the Empire; and applying to such Provincial Cabinet, both in respect to their appointments and their continuance in office, the same principles as those which are acted upon by His Majesty with respect to the imperial cabinet." To an elective Legislative Council Mr. Baldwin was opposed; believing that the demand for it would never have arisen, if the principle of Responsible Government had been conceded as soon as the Executive found themselves permanently in a minority in the Legislative Assembly. This opinion he never changed. He never concurred in the propriety of constituting, on a new basis, the Legislative Council; and for this reason he thought there would be an incongruity in his consenting to be elected to that Chamber. From the time of M. Baldwin's entrance into Parliament, we find the principle of executive responsibility constantly asserted. It was embodied in the address in reply to the Speech from the Throne, 1829; and again in 1835, it was made the subject of a solemn appeal to the Imperial Government, in an address to the Sovereign passed by a majority of twenty-one votes. On this occasion, the Assembly went so far as to intimate their intention to refuse the supplies if their reasonable demand were not complied with. After the resignation of the Executive Council, in 1836, of which M. Baldwin was a member, the Legislative Assembly adopted a resolution declaring it to be the opinion of that house that the appointment of a responsible Executive Council, "to advise the Lieutenant Governor on the affairs of the Province, was one of the most happy and wise features in the constitution, and essential in our form of government." In a House of fifty-five members only two votes were recorded against this resolution. In 1836, Mr. Baldwin went to England, and while there endeavored to impress upon Lord Glenelg, then Colonial Minister—by writing, for he was never granted an interview at the Colonial office—the necessity of applying the English principle of responsibility to the provincial executive. When in England, the intelligence of the success of the Tories in the Upper Canada elections, which had just been held, reached London; and Mr. Baldwin took special care to impress upon the Colonial Secretary not to deceive himself by supposing that this event would supersede the necessity for an application of the principle for which he so strenuously contended. If it were withheld, he assured the Imperial Government, there was great danger that the affections of the people would become alienated from the mother country. In their quarrel with Sir Francis Head, the executive took the ground that the principle of Responsible Government was intended to be conceded by the Constitutional Act of 1791.

Mr. Baldwin, having thus begun, never ceased to do battle for the principle of Responsible Government, till it was fully and unreservedly conceded. He has been called the father of Responsible Government; and in one sense he may be said to have been so. Not that he was the only one to advocate the principle; but there was this difference between him and most of the other Reformers, that while he relied entirely upon this principle as the basis of all real reform, they did not by any means confine themselves to this single demand. They were always discussing what ought to be done when

the machinery for doing it should be obtained. Mr. Baldwin was for obtaining the machinery first, and then trusting to its successful operation when it should have been secured. This devotion to a single leading principle—which, however, contains all that is valuable in the British system of Government—earned for Mr. Baldwin, in certain quarters designation of a man of "one idea." And a glorious idea it was! Without it what would Canada be to-day? Of this principle the ablest opponents were to be found in the Legislative Council. An excellent summary of their objections—containing all that could be said against Responsible Government—is to be found in a Report of a Committee of the Legislative Council which, in 1839, undertook to answer Lord Durham's able report, on British North America. Although this document contained all the Tory wisdom of the day, it is impossible to peruse it now without a smile. Mr. Baldwin's principle—his one idea, if you will—had found a powerful advocate in Lord Durham; and from the moment of the publication of his famous report, the oligarchical system was doomed. It managed to totter on a little longer, by the aid of violence and fraud; but nothing could avert a doom which was inevitable. Even the reaction attempted by Lord Metcalfe was unavailing. He would consult his ministers on all "adequate occasions"—so he said—and he was left without ministers for nine successive months, having only a Provincial Secretary, after the resignation of the LaFontaine-Baldwin Cabinet, in November, 1843. Mr. Baldwin was among those who resisted his reactionary movements; and he was one of those who came in after the fall of the ministry which, after the election, Sir Charles Metcalfe had been able to form.

Mr. Baldwin was in several different Governments. He was first sworn in as executive councillor on the 18th February, 1836; having for colleagues, Messrs. Rolph, Dunn, Bidwell, and Markland. They held office for a very short time; and it was after their resignation, upon a difference with Sir Francis Bond Head, as to how the Government should be conducted, that he made the visit to England previously referred to. In 1840, on Mr. Draper being appointed Attorney General—on vacating the Solicitor Generalship—Mr. Baldwin was appointed Solicitor General. This step was publicly approved by his friends. At a meeting held in Toronto for that purpose, Dr. Widmer occupying the chair, Henry John Boulton, who had previously been allied to the Family Compact, appeared as an advocate of Responsible Government. The meeting was, however, essentially reform in its complexion. Mr. Baldwin thus explained his views in accepting office: "I distinctly avow that in accepting office, I consider myself to have given a public pledge that I have a reasonably well grounded confidence that the government of my country is to be carried on in accordance with the principles of responsible Government, which I have ever held. My position, politically, is certainly peculiar; but its peculiarity has arisen out of the position in which the present parliament has placed the Governor General (Sir George Arthur), themselves and the country; by the course they chose to adopt during the late session; and it is therefore right that it should be distinctly understood that I have not come into office by means of any coalition with the Attorney General . . . Whenever I find that the Government is to be carried on upon principles adverse to those which I profess, I shall cease to afford them my support, and shall cease to be a servant of the Crown." This step was fully endorsed by the country; and Mr. Baldwin was elected for two constituencies, the South Riding of York and the County of Hastings. In September of 1842, Mr. Baldwin became Attorney General, for Upper Canada, M. LaFontaine occupying the corresponding office, in Lower Canada, and dividing with him the somewhat anomalous dual premiership. He continued to occupy this position till the rupture with Sir Charles Metcalfe. Taking the same office again in February 1848, he held it till July 1851, when he quitted ministerial life for ever. At different times, he represented the town of York, the Fourth Riding of York, Rimouski and Hastings, in Parliament.

Mr. Baldwin married a sister of the late Hon. Robt. Sullivan, who bore him several children. He survived her. One daughter is married to the Hon. J. Ross; one son is at sea, and another in the Church. A man of charitable dispositions, he has been known to subscribe as much as £100 at a time to a worthy object.—*T. Lead.*

Death of Jacques Viger, Esquire, Commander of the Order of St. Gregory.

Scarcely has the earth closed over the mortal remains of the Hon. Robert Baldwin, ere news reaches us that another distinguished notability of this Province has gone the way of all flesh. We learn, from Max. Bibaud's *Dict. des Hommes Illustres*, that the late

J. Viger was born in this city, May 7th, 1787. He was a man of elegant tastes, a keen antiquary, and an indefatigable collector of historical materials, public and private. Without being much of an author himself, his liberal contribution of materials *pour servir* did much to enrich the works of others. In the year 1812, he edited and published the "Relation de la Mort de Louis XVI, par l'Abbé Edgeworth de Firmont, son dernier confesseur." The titles of few other literary performances of M. Viger have reached us; but we understand he has left behind him large collections, the result of long researches, especially among extant records, early and late, regarding the annals of Canada, and the history of its chief families of the olden stock. We hope yet to learn that these may be turned to account by native *littérateurs*. An illustrated Repertory of things remarkable and rare, which he called his "Album," is one of the greatest curiosities this city contains. It is said to be a real museum, in little, of historic, artistic, mechanical and antiquarian objects. The library of M. Viger is also known to be very rich for its peculiar contents. Having the command of an ample fortune, he befriended rising men of letters and struggling artists; and in his private relations was greatly esteemed for kindness of heart and blandness of manners. His love of country was ardent, and his regard for its institutions, religious and civil, especially vivid.

During the Administration of the Provincial Government, he was presented to a seat in the Executive Council, and became, by the regardful suffrages of his fellow-citizens, the first Mayor of Montreal. His title of Commander he derived from Rome, through being a distinguished lay defender of the rights of his Church. He held, for a time, the office of road-inspector, &c. While filling these offices, he did much to advance all measures of public improvement, material and moral: a proof that what is called a *bookish man* may be alert in the performance of practical duties. But "the ruling passion strong in death" became conspicuous in his latest hours; for the fatal stroke fell upon him on Sunday last, about one in the afternoon, amidst his volumes and MSS.; and thus fitly closed a peaceful, blameless, and not unuseful life. The malady with which he had been some time afflicted, was disease of the heart. *Requiescat in pace!—Pilot.*

Notices of Books and Publications.

ON THE VENTILATION of dwelling houses and schools illustrated by diagrams with remarks upon sanitary improvements, by H. H. Miles, Esq., M. A., Professor of Mathematics and Natural Philosophy, in the University of Bishop's College, Lennoxville. Montreal, 1858: 66 pp. in-8.

This is a reprint in pamphlet form of two very excellent lectures, given by the author, under the auspices of the Lower Canada Board of Arts and Manufactures. We particularly recommend the chapter on simple contrivances for ventilation. The whole of public hygien is dealt with, in this little work, in a most able and scientific manner. The author proves that, in Canada the ratio of mortality is fearfully large for the earliest periods of life. This ought to be taken in connexion with our article on school furniture and duly weighed by all whom it may concern.

The Temple of Serapis at Pozzuoli.

By SIR EDMUND WALKER HEAD, Bart. J. B. Nichols & Sons, London, 1856.

To the classic antiquary, the ancient divinity Serapis, and the rites by which he was worshipped, have furnished prolific themes for discussion. The Egyptian divinity was supposed, by some, at least of the Greek writers, to be identical with Osiris; by later authors he has been described as the Egyptian Apollo. But so difficult is it to eliminate from Egyptian mythology anything strictly analogous to classic faith and worship, that Serapis has been identified with Zeus or Jupiter, with Pluto, with Æsculapius, and with Pan. But the difficulties grow still more complicated when we study the divinity in his Serapeia at Memphis or Thebes, where his favoured worship was associated with the rising of the Nile, and the fertilising of its submerged banks; and at Rome or Pozzuoli, where the intruding god had to contend for a time against the orthodoxy of old Pagan Italy. There, however, as elsewhere in all times, the persecuted rites grew in popular estimation; and in B. C. 43 the temple of Serapis reared its marble columns, by decree of the Roman Senate, in the Circus Flaminius, and the wor-

ship of the strange God became not only popular but fashionable; if, indeed the ancient Egyptian, and more modern Alexandrian, with the Greek and Roman Serapis were the same.

But it is not this mythological question which now attracts attention, and beguiles a distinguished scholar to lay aside for a brief period the cares of vice-regal responsibility, for pleasant dalliance with the literary sphinx. It matters not, for his present purpose:

"Whether Serapis was a deity originally Egyptian, or whether he was a strange god from Sinope thrust into the place of Osiris by Ptolemy Soter. His worship became the prevailing one at Alexandria, and spread from that commercial city to all the countries with which it was connected. When Pausanias wrote, the deity was established in almost every part of Greece. We find him at Rome in the time of Catullus, and we should certainly look for a temple to him at Puteoli, the regular port for which the fleets of Alexandria steered."

At Pozzuoli, or Puteoli, accordingly the ruins of a temple still remain on the site, where, according to the celebrated inscription now preserved in the Museo Borbonico at Naples, there existed a temple of Serapis in the year of the city, 649, or sixty-two years before the "canonization" of Serapis, and the building of the new temple of Isis and Serapis in the Circus Flaminius at Rome: B. C. 105. To the former temple a peculiar, popular, and scientific interest now attaches. Its ruined columns are discovered to be the *gnomon* of a scientific chronometer of singular value and utility, by means of which the far-reaching chronometry of the geologist finds important elucidation. The "*Lec. Parieti faciundo*" of the Museo Borbonico marble has been challenged by critical antiquaries; apparently without good reason. But no sceptical Maffei or Carelli assails the genuineness of the lithodromous perforations by means of which the columns of Pozzuoli are graven with an indisputable record of their alternate submergence and upheaval, and with this, of the successive changes in the relative level of land and sea, within an easily ascertained period.

Sir Charles Lyell, in his "Principles of Geology," after noticing the diverse opinions of Antiquaries as to the date, form, and purpose of the ruined structure at Pozzuoli, remarks:

"It is not for the Geologist to offer an opinion on these topics; and I shall, therefore, designate this valuable relic of antiquity by its generally received name, and proceed to consider the memorials of physical changes inscribed on the three standing columns in most legible characters by the hand of Nature. These pillars, which have been carved each out of a single block of marble, are forty-two feet in height. An horizontal fissure nearly intersects one of the columns; the other two are entire. They are all slightly out of the perpendicular, inclining somewhat to the south-west, that is, towards the sea. Their surface is smooth and uninjured to the height of about twelve feet above their pedestals. Above this is a zone, about nine feet in height, where the marble has been pierced by a species of marine perforating bivalve.—*Lithodromus*, Cuv. The holes of these animals are pear-shaped, the external opening being minute, and gradually increasing downwards. At the bottom of the cavities, many shells are still found notwithstanding the great numbers that have been taken out by visitors; in many the valves of a species of arca, an animal which conceals itself in small hollows, occur. The perforations are so considerable in depth and size, that they manifest a long-continued abode of the lithodromi in the columns; for, as the inhabitant grows older and increases in size, it bores a large cavity, to correspond with the increasing magnitude of its shell. We must consequently, infer a long-continued immersion of the pillars in sea-water, at a time when the lower part was covered up and protected by strata of tuff and the rubbish of buildings; the highest part, at the same time, projecting above the waters, and being consequently weathered but not materially injured.

"On the pavement of the temple lie some columns of marble, which are perforated in the same manner in certain parts; one for example, to the length of eight feet, while, for the length of four feet, it is uninjured. Several of these broken columns are eaten into, not only on the exterior, but on the cross fracture, and, on some of them, other marine animals have fixed themselves. All the granite pillars are untouched by lithodromi. The platform of the temple, which is not perfectly even, is at present (1828) about one foot below high-water mark (for there are small tides in the Bay of Naples); and the sea, which is only one hundred feet distant, soaks through the intervening soil. The upper part of the perforations, then, are at least twenty-three feet above high-water mark; and it is clear that the columns must have continued for a long time in an erect position, immersed in salt water. After remaining for many

years submerged, they must have been upraised to the height of about twenty three feet above the level of the sea."

If we leave the ruins of the ancient temple, and turn our attention to the neighboring coast, the like evidence of upheaval, depression, and submergence of the land meets the eye. But still the ancient temple has a value of its own, which the cliff of Monte Barbaro and the low terrace of La Starza cannot supply. The rocky cliff, perforated by the *Lithodomi*, tells the same tale of former submergence as the pierced marble columns; but the rock, though inscribed with the same characters, cannot tell all that is revealed by the pillars of the ancient temple of Serapis. It is something of no slight importance to the geologist to ascertain that any great change in the relative levels of sea and land has taken place within the recent human era, and thus the temple columns establish at a glance. But if the date of the structure, and the uses of the edifice, can be established, far more accurate approximations may be made to a definite measurement of the period required for such geological phenomena as are there disclosed; and here it is that the scholar and the antiquary come to the aid of the scientific geologist; and from their combined labora truth of great value, and with a mutual relation of peculiar significance, are deduced and rendered generally available.

Sir Edmund Head undertakes the solution of three questions, all of an antiquarian character, yet each of them possessing considerable importance in any discussion relating to the geological phenomena exhibited by the ruins of the so called Temple of Serapis at Pozzuoli. These are—

1st. Was it a temple of Serapis?

2nd. What is its proper age?

3rd. Can any light be thrown upon its history, or on the dates of the various changes of level?

To the first of these reference has been already made. Alexandria was the great seat of the worship of Serapis in its later Egyptian form; nor was his worship abolished in that famous commercial capital till the reign of Theodosius the Great,—the effective ally of orthodoxy against the Arian heresy,—when the ancient pagan rites were summarily abolished by Theophilus the archbishop of Alexandria, and the Alexandrian Temple of Serapis was demolished, or converted to the use of Christian devotees. The overthrow of the temple at Pozzuoli followed in like manner. It served as a fortress when Olympius retreated to it, as the stronghold of paganism during those tumults, which led to the destruction of the temple itself under Theodosius.

Signor Carelli, who denies the sacred character of the ruined edifice, inclines rather to the idea of its having been public baths, but the Æsculapian attributes of Serapis render the bath room peculiarly compatible with the essential requisites or adjuncts of his temple; and on this subject Sir Edmund adduces some valuable evidence:

"At Pozzuoli a building of some sort occupied the centre of the area. Whether, as in Egypt, the image of the god was placed there, or behind the four columns to which the ruin owes its modern celebrity, may be uncertain. The lowness of situation must have deprived our temple of subterranean passages, and the underground arrangements so elaborately provided in the Egyptian model. The possession, however, of a natural hot spring just behind the temple must have made up for many disadvantages. No appendage could be more appropriate for the temple of a god who among his many attributes usurped those of Æsculapius.

"This warm spring, however, suggests another curious question with reference to a passage in Pausanias. After mentioning several cases of fresh springs in the sea, and the hot springs in the channel of the Meander, Pausanias proceeds as follows:—"Before Dicæarchia of the Tyreni (Pozzuoli) there is water boiling up in the sea, and for the sake of it an island made with hands, so that not even this water is wasted, but serves people for warm baths."

"May not this spring be the very one now existing behind the Temple of Serapis?

"Had the hot spring of Pausanias originally discharged itself into the sea, it does not seem likely that it would have been used at all; but if its virtues had been long known to the inhabitants of Pozzuoli, and a gradual encroachment of the sea, or rather a depression of the land, deprived them of the benefit of the baths to which they had become accustomed, what could be more natural than that a small mound or island should be made by hand in the shallow water, in order that the baths might be again available?

"Pausanias does not indeed say that these baths were connected with a temple of Serapis, but this is immaterial.

"On this theory a number of curious questions present themselves.

"Which is the pavement of the building existing at the time of

Pausanias? What, relatively to the floor as now seen, was the level of the original building submerged in the sea? Is it represented by the mosaic pavement found five feet below the floor of the temple? If so, it would be important to examine the soil between the two pavements, and to ascertain whether it appears to warrant the supposition that it was a part of a mound constructed artificially."

Here accordingly we perceive that a new element comes in to complicate the question. Not only has the land, with the superimposed temple, been raised and depressed by natural causes, but the hand of man has also been working and counter working with nature; filling in and raising up when she depressed, as now digging down to ascertain her former operations. But on this also the researches of accurate scholarship can throw fresh light. Sir Edmund Head proceeds:

"It should be stated that, according to the general notion, mosaic pavements were not in common use at Rome before the time of Sylla—that is, about eighty years before Christ; but it does not follow that a mosaic pavement may not have been added after that date to a building existing before it: so that the mosaic pavement in question may have been part of the Temple of Serapis mentioned in the 'Lex Parieti faciundo.' Pausanias lived in the time of Adrian, as has been already stated, and, according to this view, the submergence of the first baths or temple, must have taken place between the time of Sylla and that date. We cannot, I presume, suppose that a mosaic pavement would be originally laid under water.

"The level below the water of the Mediterranean of the old mosaic pavement must correspond pretty accurately with that of the base of the columns of the submerged 'Temple of the Nymphs' in the neighboring bay. Did this submergence take place at the time of the great eruption of Vesuvius which over-whelmed Pompeii and Herculaneum, A. D. 79?

"Statius was born A. D. 61, and was therefore about nineteen at the time of the eruption of 79. As a native of Naples, he may be presumed to have been conversant with all the phenomena which then took place. His lines on the subject of the destruction of the cities are very striking:

Hæc ego Chalcidicus ad te, Marcellæ, sonabam
Littoribus, fractas ubi Vævius erexit iras,
Æmula Trinacriis volvens incendia flammis.
Mim fides! credetæ virum ventura proago,
Cum segetes iterum, et jam hæc deserta virebunt.
Infra urbes, populosque premi? proavitaque toto
Rura abiisse mari? necdum letale mirari
Cessat apex—

"The latter part of this passage seems to me to mean 'lands tilled by our ancestors (proavita) have disappeared in the body of the sea' (toto mari). The commentator in the Variorum edition (Lugd. Bat. 1671) appears to understand the word 'proavita' as referring to the restoration of these districts hereafter 'proavita dicit respectu futuræ posteritatis'—which seems to me absurd. How were posterity to get the lands out of the sea again? Such is not the use of the word when applied to Hector:

Pugnantem pro se, proavitaque regna tuentem.

Orid. Metamorph., xiii. 416.

"I infer from the expressions of Statius that considerable tracts of land had been sunk in the sea by some sudden depression of the ground.

"May not this have been the time when the temple of the Nymphs, and the first baths or temple of Serapis, were covered with shallow water? Is it not possible that between this convulsion and the time when Pausanias wrote, the inhabitants of Pozzuoli may have made the island in the sea, and have erected on it a second temple—the one of which the ruin still puzzles the geologist?"

Such are some of the ideas—disclosing the graceful union of science and scholarship by which both have been so materially benefited in modern times,—that reach us, towards the eve of a stormy session of our Canadian Parliament, from the pen of our Provincial Viceroy, and furnish a welcome example of relaxation amid the cares and responsibilities of Government, thus found among ourselves in the delightful seductions of scientific speculation and literary research.—*Canadian Journal of Science.*

MONTHLY SUMMARY.

MISCELLANEOUS INTELLIGENCE.

—Lowell is the Manchester of America—the metropolis of American cotton manufacture. The last number of *Hunt's Merchant's Magazine* contains an interesting article on this topic, taken from a record of the venerable Nathan Appleton, of Boston, who had been identified with the rise and progress of this city, and from which we condense some interesting facts.

The power-loom, it seems, was introduced into the United States by Mr. Francis C. Lowell, in 1814, and was first used in his factory at Waltham, Mass. He was a very ingenious man, and made several improvements, not only in the power-loom, but also in other machines. The company at Waltham was very successful; and this induced Mr. Appleton, in 1821, (who was a small stockholder) to extend his interest in another direction, and to commence the manufacture of cotton cloth, and the printing of calicos. After examining various sites for a new manufacturing village, in company with Mr. P. T. Jackson, it was suggested by a friend that they should purchase the Pawtucket Canal, and thus obtain the whole power of the Merrimack river, with a fall of thirty feet. The spot where Lowell now stands was visited for this purpose in November, 1821, by a party consisting of Messrs. N. Appleton, P. T. Jackson, Kirk Boot, Warren Dutton, Paul Moody, and John W. Boot. At that period there were not more than a dozen families residing in the vicinity; but the impression made upon the minds of the party was so favorable, in regard to the manufacturing capacities of the situation that, one of them remarked, "some of us may live to see this place contain 20,000 inhabitants"—an anticipation which has been more than realized. The Pawtucket Canal was purchased from a private company which owned it, and Kirk Boot was appointed treasurer of the association which had been formed. "The Merrimack Company," now so famous, began soon afterwards to erect two mills, the first wheel of which was set in operation on the first of September, 1823. Three additional mills were soon afterwards erected; and from the very start, the place assumed an air of prosperity. The name given to it by the act of incorporation was in honor of the first introducer of the power-loom at Waltham, and who had done so much to improve the cotton manufacture of America.

The standard for a mill-power sold by the corporation owning the canal, was 25 cubic feet of water per second on a fall of 30 feet, with sufficient adjacent land for factories. The price paid for it was \$14,336, of which \$5,000 remained on mortgage, subject to an annual rent of \$300. This water power was estimated as equal to 60 horse, and was considered necessary for running 3,584 spindles, with carding machines, looms, and all the necessary machinery for making cotton cloth.

The Merrimack Company commenced the printing of calicos in 1825; and in the subsequent year, John D. Prince, of Manchester, England, was engaged to take the charge, under whom the works were most ably managed—with Dr. Dana as chemist—until 1855, when he retired at an advanced age, on a life annuity of \$2,000 per annum. The prints of this company (the fast colors), have obtained a wide-spread celebrity. It has been the settled policy of the Lowell companies to secure men of ability in every department, and to act towards them in the most liberal manner; this has been the secret of their success—their dividends amounting annually, with very few exceptions, to more than twelve per cent ever since they were established. To show how much the public have been benefited by improvements in our manufactures, the Merrimack prints sold readily in 1825 for 23-27 cents per yard; in 1858, the same classes were sold for 9-15 cents. To exhibit the benefits which the public have derived from improvements in the manufacture of cotton cloth, it is only necessary to state that the class of goods made at Waltham in 1816, which were readily sold for 30 cents per yard, now sell for 8 and 9 cents per yard.

The capital employed in manufacturing at Lowell, is \$12,000,000, and the population has arisen from twelve families to 38,000 persons. There are 139 mill-powers used, amounting to 9,000 horse. A great improvement was made in the canal for supplying the water, in 1846, under J. B. Francis, Esq., the engineer of the corporation, and whose work on "Lowell Hydraulic Experiments" does him great credit. The first water wheels employed were of the overshot class, the best of which realized only 75 per cent of the water power; as these have worn out, the turbine has been substituted, which, as improved by Uriah A. Boyden, realize 88 per cent of the power.

Lowell is a great city, not from the number of its population, but because it is a hive of industry (a producing community), and therefore a mine of wealth in regard to the stable interests of our country.

—Her Majesty has of late conferred several honors on native Canadians which testify to the high position which Canada is now assuming for itself in the public mind in England. The warmest and most courteous reception was given in England to the Hons. MM. Cartier, Ross and Galt, and to the ministers of our sister colonies, who met in London with a view of discussing great intercolonial questions. Our present Premier, M. Cartier, was the guest of Her Majesty, during two days, at Windsor Castle. Our late Premier, Colonel Taché, has been knighted and is now Sir Etienne Pascal Taché. Chief Justice MacCaulay has also been raised to

the dignity of a Companion of the Bath. The same honor, as our readers are aware, had been conferred on the late lamented Robert Baldwin. We have now four Canadians baronets, Sir Henry Caldwell, son of Sir James Caldwell; Sir Charles Stuart, son of the late Sir James Stuart, Chief Justice; Sir Louis Hypolite Lafontaine, Chief Justice of Lower Canada, and Sir John Beverly Robinson, Chief Justice of Upper Canada; and two Canadians knights, Sir William Logan and Sir E. P. Taché.

LITERARY INTELLIGENCE.

—We have heard and read a great deal of the energy and self-devotion of travellers; but the term, in the sense in which it is here used, is associated in our minds only with the hardihood and rougher capabilities of men. Of late years, however, we have learned that it was in the power of a woman, whose character, manners, and person were not in the least more manly than the rest of her sex, but who, in point of fact, was quieter and more reserved than thousands of females who have never left the seclusion of their villages, to compass voyages and travels, with means and in a space of time which add materially to the marvellous, indeed almost miraculous, nature of her exploits. Madame Ida Pfeiffer, whose name is so familiar to us in connection with her "Voyage round the World," and other works, must be considered as one of the most remarkable women of this or any other time. The record of her adventurous career reads like a story in the Arabian Nights. She was born at Vienna, at the close of the last century, and lived a tranquil life until the age of forty-seven, nourishing, however, a strong passion for travel, and out of a narrow income forming a fund for the realisation of her hopes.

In 1842 she started on her first journey; traversed Turkey, Palestine, and Egypt; and published her diary, in the form of two small volumes. In 1845 she visited Scandinavia and Iceland, of which countries she wrote an interesting account. At length, on May 1, 1846, at the age of fifty-one, she left Vienna on her first tour round the world. She was accompanied for a short time by Count Berchthold; but in the course of their transit through Brazil that gentleman's strength failed him, and she proceeded alone to visit the Puri, or Indian aborigines of that country, going through a series of the most romantic adventures. From Brazil she proceeded, by way of Cape Horn, to Chili, and thence to Tahiti, an island which she thoroughly explored in a fortnight. She next reached China, but did not succeed in penetrating into the interior of that country; proceeded to Calcutta, and thence travelled overland to Bombay. After a short stay at that Presidency she started for Bassora, on her way to Bagdad. From this point she began a perilous journey to Mosul, travelling, as she described it, like the poorest Arab; and after many startling adventures and hairbreadth escapes from robbers and the treachery of her solitary guide, whom her resolution and courage alone kept in check, she achieved the passage of the Koordish Mountains, and arrived in safety at the missionary station of Oroomiah. There she continued her journey through Persia, and, returning homewards by way of Russia, Constantinople, and Athens, reached Vienna in November, 1848.

In 1851, with the small capital of one hundred pounds, granted her by the Austrian Government, Madame Pfeiffer set sail for the Cape of Good Hope, intending a second time to make the circuit of the world. Her immediate object was to penetrate the continent of Africa in the direction of the recently-discovered Lake Ngami; but the expense of travelling proved so great that she was obliged to content herself with a few rambles, and the execution of her second plan—that of exploring the Sunda Islands. In the beginning of 1852 she was at Sarawak, whence she penetrated into the interior of Borneo, and inspected the gold and diamond mines of Sandax. She afterwards visited Java and Sumatra, where she went among the cannibal tribe of the Batak, hitherto generally avoided by Europeans, but whose fierce nature her calm and quiet bearing subdued, and she appears even to have won their respect, since none but a superhuman being, they asserted, could have ventured amongst them with no other protection but her weaknesses. She remained long enough among the savage tribes to become acquainted with their habits, and penetrated further than any preceding travellers. After visiting the Moluccas she proceeded to California, that execrable gold land, as she termed it, sailed down the western coast of America, reached the source of the Amazon River, crossed the Andes, beheld the snow-capped peaks of Chimborazo and Cotapaxi, and afterwards saw all that North America has to show of the grand and beautiful, and came to London, for the second time in the course of her journeyings, at the end of the year 1854.

Undaunted by the disadvantages of advancing age and very limited means, she undertook her last effort of travel in an attempt to explore the wild and inhospitable island of Madagascar. There she caught a fever, from which she never wholly recovered, and which terminated in her death, a short time since, in her native city of Vienna.

Although not a scientific traveller, according to the requirements of the present age, Madame Pfeiffer has done much to advance the cause of knowledge by faithful records of all that came within the sphere of her intelligent observations. She was able to take bearings and distances, to make meteorological observations, and has contributed largely to the science of entomology. On the whole, she may well be said to have left a name which can never be mentioned without wonder and admiration at the display of qualities which, without being unfeminine, are seldom expected from, and as rarely found to characterise, a woman.—*Illustrated London News.*

—The rooms of the *Institut Canadien-Français* were solemnly inaugurated on the 16th instant. An inaugural address by the Hon. Mr. Chauveau, President of the Institute, and a lecture by Hector Fabre, Esq., were delivered before a crowded audience. His Lordship, the R. C. Bishop of Montreal, the Rev. Mr. Granet, Superior of the Seminary, D. Masson, Esq., President of the St. Jean Baptiste Society, and the Rev. Fathers Vignon and Aubert also addressed the meeting. The building now occupied by the Institut is that which formerly belonged to the Montreal Natural History Society, Little St. James' street. It was bought for £2300 by a joint stock company, consisting of the leading members of the new institution. The hall in the upper part of the building has been greatly improved, and in order to make more room, a brick wing has been erected for the staircase instead of the one in the centre of the hall. As now constructed, the lecture room can hold upwards of 500 persons. A larger number even were present. A reading room, well supplied with newspapers and periodicals, has been open for some time, and a library and museum are in course of being established.

SCIENTIFIC INTELLIGENCE.

—Mr. Fox Talbot, the inventor of the well known "paper process" of photography, and who, with a liberality seldom found, relinquished his patent (being a wealthy man), and threw his improvements open to the world, has just invented a new process of engraving by light on plates of copper, steel, or zinc. Taking a perfectly clean plate, he covers it with a solution of a quarter of an ounce of gelatine dissolved in eight or ten ounces of water, mixed with one ounce of a saturated solution of bi-chromate of potash in water. The engraving process should be carried on in a darkened room, and is performed as follows:—

A little of this prepared gelatine is poured on the plate to be engraved, which is then held vertical, and the superfluous fluid allowed to drain off at one corner of the plate. The plate is dried over a spirit lamp, and the gelatine left in a thin film evenly spread over it. The object to be engraved is laid on this, and screwed down upon it in a photographic copying frame. This frame is then placed in the sunshine for one or more minutes. When the frame is taken from the light, and the object removed from the plate, a faint image is seen upon it—the yellow color of the gelatine having turned brown wherever the light has acted. Powdered gum copal is now spread thinly over the plate and melted into a thin covering, and the etching liquid applied. This liquid is the perchloride of iron, of which water dissolves an extraordinary quantity. This, if a certain strength (to be found by experience, five or six parts of the saturated solution to one or two of water being an average strength), is applied with a camel's hair brush, and the etching quickly commences, to be continued as long as the operator thinks fit. The liquid is then wiped off with cotton wool, the plate cleaned with water and whiting, and a perfect etching is obtained, the liquid acting only on those parts of the gelatine which have been left untouched by light. This liquid may be conveniently used for common etching, as it is, in every way, superior to aquafortis, and its preparation is simple, being merely a solution of peroxyd of iron in hydrochloric acid, evaporated nearly to dryness, and dissolved in water. It disengages no gas while "biting in," and does no injury to the hands or clothes of the operator. There are, of course, many points of difficulty in the process, which patience and experience on the part of the operator will easily overcome.

STATISTICAL INTELLIGENCE.

—In 1856 the population of England, Scotland, and Wales was 22,080,449, viz:—10,802,279 males and 11,278,170 females. England and Wales contained 19,045,187 of these, and Scotland 3,035,262. There were 759,201 births, 448,962 deaths and 179,824 marriages. There were 614,802 legitimate and 42,651 illegitimate births in England and Wales, and in London 83,787 legitimate and 3,646 illegitimate births. The proportion of illegitimate to legitimate was 1 in 14.0, and 1 in 23.0. The proportion of marriages to the population was 1 in 119 in England and Wales, and 1 in 100 in London, and it is added:—In Great Britain 5,179 schools were inspected in 1856, accommodating 877,762 children; 571,239 was the average number in attendance; 3,455 of these schools belonged to the church, and the rest to the various dissenters (including the Roman Catholics) and the kirk of Scotland; 165 primary schools were built, and 6,282 enlarged or improved in England in 1856. The receipts for the purposes of primary education amounted to £915,372, (£422,633 from Parliamentary grants,) and the expenditure to £939,910. In Ireland there were 5,245 national schools at work at the end of 1856, and the average daily attendance varied from 269,410 to 254,011. There were 168 agricultural national schools at work in 1856. The receipts on account of primary education amounted to £247,664, and the expenditure to £231,458.

The total number of paupers in the United Kingdom in 1857 was 1,057,133, the percentage to the population being 4.6 in England and Wales, 3.9 in Scotland, and 0.9 in Ireland. The total expenditure on the paupers of the United Kingdom was £7,153,742. In England there were, in 1857, 122,845 in-door, and 762,165 out-door, paupers. The adult able-bodied paupers (exclusive of vagrants or "sturdy beggars") numbered 140,075, of whom 19,660 were maintained in-doors. The total amount expended on the relief of the poor in 1857 was £5,898,756, the average rate per individual of the population having been 8s. 5½d. for "poor rates received," and 6s. 1½d. for expenditure in relief of poor. Ireland presents a remarkable improvement as regards the decline

of pauperism. The total number of paupers in 1857 was only 56,910, against 73,525 in 1856, and 89,610 in 1855. The percentage ratio to the population was only 0.9. The expenditure has fallen off from £849,951 (1855) to £619,514.—*Hunt's Merchants' Magazine.*

—The number of languages spoken is 4,064. The number of men is about equal the number of women. The average of human life is thirty-three years. One-quarter die before the age of seven. One-half before the age of seventeen. To every one thousand persons, one only reaches one hundred years. To every one hundred only six reach seventy-five years; and not more than one in five hundred will reach eighty years. There are on the earth one thousand millions of inhabitants. Of these, 33,333,333 die every year; 91,824 die every day; 7,780 every hour, and 60 per minute, or one every second. These losses are about balanced by an equal number of births. The married are longer-lived than the single; and above all, those who observe a sober and industrious conduct. Tall men live longer than short ones. Women have more chances of life previous to the age of fifty years than men, but fewer after. The number of marriages is in the proportion of seventy-six to one hundred. Marriages are more frequent after the equinoxes, that is, during the months of June and December. Those born in spring are generally more robust than others. Births and deaths are more frequent by night than by day. Number of men capable of bearing arms is one-fourth of the population.—*Ibid.*

—By the latest return of the populations of Great Britain and France, it appears that the proportion of children and young persons to adults is about one-seventh more in Great Britain than in France. The inferences are that marriages are more fruitful than in France; that the population in Great Britain is in a more rapid state of advance—the percentage of persons living under 15 being 35 in Great Britain, and 30 in France. The total number of adult males in the United Kingdom is 5,210,000; in France, 7,250,000.—*Ibid.*

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