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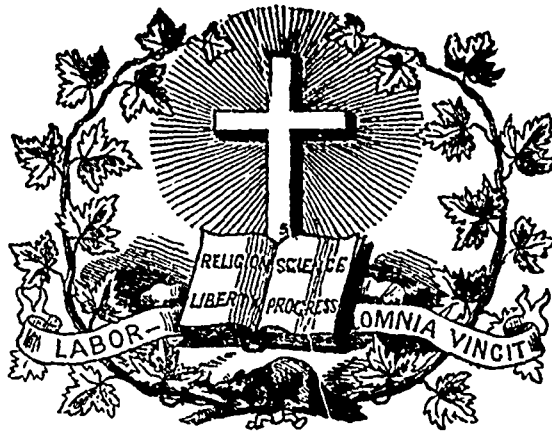
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# JOURNAL OF EDUCATION.

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No. 4.

**SUMMARY.**—**EDUCATION:** Biography as a means of teaching.—School days of eminent men in Great Britain, by John Timbs, F. S. A. (continued).—Suggestive hints towards improved secular instruction, by the Rev. Richard Dawes. 11th Natural Philosophy, (continued).—The magic lantern an auxiliary in teaching.—**LITERATURE.**—Poetry: The Poet and the Rose.—**SCIENCE:** Description of remarkable Parhelia.—**OFFICIAL NOTICES:** Appointment of a member of the Quebec Catholic Board of Examiners.—Diplomas granted by Boards of Examiners.—Teachers conferences.—Notice to the holders of copy right concerning the approval of books by the Council of Public Instruction.—Notice to teachers.—Donations to the Library of the Department.—**EDITORIAL:** Quebec Catholic Board of Examiners.—Report of the Superintendent of Public Instruction for Louisiana for 1857.—Report of the Superintendent of Public Instruction for Lower Canada for 1858.—Extracts from Reports of Inspectors of Schools, (continued).—**MONTHLY SUMMARY:** Educational Intelligence.—Literary Intelligence.—Scientific Intelligence.—Statistical Intelligence.—Miscellaneous Intelligence.—**WOOD CUT:** Diagram of parhelia observed at St. Mary's College, Montreal.

## EDUCATION.

### Biography as a Means of Teaching and Training.

A PAPER READ BEFORE THE UNITED ASSOCIATION OF SCHOOLMASTERS IN ENGLAND.

That the story of a life is, and ever has been, singularly attractive to man, and especially so to the young, can, I think, be established by a passing reference to history, to our current literature, and to our individual experience.

Biography might aptly be termed the warp of history. For what event has ever been recorded of which a life was not the basis, and in which a man was not the foreground? To look back upon history is to look upon a crowd—tumultuous, shifting and confused; to understand which, one must make a selection and proceed to inquiries, that is, study Biography.

And upon studying history, will it not appear as though this biographical teaching had ever been the most common and influential means by which to convey instruction? For if, in the primitive times, some venerable patriarch gathered around him his children and his grand children beneath the shadow of the oak, the olive, or the palm—there to inform them in their varied duties, and emulate them to virtuous and noble achievements, was it not the life-story of some revered ancestor, or some honoured and distinguished contemporary, that kindled such unwonted fire in the old man's eyes, and called up a corresponding enthusiasm in the faces of his youthful listeners? Was it not by the recital of some thrilling piece of biography, that it would be made evident how that peculiar gifts and benedictions alighted upon the conforming and the pious, while severe and significant judgments overtook and brought to ruin the indifferent, the doubter, or the scoffer? So also, if the sturdy warrior sought a theme by which to cheer his comrades by the lonely watch-fire, or dare them to the deadly breach, was not the heroism of some mighty progenitor the watch-

word and the incentive? In fact, does not all history go to show, that the memory of those "who had made their lives sublime" was the most potent charm by which to invoke the inspiration of the poet, the eloquence of the orator, the endurance of the worker, and the valour of the brave? In all literature, in all tradition, the impure mythology of the Greeks, the heroic stories of the Romans, the indecent fables of the Hindoos, the barbaric lays of the Celts, and the chivalric minstrelsy of the middle ages, do life-stories predominate; all teem with proper names; the universal subject appears to be *Man*, and the universal predicate some form of the verb, *to live*.

If we turn to that purest and most ancient stream of historic lore—the Holy Scriptures—the power and prevalence of biographical teaching will be still more apparent. Why, I should suppose that the Bible, apart from its high and holy functions as a Divine Revelation, and considered simply upon its merits as a book, would be allowed to be one of the most captivating compositions ever penned. Now, to what does it owe its charms? Is it not to its life-stories? Cannot each one of us remember how that, in our childhood, we pored for hours over its beautiful narratives—how that we were troubled at the sufferings, and rejoiced at the prosperity, of a Joseph, a David, a Jesus, and a Paul. And how, too, that, in spite of all the little perplexities of our understandings, arising from its Eastern customs and supernatural element, we always brought away from these Bible-stories the settled conviction, that conduct which was good and pure, and true, was, somehow or the other, sure to come right at last. And when one looks back at those pleasant days, the thought arises,—Surely, if less were said about reading the Bible as a duty and a task, and more made of the *delights* and *pleasures* that attend its perusal, might not more Bibles be redeemed from cobwebs and dust, and fewer "souls perish for lack of knowledge?" But let that pass.

Not only as a literary production, but more remarkably as a Divine Revelation, is the biographical teaching of the Word of God significant. To open its sacred pages with the firm conviction that it is really and literally an inspired work, and then proceed to examine into its method, one must reason thus: Here the Divine Wisdom condescends to instruct the dull ignorance of his creatures, in one of the most difficult and important of subjects, and here every precept and every truth are

"Drawn out in living characters."

The Deity teaches by biography—sometimes by an allegory, sometimes by a figure, and sometimes by a real life—but always biographically. To turn for a moment or two to our current literature. What are the books that are universally read and relished? The books that reach no end of editions, and wander into a perfect babel of tongues? The books that, pampered in crimson and gold, adorn the drawing-rooms of the great; or, unceremoniously snubbed into a coarse paper wrapper, accompany the miscellaneous

articles to be found in the satchel of the schoolboy, and the tool-basket of the mechanic? Need I name "Robinson Crusoe," or "Pilgrim's Progress," or "Uncle Tom's Cabin," or "Petrarch's Lives," or "Macaulay's Essays," or "Captain Cook's Voyages," or "Benjamin Franklin's Auto-biography," with the scores of similar works whose very names are "household words," and which to be unacquainted with one must be transcendently learned, or deplorably ignorant. Now is there anything in common among these favourites of the multitude that will in any degree account for their great popularity? It can scarcely be attributed to their style; for some are learned, and others are commonplace and idiomatic. Nor can it be the particular order of literature; for we find here a fiction, there an allegory, and here again a dry matter of fact. What, then, is the secret charm that works in such dissimilar compositions? I think the solution will be found in the fact, that all contain, more or less complete, the story of a life; they are biographical—hence their attractiveness. And this view will be strengthened, if we turn from readers to authors, and infer the prevailing taste of the people from the prevailing practice of writers. Read the Reviews, estimate the comparative successes of authors and their works, and examine the balance-sheets of publishers, and it is highly probable that you would be found to affirm, that, in any book intended for the general reader, biography—either real or imaginary—is a *sine qua non* to be popular, profitable, and to a certain extent immortal, a book must photograph one of the many phases of human life.

Now a glance at our individual experience. What is our verdict as educators? Do we find that the children discover any preference for these life-stories? For myself, yes. I have seen large classes of tiny infants sit fascinated, or clap their little hands for very pleasure, under the influence of some touching life-story feelingly narrated. I have seen crowds of weary children, in an ill-ventilated Sunday-school roused to eager attention by some life-like biographical sketch. And most vividly do I remember the impression repeatedly produced upon a gang of barge-boys and costermongers that attended, or rather patronized, a primitive kind of Ragged-School in an exceedingly low neighbourhood by this very biographical teaching. Over and over again has order been restored, and an hour's wrapt attention secured, by the skilful narration of the life of some Scripture worthy; and I have considered it no bad compliment both, to teacher and subject, when the noisiest and most vulgar of the whole troop have peaceably retired with a "Good-night Teacher," and confidentially remarking to each other, as they lighted their short pipes at the door—"Well, if that 'ere tale didn't beat Phelps, blow me!" I think therefore that if one had the time and talent properly to enlarge upon the points to which I have just hurriedly referred, we should agree that history, our current literature, and our individual experience, all go to prove that the teaching of biography is universally attractive.

As teachers anxious to discover the causes of the various mental phenomena that come under our notice, we may very properly inquire why biography should thus enlist the sympathies and arrest the attention of man? One or two thoughts have suggested themselves to my own mind which I will venture to mention for your consideration.

In the first place, I think some of this relish for life-stories may be traced to the social nature of mankind. It would almost appear to be an essential element of human happiness to know everybody, and a good share of everybody's affairs. No wretched Bosjeman is sufficiently sunk in barbarism to be below his notice, and no Imperial Majesty can rise to such heights of grandeur as to be beyond his observation: he will devour with equal avidity the discoveries of Dr. Livingstone or the gossip of the Court Circular. Nor do I think that this curiosity springs altogether from a spirit of impertinent meddling, but would rather refer it to that deep-rooted conviction which obtains in every breast, that, somehow or the other, the condition and conduct of each is affected by the condition and conduct of all. The every-day greetings of "How do you do," and "God be with you," are not the mere meaningless conventionalities of an artificial society, but, rather, the natural outgoings of humanity grown up into a habit; hence it seems natural that the story of one man's career should possess attractions for all.

Again, some of this interest in biography may result from that mysterious quality in man which, for want of a term, I will call the "consciousness of immortality." I mean, that intense and undefinable longing to penetrate the obscurity of the past, or the future, that feeling of veneration that lends such peculiar charms to every thing dead, or very old, rendering Longfellow's advice to "let the dead past bury its dead," a practical impossibility, reversing, too, the old proverb, and estimating "a dead dog as better

than a living lion," so that the virtuous and the brave who have passed to the spirit world, revisit the imagination like another Samuel before another Saul, invested with parts and graces embellished and exaggerated by the doubtful light of the tomb.

To man's social nature, then, and to the sanctity which he attaches to the memory of the dead, I think may be referred some of the preference which is so universally discovered for biographical teaching.

If what has been advanced be true in fact, and fair in inference, it will be admitted that the teaching by life-stories offers a strong means by which to get at, and to influence, the minds of children and so merits the attention of every teacher.

But admitting that biography possesses all these charms, and can exert all this influence, I do not think it by any means follows that the results of such teaching will invariably be good. Indeed, it is quite competent for us to ask, whether some men's memories may not be left to perish? being neither fit to "point a moral," nor "to adorn a tale:" lives "so rank and pestilent," as 'twere wise and merciful to treat as carrion, and leave to the waters of oblivion. With this doubt uppermost in one's mind, a further question forces itself upon our consideration, namely: What use do we wish to make of this biographical teaching? To which I would answer: 1st. We wish to introduce the people to good company; and 2ndly. We wish to set before them the most unexceptionable models.

Now, accepting these two objects as proper ones, and worthy to be pursued, suppose we look about us in society, and ascertain whether the various agencies which profess to be means of public instruction, and to draw their lessons from life-stories, are taking the best course to attain to so laudable an object.

To begin with those universal exponents of life, whose great business it is "to hold as 'twere the mirror up to nature,"—I mean the Opera and the Drama—what sort of companions and what description of models do they supply? Not quite what would satisfy a good taste, I fear. The great majority of their heroes and heroines are scarcely adapted to strengthen the decent, modest, workaday notions, which we desire to fasten upon our children; and although these places are visited more for amusement than instruction, that cannot be consistently urged as a reason why such prominence should be given to vice, instead of making the purest types of character the basis of all dramatic representations.

Turn now for a moment to some of our Literary teaching. Here is a first-class Monthly, invested with all the dignity of learning, and stamped with the authority of acknowledged genius, talking glibly of ethics and metaphysics, and assuming to be critical upon themes philological, classical, and poetical—one of the elect among the *litterati*—and yet, in this most respectable and proper periodical, we find writers selecting their life-stories from the lowest grade of criminals. Does it not strike one as something lamentably shocking, for a gentleman of brilliant parts and finished education to sit down, month after month, and grope among the rotteness beneath the gallows, paying more regard to the reputation of thieves and cut-throats than to his own, and striving to immortalize the names of Turpin and Jack Sheppard, by a process which must inevitably tarnish and tread into oblivion his own.

Visit, too, our Classical Academies, and I suspect we should find some of the gods and heroes which scholars delight to honour anything but the incarnations of persevering virtue and patient plodding righteousness; examples which simple-minded people would be apt to suppose better adapted to make boys caricature the pleasurable vices of bad gods than to imitate the sturdy virtues of good men.

But, to look a little nearer home, what are we doing in this direction in our Elementary Schools? Take History, for instance. Do we not sometimes detect ourselves in giving a very unwise prominence to plots, assassinations, and wars, thus engendering and cultivating a feeling of romantic interest on behalf of the Guy Fawkes, the Feltons, and the Napoleons of the world, both dangerous and undesirable?—while the really noble and sublime careers of a Newton, a Watt, a Hunter, a Wilberforce, or a Stephenson are passed by with an indifference as unwise as it is ungraceful?

To turn, lastly, to the very important subject of Scriptural Instruction, is there not too much of what goes by the name of "faithful teaching," both in our day and Sunday-Schools? and which, if interpreted, I think would in many instances mean an extremely injudicious selection of biographical illustrations. Why, to listen to some of our teachers, aye, and very good and earnest ones too, one would almost be led to conclude that the Bible was some antiquated Newgate Calendar, with such frequency and unction do they enlarge upon the wickedness of its heroes. Baalim

the apostate, Ahab the reprobate, Judas the traitor, and Annanias the hypocrite, seem to compose their prerogative biographical instances; they appear to be altogether oblivious of the very obvious truth, that in the sacred picture-gallery a hundred virtues are personified for one vice—that for a single Baalim we have “the goodly fellowship of the Prophets;” for one Judas, “the glorious company of the Apostles;” and for a single Annanias, “the noble army of Martyrs;” and these “are set for our examples,” as “apples of gold in pictures of silver.”

From this cursory glance at the Drama, at Literature, and at some of our Educational doings, we cannot but acknowledge that much of the teaching from *life examples* is likely to be pernicious in its influence. The companionship chosen is vulgar and criminal, and the models are too commonly deformed, abnormal, and essentially bad. But it will be argued, that in the cases referred to these depraved examples were not intended as *models* at all; they are put forward merely as *contrasts*, and for purposes of *caution* and *warning*. Well, certainly there is some little truth in this, or the very naming of such vile specimens would be perfectly inexcusable. All that I fear is, that the black is rather too profusely laid on, and that so much “pomp and circumstance” enlisted on behalf of criminals is apt to convert the gallows into a monument; so that, instead of gibbeting them, we embalm them. Indeed, it may be fairly questioned as to whether there is not already somewhat more of the poetic and heroic element about these villainous lives than properly comports with lazy, worthless thieves, and cowardly cold-blooded murderers, and, without being censorious, one cannot help suspecting that some of these *contrasts*, or *cautions*, or *warnings*, are put forth for “powerful effects!” and “thrilling sensations!”

Besides, this negative teaching is in direct opposition to what is found to be successful in the teaching of every other subject. If I want a child to draw a cone, I do not distract his attention by showing him every other solid that is *not a cone*, just for the sake of *caution* or *contrast*. If I want a child to master the square of A B, + I do not make him commit to memory a hundred incorrect answers for the sake of *caution* or *contrast*; or if I wish to train a child to distinguish the niceties of tint and shade in the tertiary colours, I do not dazzle and confound his vision with large surfaces of red, yellow, or black. And is it not equally unphilosophical to strive to win the heart to love and imitate the beauty and symmetry of truth and virtue by the daily presentation of falsehood and vice?

I contend, then, that since children love *life-stories*, and since by means of them we may help them to good companions and good models, it becomes our duty as teachers to discard and discourage all biography tainted and impure, however stirring may be the incidents and exciting the details with which it may be interlarded. But “*Whatsoever things are true, whatsoever things are honest, whatsoever things are just, whatsoever things are lovely, whatsoever things are of good report, if there be any virtue, if there be any praise, let them think on these things.*” Having decided to give the preference to the biography of men of good character, we might with propriety ask ourselves: What are the most useful aspirations for us to awaken in our children? Shall we stimulate the young imaginations to strive after eminence in poetry, or literature, or politics, or war? These are, without doubt, laudable objects of ambition, and ought not to be discouraged, especially among the “Upper Ten Thousand,” but with the children of mechanics and tradesmen before us, should not our efforts be principally directed to the exaltation of every homely virtue? Should we not aim to create an early love for godliness and true manliness, so that such rugged, prosy qualities as industry, thrift, benevolence, honesty, and truth might be esteemed by them as things without which they could not be happy? And what kind of lives should I call up before the children to excite such feelings as these? The lives of men who wore crowns, or coronets, or mitres? Men whose greatness was the result of some lucky chance, or the accident of birth? I think not; rather let me summon to my aid the life-story of some distinguished member of the lowly order. If Biography is to be my moral diagram, let it picture what I wish to teach, and let me tax my teaching power to invest the unromantic, unobtrusive pilgrimage of an earnest, pious, struggling, working man with some portion of that poetic interest which is so lavishly wasted upon worthless and undeserving objects. True, I can do but little towards raising my children to the pedestal of heroism, but may I not do something towards bringing heroism down to their daily labour and daily life?

Now, that the right sort of biographical teaching will conduce to this end in a very remarkable manner I feel most confident, and it will act in two important ways: first, as a direct means of

instruction in itself, and secondly, as a means by which to strengthen and illustrate other portions of instruction. A good life example is a powerful and impressive teacher, and it will always serve to furnish “*prerogative instances*” in support of particular truths.

Biography should be completed—not sketchy, anecdotal, and incidental. Let the story begin in childhood, be copiously elaborated in youth, and patiently followed on to the closing scene. By this means the children will come to consider their hero as their companion, and will presently conceive for him a strange and sublime sort of friendship; they will sympathise in all his changing fortunes, and watch out for and praise every good trait in his character. You will hear them say, with real concern: “*What a good job it was he did this,*” or “*What a pity he didn’t know that;*” and, with a very little care on the part of the teacher, important truths will be seized, understood, and remembered, and the children will appreciate the moral none the less for having discovered it and appropriated it themselves, without the assistance of copy-book homilies.

Several instances corroborative of these remarks have come under my own notice, and doubtless many teachers of greater experience have observed more fully the same results. I will conclude these remarks with an instance that occurred in a lesson a few months back.

I have commonly made it a practice to spend an hour in school, now and then, with a collective lesson upon biography, choosing for this purpose such lives as those of Franklin, Williams the Missionary and Martyr of Erromanga, Arkwright and Stephenson. It is to an incident that occurred in a lesson upon the last-named worthy that I beg now to refer.

By means of two or three previous lessons, the boys had become familiar with the principle points in the early life of George Stephenson—his father, mother, wife, and little son Bobby were among the people they knew—the particulars of his courtship, marriage, and his subsequent heavy affliction by the death of his wife, were matters fresh in their memory. As well as I can reproduce what occurred in the lesson, it ran thus:—

“*You boys will remember that in our last lesson I told you about Stephenson’s visit to Scotland, when, for the first time in his life, he had to live and work among strangers. You remember, too, that he managed to steer clear of all the new temptations to which a new situation and strange shopmates were sure to subject him, and that, by dint of hard work and still harder saving, he found himself the owner of twenty eight pounds at the end of the year. You will also remember that his yearning after his little son, and his old father and mother, was so strong, that he left his situation and turned his face homeward. I dare say, too, that you have not forgotten how we tried to picture to ourselves his daily pilgrimage as he pursued his weary way across the desolate moors, equipped in the same heavy boots and coarse clothing, a little more patched and worn, as he had worn in his outward journey, with the same sturdy cudgel in his hand, and the same old kit strapped to his back. Well, now, I want you to come with me again in imagination, and we will overtake him before he reaches home. Here is our acquaintance just plodding his way up the last hill that hides the little village of Jolly’s Close—now he is at the top of the eminence, and stands leaning upon his stick looking eagerly about him. I wonder what he is thinking about? His poor dead Fanny, may be, and the happiness he buried with her in the grave; and then he remembers that in yonder little one-roomed cottage, by the brink of the babbling brook, are other dear ones for whom he may yet labour and save. Now he starts off eagerly down the Burn side, for his sharp eye has caught sight of a little curly-headed urchin playing by that same little cottage door, and something tells him ’tis his son. Now he has crossed the rude wooden bridge and is holding little Bobby in his arms. The news of Geordie’s return spreads like wildfire, and homely faces begrimed with coal-dust greet him on every side; while brothers, sisters, and neighbours crowd with anxious faces around him. But why is his welcome home so quiet and so very earnest? Where is all the noise and jollity that he anticipated? Why hangs such an ominous gloom upon every countenance? And why, as his bright eyes glance inquiringly from face to face, are moist eyes averted? Something is certainly wrong—what can have happened? Little Bobby is safe and sound, with his little arms entwined around his father’s neck. At length one of the neighbours ups and tells him: ‘That his poor old father was engaged cleaning out a boiler, and while he was inside it, a fellow-workman unwittingly turned on the steam; the scalding jet fell full upon the poor old man’s face; he was carried home frightfully scalded, and had since become totally and helplessly blind.’ We will not even try to picture the dread-*

ful grief of so good a son at the deep affliction of so kind a father. But when, upon entering the cottage, he laid his big hand upon the shoulder of the poor blind old man, and, struggling with his own sorrow, strove to cheer and comfort the aged couple, while poor old Mabel laid her head on George's shoulder and told him all her troubles, how that they were deeply in debt, and on the point of ruin; at that moment George's other hand wandered to his breast-pocket, and felt a certain little leathern bag. 'Ah!' exclaim several of the boys, with an outburst of joy almost angelic, and truly refreshing for a teacher to witness, 'Wasn't it a good job he had saved that money?'"

I need not say that with such a challenge a teacher would make the most of the opportunity, reminding the children that George had not got together the money without some considerable self-denial, and a good many hard names—he had patched up his own jacket, and heel-pieced his own boots—he had dispensed with sundry pints of beer and pipes of tobacco. He had been called mean, unsociable, and stingy, all for the very sake of saving this identical packet of golden guineas; and now that he lays his hand upon them, and feels a power there which his less happy brothers did not possess, and when he paid down the fifteen pounds which his father was indebted, and placed the aged couple in circumstances of plenty—when these and similar points are pressed earnestly upon the eager attention of the children, it is plainly evident, from the kindling eyes and decided tone of the class, that both their judgment and their feelings are enlisted on the side of saving, and, from that moment, *thrift* becomes in their minds a sacred and religious thing.

Now, while I have in this very imperfect sketch recognized economy as the virtue that would gain most by the teaching, it will, I think, be allowed that benevolence, and filial duty, would also be received by the willing understandings of the children as qualities lovely and to be desired to make them happy.

In this manner, then, I think biography may be made a means of direct useful instruction, and of powerful moral and religious training. Before closing these somewhat crude remarks, I will just glance for an instant at the other use of life-stories, I mean, as a means by which to strengthen and to illustrate other subjects. And here again, in order to avoid multiplying cases, I will refer to the same biographical sketch. Shortly after our lessons on Stephenson, I remember there was one on Social Science, in which the question arose, "Why ought men to save?" and it was quite edifying to hear the confident manner in which Stephenson was brought forward as an instance, in several important questions. "The afflicted must perish miserably, if some did not save;" "children could not be fed, clothed, and educated, if some did not save," and so on; Stephenson being brought forward as the finishing stroke to the argument in each case. Since that time, in lessons on coal, on the locomotive, on a clock, on coal gas, on the safety-lamp, and many other subjects, has the same welcome presence given additional zest and interest to school work. So is it with other men and other subjects. Captain Cook and Sir John Franklin will enliven and illustrate many a lesson on Geography and kindred subjects; Arkwright, Jacquard, and the elder Pée, fix attention on spinning, weaving, and calico printing; whatever the subject, Biography will enhance its interest and enforce its lessons. A landscape is a desert without a man, nature is incomplete without human nature. For truly has the philosopher decided, the noblest study for mankind is Man.—*The School and the Teacher.*

### School days of Eminent Men in Great-Britain.

By JOHN TIMAS, F. S. A.

(Continued from our last.)

#### C.

#### EDUCATION OF WILLIAM III.

Although William Henry, Prince of Orange Nassau, occupies a prominent place in the history of England and of mankind, his boyhood and education, and subsequent encouragement of letters, may be briefly told. He was born in 1650, and was the posthumous son of William II. of Orange, by Mary, daughter of Charles I., king of England. He was a weak and sickly child; but Lord Macaulay describes him as largely endowed by nature with the qualities of a great ruler, which education developed in no common degree.

After William had become King of England, he was to the last a foreigner in speech, tastes, and habits. He spoke our language,

but not well; his accent was foreign, his choice of words was inelegant, and his vocabulary seems to have been no larger than was necessary for the transaction of business. Our literature he was incapable of enjoying or understanding. He never once, during his whole reign, showed himself at the theatre. The poets who wrote Pindaric verses in his praise complained that their flights of sublimity were beyond his comprehension; perhaps he did not lose much by his ignorance. (1)

It is true that his Queen did her best to supply what was wanting. She was English by birth, and English also in her tastes and feelings. She took much pleasure in the lighter kinds of literature, and did something towards bringing books into fashion among ladies of quality. She paid strict attention to her religious duties; and her well-bestowed patronage of Doctor Tillotson proves her to have been a true friend of the church. Tenison proved himself a friend to public education by founding in St. James's parish, attached to his chapel, a school, with schoolmasters to teach, without charge, 40 poor boys of the parish to read, write, cast accounts, &c. To Tenison also we owe one of the few public libraries in the metropolis.

Tenison's Library, built by Sir Christopher Wren, is situated in Castle-street, in the rear of the National Gallery. It was founded in 1684, by Dr. Tenison, then Vicar of St. Martin's-in-the-Fields, to supply what he considered a deficiency of "any one shop of a stationer fully furnished with books of various learning within the precinct of the city and liberty of that minster."

#### CI.

#### THE REIGN OF QUEEN ANNE.

Anne, the second daughter of James, Duke of York, by his wife Anne Hyde, was born at St. James's, in 1665. Her education was entrusted to Dr. Henry Compton, (subsequently Bishop of Oxford and of London,) and she was by him firmly grounded in the principles of Protestantism.

The reign of Queen Anne (1702 to 1714) was as distinguished for literature as for arms; but, although her administrators numbered among them eminent scholars, her own tastes and opinions had little share in calling forth the literary genius and talent which have led to her reign being styled the *Augustan Era of English Literature*—on account of its supposed resemblance in intellectual opulence to the reign of the Emperor Augustus. This opinion has not been entirely followed or confirmed in the present day. Anne's reign produced Addison, Arbuthnot, Congreve, Pope, Prior, Steele, and Swift—writers of a high degree of excellence in their particular walks, but scarcely to be compared with the great poets of the reign of Elizabeth, or with a few other illustrious names of a succeeding generation, such as Milton and Dryden. Yet, Addison and Steele invented or introduced among us the periodical essay, a species of writing which has never been surpassed, or on the whole equalled, by any one of their many followers. Who can describe the lightness, variety, and urbanity of these delightful papers—the delicate imagination and exquisite humour of Addison, or the vivacity, warm-heartedness, and perfectly generous nature of Steele?

This was the age of the *Examiners, Spectators, Tatlers, and Guardians*, which gave us the first examples of a style possessing all the best qualities desirable in a vehicle of general amusement and instruction; easy and familiar without coarseness, animated without extravagance, polished without unnatural labour, and from its flexibility adapted to all the varieties of the gay and the serious.

Next to Addison is Arbuthnot, a writer of sound English, pointed wit, and polished humour. Congreve is our most brilliant writer of comedy. Pope wrote the poetry of artificial life with a perfection never since attained; and in the hands of Swift, (the most powerful and original prose-writer of the period,) satire was carried to its utmost pitch of excellence; whilst Prior, in his graceful and fluent versification, reflected the lively illustration and colloquial humour of his master, Horace. Prior's patron, St. John Lord Bolingbroke, (one of Anne's ministry,) was so distinguished a scholar, that even his most familiar conversations, it is said, would bear printing without correction; for he was one of the most brilliant orators and talkers of his time. It is lamentable to add, that Bolingbroke from early life had cast off belief in revelation. Fortunately, his works are now but little read.

(1) Prior, who was treated by William with much kindness, and who was very grateful for it, informs us that the king did not understand poetical eulogy. The passage is in a highly curious manuscript, the property of Lord Lansdowne.—*Macaulay's History of England*, vol. ii.

Harley, Earl of Oxford, the favourite minister of Queen Anne, was not only a great encourager of learning, but the greatest book-collector of his time; and his curious books and manuscripts form the nucleus of the Harleian Library, now one of the richest treasures of the British Museum.

Among the educational events of this reign may be mentioned the establishment of the Clarendon Press at Oxford, in part from the proceeds of the sale of Lord Clarendon's *History of the Rebellion*, presented to the University by his son. The building, by Sir John Vanbrugh, continued to be used according to its original intention until 1830, when additional room being required to supply the increased demand for books, a new building was erected opposite the Radcliffe Observatory.

## CII.

## REIGNS OF GEORGE I. AND GEORGE II.

George I. was born at Hanover, in 1660, on the day before that on which Charles II. made his entry into London, at the Restoration. His education was grossly neglected, notwithstanding that his mother, the Electress Sophia, was the protector of the learned men of her day, and spoke five languages with fluency. The Prince's inattention to study must have been great indeed; for he never acquired even the language of the people (the English) over whom he expected to reign. After his accession to the throne, he established professorships of Modern History in the universities; and he gave the library of the Bishop of Ely, which cost the king 6000 guineas, to the University of Cambridge. He liberally patronized Vertue, the engraver; bestowed the Laureateship upon Nicholas Rowe; and encouraged Dr. Desaguliers in rendering natural philosophy popular, in a course of lectures at Hampton Court. When congratulated by a courtier on his being sovereign of Great Britain and Hanover, "rather," said the King, "congratulate me on having such a subject in one as Newton, and such a subject in the other as Leibnitz."

In this reign were educated Samuel Johnson; and Hume and Robertson, the historians.

George II., the only son of George I. and his queen Sophia Dorothea, was born at Hanover, in 1683. He was educated under the direction of his grandmother, but was nowise distinguished for learning, nor in after-life felt or affected the least admiration for art, science, or literature. In his long reign, however, flourished in literature, Shercock, Hoadley, Secker, Warburton, Leland, Thomson, Akenside, Home, Gray, Johnson, the two Wartons, Robertson, Hume, Fielding, and Smollet; not to mention Swift, Pope, and Young, the survivors of a former age. Yet, this and the previous reign were a blank half century in the annals of the education of the people.

At the close of the reign of George II. was opened The British Museum, which may be regarded as one of the educational institutions of the country.

The British Museum has been the growth of a century, between the purchase of Montague House for the collection in 1753, and the completion of the new buildings. The Museum originated in a suggestion in the will of Sir Hans Sloane (d. 1753), offering his collection to parliament for 20,000*l.*, it having cost him 50,000*l.* The offer was accepted; and by an Act (26th George II.) were purchased all Sir Hans Sloane's "library of books, drawings, manuscripts, prints, medals, seals, cameos and intaglios, precious stones, agates, jaspers, vessels of agate and jasper, crystals, mathematical instruments, pictures, &c. By the same Act was bought, for 10,000*l.*, the Harleian Library of MSS. (about 7600 volumes of rolls, charters, &c.); to which were added the Cottonian Library of MSS., and the library of Major Arthur Edwards. By the same Act also was raised by lottery 100,000*l.*, out of which the Sloane and Harleian collections were paid for; 10,250*l.* to Lord Halifax for Montague House, and 12,873*l.* for its repairs; a fund being set apart for the payment of taxes and salaries of officers. Trustees were elected from persons of rank, station, and literary attainments; and the institution was named THE BRITISH MUSEUM. To Montague House were removed the Harleian collection of MSS. in 1755; other collections in 1756; and the Museum was opened to the public January, 15, 1759.

## CIII.

## EDUCATION OF GEORGE III.

How various the fortunes under which the royal youth of England have been reared for her rule and government may be seen by a glance through the preceding pages. The retrospect will be interesting and instructive, in showing the storm and sunshine, the promise and blight, amid which have been reared the princes of

This blessed plot, this earth, this realm, this England,  
This nurse, this teeming womb of royal Kings,  
Fear'd by their breed, and famous by their birth.

Shakspeare, *Richard II.*

As we approach the close of the long line, such violence and trouble as beset the infancy of our earliest sovereigns is no longer to be recorded of the lives of their successors: we have no longer to chronicle how the heir to the crown drew his first lessons, safe only in the strength of the fortress; or how the course of his early studies was broken by shifting from castle to castle, as the only security amidst the fierce contentions of civil war. Such chances of evil have long ceased to beset the infancy of our kings; but they have been succeeded by troubles of a milder kind—though of almost equal ill-promise for the welfare of princes—in the political difficulties which have too often attended their early lives, and beset their training for the kingly office. The boyhood and youth of George III. were clouded with such disadvantages, which, however, the strong natural sense of the prince, in great measure, enabled him to overcome. Whatever may have been the defects of his own training, it must be acknowledged that the King was—what many influential persons of his time were not—"an avowed friend to the diffusion of education, and certainly was not afraid that his subjects should be made either more difficult to govern, or worse in any other respect, by all classes and every individual of them being taught to read and to write." His reign is perhaps to be placed above every other of the same length in modern history, for the accessions to almost every department of knowledge by which it was signalized: and even the latter half of the period, notwithstanding the wars and political confusion by which it was disturbed, was at least as distinguished for the busy and successful cultivation of science and literature, as the quieter time that preceded.

George William Frederick, the eldest son of Frederick Lewis, Prince of Wales, and Augusta, daughter of Frederick II., Duke of Saxe-Gotha, was born in 1738, at Norfolk House, St. James's-square. The nation were elated at the birth of the heir presumptive to the throne; and on the first anniversary of his birthday, he was congratulated by a company of 60 Lilliputian soldiers, all under twelve years of age, who were received by the infant prince wearing a uniform, hat and feather; and next year he was present at a masque written by Thomson and Mallet, to commemorate the accession of his family to the British throne. At the age of six, the prince was placed under the care of Dr. Francis Ayscough, afterwards Bishop of Bristol, who, writing to the pious Dr. Doddridge, says: "I thank God I have one great encouragement to quicken me in my duty, which is the good disposition of the children entrusted to me; as an instance, I must tell you, that Prince George (to his honour and my shame) had learnt several pages in our book of verses, without any direction from me."

The Prince of Wales was a liberal patron of men of letters. He paid great attention to the education of his son, for whose use he commissioned Dr. Freeman to write the *History of the English Tongue*. On the first appearance of the *Rambler*, by Dr. Johnson, he also sought out the author that he might befriend him; the Prince also greatly encouraged Vertue, the engraver; and upon one occasion he sent the poet Glover a banknote of 500*l.* to console him in his affliction.

To accustom the young Prince and his brothers to rhetoric, plays were got up at Leicester House; when Prince George filled the character of Portius, in Cato, and recited the prologue. The instruction of the young actors was entrusted to Quin, the comedian, who, many years afterwards, on hearing of the graceful manner in which George III. delivered his first speech from the throne, said, with delight, "Aye! 'twas I that taught the boy to speak." With Lord Harcourt and Lord Waldegrave successively as governors, and Dr. Hayter, bishop of Norwich, succeeded by Dr. John Thomas, Bishop of Peterborough, as preceptors, and under the more influential superintendence of Lord Bute, the Prince progressed in his studies, but was kept in great privacy by his mother, whose notions were certainly very narrow. One of her complaints against the Bishop of Norwich was that "he insisted upon teaching the Princes logic, which, as she was told, was a very old study for children of their age, not to say of their condition." From Lord Bute the Prince derived his chief knowledge of the constitution; Bute actually drawing his subjects for conversation from the Commentaries of Blackstone, the author permitting him to see that work in manuscript, and even to submit it to be read by the Prince. He grew up to be perfectly master of all the proprieties of his station; and the decorum of his private conduct gave a higher tone to public manners, and made the domestic

virtues fashionable even in circles where they were most apt to be treated with neglect. He was well acquainted with the language, habits, and institutions of the English people. "Born and educated in this country," said his majesty, in his opening speech to the Parliament, "I glory in the name of Briton, and I hold the civil and religious rights of my people equally dear with the most valuable prerogative of my crown." And never, throughout the course of a long and anxious reign of sixty years, did his actions as a man or a prince contradict the boast. He was profoundly yet unaffectedly religious; his love of Christianity strongly displaying itself even in his sixteenth year, when he distributed within his own circle one hundred copies of Dr. Leland's view of deistical writers, written in contravention of their pernicious writings. George III. was likewise a lover of music, his favourite composer being Handel, and we have seen in the King's handwriting lengthy programmes of chamber concerts performed in Windsor Castle. He liberally patronized Cook, Byron, and Wallis, the navigators; Herschel, the astronomer; and West, the historical painter; and he took a lively interest in the foundation of the Royal Academy of Arts. He collected a library of 80,000 volumes, the most complete ever formed by a single individual: it is now in the British Museum, and known as "the King's Library." His Majesty collected this library at Buckingham House. Dr. Johnson, by permission of the librarian, frequently consulted books.

"It is curious that the Royal collector (George III.) and his venerable librarian (Mr. Barnard) should have survived almost sixty years after commencing the formation of this, the most complete private library in Europe, easily appropriating 2000*l.* per annum to this object, and adhering with scrupulous attention to the instructions of Dr. Johnson, contained in the admirable letter printed by order of the House of Commons."—*Quarterly Review*, June, 1826.

To Johnson, Sheridan, Beattie, and Blair, George III. granted pensions; he especially admired Dr. Johnson, who has recorded a long conversation with His Majesty; and after the interview, the Doctor observed to the royal librarian, "Sir, they may talk of the King as they will, he is the finest gentleman I have ever seen." He subsequently declared that "the King's manners were those of as fine a gentleman as one might suppose Louis the Fourteenth or Charles the Second to have been."

(To be continued.)

### Suggestive Hints towards Improved Secular Instruction.

BY THE REV. RICHARD DAWES, A. M.

#### XI.

#### NATURAL PHILOSOPHY.

(Continued from our last.)

*Dew.* When it is once understood that the air of the atmosphere holds up a considerable quantity of vapour, and that the greater its temperature the greater is the quantity which it holds, it will be easily understood that, when any portion of air comes in contact with a body colder than itself, that it will throw down some of its moisture.

During the daytime, the earth, plants, etc., absorb heat from the sun; when he goes down, they radiate or give off part of the heat they have absorbed, and consequently cool;—this cools the air in contact with them, and when cooled below the point which enables it to hold up all the vapour which it had taken up during the day, it lets it fall again—this is called the dew-point. Now, some plants and some leaves, and earths give off heat faster than others—on such a more copious dew will be deposited. On the contrary, gravelled walks, stone, etc. give off heat less rapidly, and on them little or no dew falls.

This all know from experience, or at least may easily ascertain it:—then to call their attention to the beautiful drops of dew formed on the leaves—the service they are to the plants—the beautiful provision of the Almighty in causing the dew to fall more copiously on the vegetable world, which wants it, than on the mineral—attraction of cohesion keeping the globules together, etc. Why they disappear in the morning, again becoming vapour.

Little or no dew on cloudy nights: why? An umbrella overhead in an evening prevents the falling of dew on the person—on the clothes—the philosophy of this—the clouds are an umbrella, and the reason why no dew falls on a cloudy night applies to the umbrella—held over the head.

Any schoolmaster taking an interest in this subject, will see some very simple but curious and instructive experiments in Griffiths' "Chemistry of the Four Seasons." They consist in taking equal portions of dry wool of a given weight, and placing them in the evening—one on gravel, another on glass, another on grass, but sheltered by a slight covering a little elevated above it, and then at sunrise taking them up and weighing them; of course the increased weight, which will in all these positions vary very much, is the weight of water deposited in the shape of dew. These and a variety of phenomena connected with this subject, easy of explanation—such as the mists—the fogs rising in damp, marshy places—following the course of a river, and many appearances of a like kind, which those living in the country are in the habit of witnessing, may be studied with great interest: but, as it is merely my object to throw out what I conceive to be useful hints, I will not pursue it further.

The force with which the absorption of moisture by porous bodies causes them to expand, is much greater than those who have never thought on the subject have an idea of.

As an instance of this, and of turning it to practical purpose, Sir John Herschel, in his "Discourse on the Study of Natural Philosophy," gives the following very interesting one, as a process which is had recourse to in some parts of France, where millstones are made: "When a mass of stone sufficiently large is found, it is cut into a cylinder several feet high, and the question then arises how to subdivide this into horizontal pieces, so as to make as many millstones. For this purpose horizontal indentations or grooves are chiselled out quite round the cylinder, at distances corresponding to the thickness intended to be given to the millstone, into which, wedges of dried wood are driven. These are then wetted or exposed to the *night dew*, and next morning the different pieces are found separated from each other by the expansion of the wood arising from its absorption of moisture."

This is a very curious instance of a simple natural power doing what would require great trouble and expense to effect; either by chiselling through, or by any machinery of sawing, sometimes used for dividing blocks of stone. The same author also mentions another instance where a knowledge of the laws of nature, although acting here in a different way, is called into action. In this case the heat first expanding, and then the application of the water causing a sudden contraction. In the granite quarries near Seringapatam the most enormous blocks are separated from the solid rock by the following neat and simple process. The workmen having found a portion of the rock sufficiently extensive, and situated near the edge of the part already quarried, lay bare the upper surface, and mark on it a line in the direction of the intended separation, along which, a groove is cut with a chisel, about a couple of inches in depth. Above this groove a narrow line of fire is then kindled and maintained till the rock below is thoroughly heated; immediately on which a line of men and women, each provided with a pail of cold water, suddenly sweep off the ashes, and pour the water into the heated groove, when the rock at once splits with a clean fracture. Square blocks of six feet in the side, and upwards of eighty feet in length, are sometimes detached by this method.

The following practical way of giving an insight into the principle on which bodies float in fluids lighter than themselves, and of estimating their weight by the quantity of fluid displaced, has been found very serviceable:

They have two tin vessels, a larger and a smaller one, the large one having a small spout level with the top, so that, when filled with water and running over, it may discharge itself into the small vessel placed by the side of it; the small one of known dimensions, say nine inches square at the bottom and six inches high, with a graduated line on one of the sides, so that it may be immediately seen to what height the water rises when flowing into it, and of course knowing the area of the base, and multiplying this into the height at which the water stands, will give its volume.

Then they are provided with a number of cubes of wood, the woods of the parish, oak, elm, ash, etc., four inches on a side—together with other pieces of any irregular shapes, for the purpose of experiment.

Having filled the larger vessel with water up to the spout, and placed the smaller one under it, the teacher takes a cube of oak, for instance, floats it on the water, which immediately begins to flow into the smaller vessel, and when it has ceased to do so, the height at which it stands is observed. They then calculate the number of cubic inches of water displaced.

This they know is equal to the number of cubic inches of oak under water—(the teacher should show them the proof of this—

that it is equal in weight to the piece of oak. *Proof*—then knowing that the weight of a cubic foot of water, temperature about 62o, is 1,000 ozs., and why it is necessary to specify the temperature—they calculate, for instance, the weight of a cubic inch, by dividing 1,000 by 1,728, the number of inches in a foot.

Then multiplying the weight of one inch by the number of inches, this gives the weight of water displaced, and the weight of the wood.

They then take the piece of wood, tie a string round it, weigh it by a spring-balance, and find this exactly agrees with the figures they have worked out; and it is this weighing which gives such a character of certainty to what they have been doing, which makes them take pleasure in the work. Weighing before floating it is better.

Again, knowing the measurement of the piece of wood, supposing it to be one of known dimensions, subtracting the number of solid inches under water from the whole, gives them that part of the body above the surface, and which is floating in air.

The same would be done with pieces of ash, elm, fir, etc. Also in winter, pieces of ice afford a teacher who understands the subject an opportunity of giving a useful lesson,—pointing out how water becomes solid at a particular temperature—that although water freezes at this particular point, yet pieces of ice, may have a temperature far below this—that a piece of ice, temperature 20o, as measured by Fahrenheit, would be of more service for cooling butter, water, etc., than one at 32o, and so on.

The teacher might ask such a question,—What is the atmospheric pressure on the surface of the water in the vessel? making them calculate it, and showing how it varies with the barometer.

It is by repeating these questions over and over again, in a practical way, that they tell on the minds of children.

Again, take a small square, or oblong, or a box of any shape—a piece of wood hollowed out like a boat—a tin, such as tarts and bread are usually baked in: floating these, and loading them with weights until the water reaches the edge—they then see clearly that the quantity of water displaced is equal to the measure, in volume, of the vessel and the material of which it is made: and that a boat will just float, when the weight of the cargo and the weight of the boat taken together are equal to this displaced volume of the fluid in which it floats, and that any weight beyond this will sink it.

Calculating the weight of this volume of water displaced, and subtracting from it the weight of the boat, gives the extreme weight which the boat would carry without sinking.

Applying this to boats made of iron, or any other heavy metal, it is evident, that so long as the weight of the boat is less than a weight of fluid on which it is floating, the volume of which is equal to the whole size of the boat and material included, it will carry some cargo—that the limit to the thickness of the iron, so that the whole may float, is that which would make the weight of the boat equal to the weight of fluid of its own volume—that the thinner the material (due regard to safety being had), as in all cases the less the weight of the boat itself, of a given size, the greater cargo it would carry—that a boat which would sink in one fluid, would float merrily in another which was heavier, etc.; for instance, a load which would sink in fresh, would float in salt water, and be buoyant in mercury. The teacher would naturally point out that the same boat would carry a heavier cargo on salt water than on fresh. What would it be on oil, milk, mercury, etc.

The number of things which the principles connected with floating bodies may be called upon to illustrate is very great.

Having made them understand what is meant by the term specific gravity, and that by taking the weight of a certain volume of water as a standard, we calculate the weight of other bodies, it will be well to have a table of the specific gravities of substances in common use, metals, woods, etc., suspended on a cord in the schoolroom; and to show them by experiment how these results are arrived at. It is quite a mistake to think that boys about twelve or thirteen years of age cannot be made to understand them, and not only that—they will take a great interest in them.

A short list is added, merely for the purpose of working an example or two from it. Taking water as 1.

Distilled water.	1	Copper.....	8.788	Coal.....	1.250
Sea water is...	1.026	Tin.....	7.291	Oil.....	.940
Platina.....	22.069	Iron (cast)....	7.207	Oak.....	.925
Gold.....	19.258	Iron (bar)....	7.788	Ash.....	.845
Mercury.....	13.586	Zinc.....	7.100	Maple.....	.765
Standard silver	10.474	Flint glass....	3.329	Elm.....	.600
Lead.....	11.352	Marble.....	2.700	Fir.....	.550
Brass.....	8.396	Ivory.....	1.825	Cork.....	.240

A simple inspection of this table may be made a useful lesson, by pointing out to them the comparative weight of those substances they are continually handling, the difference among them being much greater than they are in the habit of thinking it—that those substances the specific gravity of which is less than 1 will float. In this way the comparing one thing with another makes them think. Also why distilled water is a standard—that water varies in weight with the substances it holds in solution—that its boiling-point varies with these substances.

Assuming the weight of a cubic foot of distilled water, and at the temperature of 63o Fahrenheit to be 1000 ozs. (why distilled water, and why a fixed temperature?) let them show that the

weight of a cubic inch =  $\frac{1000}{1728}$ , and why the divisor is 1728.

When we speak of the specific gravity of lead being 11.352 and of iron 7.788, we mean that the weight of any given volume of lead or iron will be so many times that weight of the same volume of water, and knowing the one, the other is easily calculated.

Thus a cubic foot of water weighs 1000 ozs., therefore a cubic foot of lead weighs 1000 ozs.  $\times$  11.352 = 11352 ozs., of iron 1000 ozs.  $\times$  7.788, or 7788 ozs., of an inch in the same way.

The specific gravity of dry oak is .925, of fir .550, of elm .600, therefore any given volume of these woods would float, being lighter than the same volume of water. A cubic foot of dry oak would be 1000 ozs.  $\times$  .925, or 925 ozs.; of fir 1000 ozs.  $\times$  .550, or 550 ozs., a little more than half the weight of oak.

As applied to these substances, a good deal depends on their state of dryness, sap in them, etc.

The following questions of a practical kind may suggest others: What is the weight of a block of marble, granite, etc., of regular figure (or any other which they can measure), base of it fifteen feet six inches by five feet two inches, and four feet high.

A given number of feet of oak, elm, ash, etc.? A given mass of metal, what would be its weight? The weight of metals is exactly known from measurement, supposing them to be pure.

In this way the scholar will be easily made to calculate what horse-power, or man-power—moving power—it will take to move given masses of these materials; and would, if called upon to put it into practice, contrive accordingly—strengthening their machinery, etc., adapting it to the work required to be done.

From this also may be shown, the reason why heavy bodies appear so much lighter when moved in a fluid like water—the heavier the fluid the easier they move—as when they raise a bucketful of water from a well; its increased heaviness the moment it gets to the surface of the water—given size of the bucket how much increased in weight?—would it be heavier if raised out of the water into a vacuum, and how much?—moving masses of stone, as granite, under water—floating beams of timber, etc. Having given the volume and the specific gravity of the fluid in which they are moving, to calculate what they lose in weight.

Suspend a cubic foot of lead by a chain from one end of a balance: what weight would balance it at the other end, or over a single pulley? A weight equal to itself.—Now let it fall into a vessel of water: will it take the same weight to balance it as before? No, Sir; a weight less than itself, by the weight of a cubic foot of water.—What does a cubic foot of water weigh? 1000 ozs.—Well, I don't recollect the weight of a cubic foot of lead, but what is its specific gravity?—look at your table, 11.352; therefore the weight of the lead in air is 11,352, and deducting 1000 ozs., the weight of a cubic foot of water, which is the weight lost by the lead, gives 10,352, the weight necessary to balance the lead when in water.

Suppose a cubic foot of lead resting on a pile under water, what force must be exerted to pull it off, supposing no resistance from friction on the pile? About 9.10lbs of its own weight.

From this to explain how it is that the sand, stone, shingle, etc., are so easily tossed about on the sea-shore—how the human body floats, etc.

*Questions:* A vessel full of mercury, the bottom of which is nine inches by 4.56, and the height ten inches, what is its weight?

Suppose a cistern, twelve feet long, five feet wide, and four feet six inches high, made of lead a quarter of an inch thick, what would be its weight?

What is the weight of a cylinder of iron thirty inches in diameter and six feet high? Of a block of granite in the form of a circle, four feet six inches in diameter and twenty inches thick?

A statue of marble is placed in a vessel full of quicksilver, and causes six cubic feet to run over, what is its weight? Would it sink? Would a statue of cast iron sink?



Why is the line of the angler more likely to break after the fish is out of water than when it is in it?

Do you see any connection between the weight of a given mass of matter and the altitude of the barometer? and how might a dealer in any bulky commodity profit by observing that connection?

The specific gravity of ice is to that of water as 8 to 9, and a field of ice of uniform thickness, has 10 feet above water, how many feet below it?

A cubic foot of a metal weighs 1000 lbs. when weighed in air; the weight of a cubic inch of air being about 1/800th part of a cubic inch of water at a temperature of 63°, what would be the weight of the body in vacuo; also if weighed in water—and if in air of half the density,—work out the arithmetical results.

Making them reduce the fluid measures into cubic inches, feet, etc., is a good exercise.

How many cubic inches in a pint? 34·659.  
in a quart?  
in a gallon, etc.?

Then of course they easily calculate the weight of any of these measures filled with a fluid, the specific gravity of which is given.

In aeriform bodies, common atmospheric air is taken as a standard instead of water, the weight of which is about one eight-hundredth part of the former: therefore, as a cubic foot of water weighs 1000 ozs., the weight of a foot of air will be 1000/800 or 1·25 oz.; ten feet will be 12·5 ozs., 100 feet 125 ozs., etc.; then having the specific gravities of other gaseous substances, some of which are heavier, some lighter, than the atmosphere, they may be made to calculate the weights of given volumes.

The principle of the thermometer should be explained—how it is made—how graduated—and how the freezing and boiling points are determined—why the tube is of a narrow bore, etc.

In the Boys' school at Somborne there is a barometer and a thermometer, which they are in the habit of observing; registering the height when they go in, and noticing the course of its rise from increased temperature; this is registered three times a day, and a thermometer kept in the open air. The height of the barometer—the taking a weekly and a monthly average—forms an exercise of their arithmetic.

Attention might be called as to how such averages of the thermometer are affected by swampy and marshy grounds of great extent—improved drainage—how this is likely to affect the temperature of a district, so much so, even as to advance the period of harvest—how the height of the thermometer may be affected by particular aspects—whether the line of country slopes towards the north or south, or is a level plain, etc.

(To be continued.)

### The Magic lantern an auxiliary in Teaching.

There is scarcely any thing that can be called a scientific instrument that has so extensively played the part of a humbug as the one mentioned in the heading of this article. It is, however, when properly constructed and used,—taken together with such pictures as can now be produced.—a means of illustrating science, art topography, and even history, that has few if any equals.

Passing by all those which are mere toys,—the best instruments, as commonly constructed, are not such as can be used to exhibit satisfactorily paintings of the highest finish. It may, however, be well to say in this connection, that for coarse pictures of ordinary execution, these lanterns answer better than a more perfect instrument, as they soften the outlines by their very want of defining power.

The best lanterns, as usually made, are constructed as follows: First a large tin box with a chimney, and holes in the bottom to admit air, and a good solar lamp to which a concave reflector is added. In front of the lamp are the condensers, which consist of two convex lenses, the use of which is to render the divergent rays from the lamp parallel. In front of the condensers is placed the picture, and still farther in the same direction are the magnifiers contained in the tube or nozzle of the lantern. These magnifiers are usually double convex, or better plane convex lenses; and here lies the great defect in the instrument. These magnifiers should be achromatic, i. e., such a combination of lenses as to correct both the chromatic and especially the spherical aberration. Without this arrangement, when the picture consists of simple lines, they appear when seen from a short distance as fringed with prismatic colors; this, however, is the least defect, the other arising from spherical aberration, being very serious, and is as follows:

When a series of parallel lines are ruled on the glass and thrown on the screen, those lines and parts of lines nearest the circumference appear curved, and also when the centre of the picture is distinct, the circumference is undefined and hazy.

To correct these defects, it is usual to place a diaphragm in the tube; this is, however, to sacrifice about one half the light, and consequently, the picture can be shown with equal illumination of only one half the size as with an achromatic magnifier of the same diameter and focus.

It is true, if the Drummond light be used, this is of less consequence; but even then the achromatic lenses are much better, as the diaphragm corrects only in part.

The Drummond light is expensive, and troublesome to manage, and always requires time for preparation.

With a good solar lamp, and the best sperm oil, a picture three and a half inches in diameter can be thrown on the screen, with a suitable achromatic magnifier from six to ten feet in diameter, according to the subject and transparency of the picture, and be brilliantly illuminated,—as much so as with the common magnifier, if made from three to five feet in diameter. Moreover, with the achromatic, every part of the picture will be distinct and sharply defined.

I am aware that I have stated these diameters of pictures on the screen, far below what is said of them in catalogues of philosophical instruments: but a picture to be satisfactory, must be illuminated.

The best substance for a screen is white cartoon paper; the picture is seen, of course, by the light reflected from the surface, and not by light transmitted through the screen. If pictures are to be shown by the latter method, fine, bleached cotton (wot) is the best material.

If it is desirable not to place the lantern very far from the screen, (say about fifteen to twenty feet,) a good "half plate" size camera tube, such as is used for photographic purposes, can be attached to the lantern instead of the ordinary nozzle, and this has the advantage of a rack and pinion motion.

If it is desirable to place the lantern thirty or forty feet from the screen, and a six to ten feet picture is desired, a longer nozzle must be made and an achromatic lens be specially prepared.

With a good lantern and suitable paintings, a teacher can illustrate to a whole school at once any subject that is within the limits of Painting, Drawing, or Photography.

For examples: Astronomy can be illustrated to a class even with an imperfect instrument, as by any other means. The brilliancy of the pictures gives effects almost as true as the telescope itself.

Anatomy, Botany, all branches of Natural History, Geology, Microscopic views, Portraits, Maps, Works of Art, Sculpture, and celebrated pictures, Landscape views, Diagrams, &c., &c., can all be delineated with truth, as to form, color, and every other attribute of a picture on canvas. Another beautiful feature of these pictures, is that many subjects admit of motion, which increases the truthfulness of the representation, and also adds to the interest of the spectator.

The fact that the picture must be seen in at least a partially darkened room, by obscuring surrounding objects tends to concentrate the attention of the learner.

One objection may be urged, viz: the expense of good apparatus and paintings. But when we reflect how many "institutions of learning" purchase such "philosophical toys" as an "orriery" or miniature locomotive "with cars attached," it would seem rather to be a lack of judgment than want of money, in some cases at least.

But in truth, one very important advantage in this kind of illustration is the cheapness of the pictures, when we consider the surface which they cover when seen on the screen, and how much can be represented in one picture. To produce the same results on canvass would, in most instances, cost double or quadruple the price of the picture on glass.—D. H. BRIGGS, (Mass. Teacher.)

## LITERATURE.

### POETRY.

#### THE POET AND THE ROSE.

Pensively the Poet strayed,  
Seeking out some cool retreat,  
Tired of the clang of trade  
And the sound of hurrying feet.

"Weary world!" the Poet said,  
 "What is left a bard in thee  
 Save to mourn thy virtue fled  
 And thy banished purity?"

'Neath the ivy's noisome shade  
 Where no thing of beauty grows,  
 Drooping, as if half afraid,  
 Grew a white, half-opened rose.  
 "Simple flower! fair virtue blooms,  
 Like thy pure white petals here,  
 In the midst of damps and glooms,"  
 And the Poet dropped a tear.

In the rose's deopst heart  
 Lay the tear the Bard had shed;  
 Lo! the folded petals part,  
 Now it lifts its drooping head,  
 Bursting into fuller bloom,  
 While from out its snowy breast  
 Floated up a sweet perfume  
 Like a benison of rest.

"Blessed flower!" the Poet cried,  
 "Many a pure, white soul I knew,  
 Fainting by the highway side  
 For the lack of heavenly dew.  
 Be this lesson not forgot;  
 If the dews of Love were given,  
 Even in the darkest spot,  
 Buds would open fit for Heaven."

In the great world's dusty mart,  
 In its hurry, in its strife,  
 Dwelleth many a weary heart  
 Fainting for the springs of life.  
 Happy thou whose eye can find  
 Lessons here to guide thy youth,  
 And amid the sheaves I bind,  
 Glean the precious grains of truth.

Rhode Island Schoolmaster.

SCIENCE.

Remarkable Parhelia.

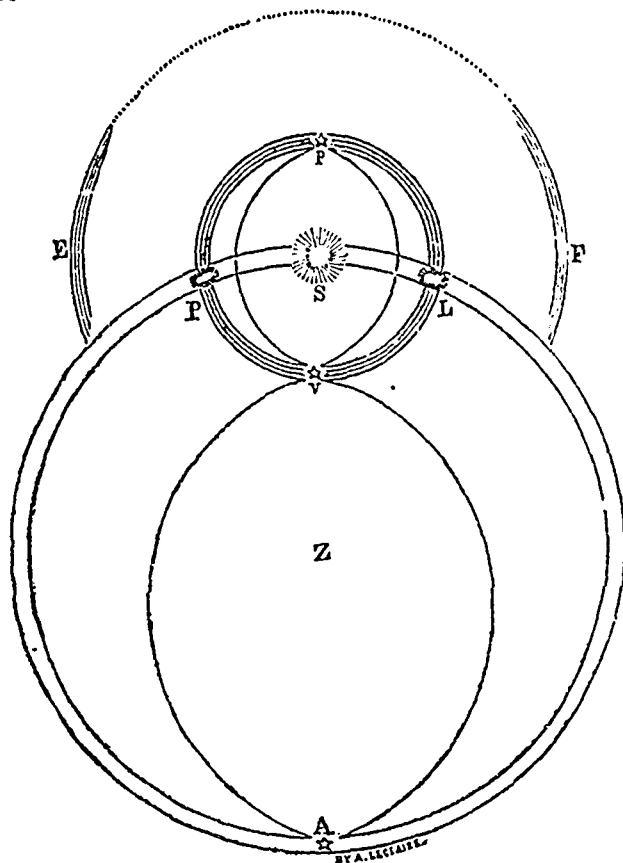
A phenomenon of rare occurrence in other climates and not very frequently seen even in our northern regions, was observed at Montreal, on the 9th instant. The following account of the observations made at St. Mary's College, is given from notes taken at the time by a student in the class of natural philosophy, another student having made a diagram, which we subjoin.

Let *Z* be called the zenith, and *S* the sun at its altitude. At about ten o'clock A. M., the weather being fine and rather warm, the atmosphere, which, up to that hour, had appeared quite clear and very transparent, became gradually overspread with, as it were, a net-work of moving vapour, the higher strata veiling the azure of the sky as with a thin gauze. First appeared in the heavens, round the sun, a halo, or rainbow-colored circle, *Pp Lv*, perpendicular to the visual ray of the observer. Then the great parheliion circle *PSLA*, of a white light resembling that of the Milky-Way, equal in breadth to the apparent diameter of the sun, extends parallel to the horizon. A kind of second parheliion circle, of the same white light, but not so distinct, with points of tangency at *v* and *A*, assumes occasionally a figure more or less elliptical. A second halo, or at least a strong concentric reflection of the first one, with prismatic colors, but not so well defined, also assumes an elliptical figure, with its points of contact at *p* and *v*, and may be somewhat changing. Lastly, on each side of the first halo, *EF*, are seen two segments of a rainbow-colored circle of light, which, if we suppose this halo to have 45°, seem, from their position and their curve, to belong to a halo of 90°, these parts of the circumference only being visible. The two images of the sun, *P L*, sometimes appeared so elongated on the parheliion circle, that it was thought two others could be seen at the points of intersection with the concentric ellipse. Two points, of a very brilliant light, edged with deep prismatic colors, at the upper and lower parts of the first halo, indicated at *p* and *v*, might perhaps confirm the opinion held by some authors and objected to by others, as to the existence of vertical parhelia. As so dazzling a light could

not be looked at without colored or smoked glass, and the observers were unprovided with either of these, it cannot be affirmed positively that there were well determined vertical images. On the 2nd of June 1839, Mr. Quetelet saw, at Brussels, the inner halo, accompanied by the two vertical parhelia.

The *anthelion* or figure of the sun *A*, at the point diametrically opposed, on the parheliion circle, to that of the sun, was still less distinctly defined, when observed, and seemed scarcely any larger than a mere luminous point produced in the meeting of the two curves, without any prismatic colors.

The spectacle lasted, with varying intensity and dimensions, assuming different forms, from about ten o'clock to mid-day. In the evening a beautiful aurora borealis displayed its undulating light in the same celestial field where twelve hours before had appeared the other phenomenon.



OFFICIAL NOTICES.

APPOINTMENTS.

EXAMINERS.

His Excellency the Governor General in Council was pleased, the 2nd instant, to appoint John Burroughs, Esquire, a member of the Catholic Board of Examiners for the district of Quebec, vice Jacques Crémazie, Esquire, resigned.

CATHOLIC BOARD OF EXAMINERS FOR THE DISTRICT OF MONTREAL.

Messrs. Jérémie Laporte, and Pierre Lacroix; Misses Adéline Adam, Adéline Béchard, Flore Généreux, Héloïse Gravel, Otavie Legros, Philomène Monpetit, Olive Ouimet, Marie Primeau, and Catherine Turcotte have obtained diplomas authorizing them to teach in elementary schools.

F. X. VALADE,  
 Secretary.

BOARD OF EXAMINERS FOR THE DISTRICT OF KAMOURASKA.

Misses Lucie Bôgin, and Adèle Bouchard have obtained diplomas authorizing them to teach in model schools.

Messrs. Octave Boucher, Mathieu Morin, and Calixte Dion; and Misses Sophie Debiens, Emilie Gagné, Marie Clémentine Martin, Marie Apollino Caron (Mme Edouard Routier), Odile Sirois, Victoire Pelletier, Philomène Pelletier, Philomène Gagnon, Eliza Deslauriers, Henriette Pelletier, Angélique Emond, Claire Langlois, Marie Bélanger, Stéphanie Dumais, Luce Potvin, Océile Lavoie, Emilie Roy, Marie Marguerite Francoeur, Flore Caillouette (Mme Octave Roy); Céleste Ouellet, Georgina Bernier, and Hermine Dion, have obtained diplomas authorizing them to teach in elementary schools.

P. DUMAIS,  
Secretary.

#### TEACHERS' CONFERENCES.

The eleventh conference of the Teachers' Association in connexion with the Jacques-Cartier Normal school, will take place on the 25th of May next.

The tenth conference of the Teachers' Association in connexion with the Laval Normal school, will be held on the 26th of May next.

#### Notice.

Copy-right holders, or authors, who may desire to submit, for the approbation of the Council of Public Instruction, any works belonging to them, will have to transmit to the Recording Clerk of the Council, their applications to that effect, within at least one month of the meeting, at which they intend to present such works, the said applications to be made according to the subjoined form, stating the price per dozen copies of each printed work, and the price for which they are willing to transfer their right of ownership, if they should think proper so to do; transmitting also eight copies of every printed book, or a copy of the manuscript if such book be not in print.

#### FORM OF APPLICATION.

I have the honor to submit, for the approbation of the Council of Public Instruction, the work of which the following is the title.—

The last edition was published in \_\_\_\_\_, in the  
year \_\_\_\_\_, of which \_\_\_\_\_ copies were printed.  
The price per dozen is \$ \_\_\_\_\_  
The copy-right of this work is owned by \_\_\_\_\_, who  
will transfer it to the Council, for the sum of \$ \_\_\_\_\_  
I transmit eight copies (or the manuscript) of the said work.  
(Signature and address in full.)

By order of the Council,

LOUIS GIARD,  
Recording Clerk.

#### NOTICE TO TEACHERS.

The Teachers of the districts of Quebec and Three Rivers, may, for the future, pay their premiums for the superannuated teachers' pension Fund, and their subscriptions to the Journals of Education, to Revd Mr. Langevin, Principal of the Laval Normal School, who is authorised to receive the same.

#### DONATIONS TO THE LIBRARY OF THE DEPARTMENT.

The Superintendent acknowledges with thanks the following donations:—

From Mr. Joseph Henry, Secretary to the Smithsonian Institution, Washington: Annual report of the Board of Regents of the Smithsonian Institution for 1858, 1 vol. in-8o.

From Mr. Désiré Girouard, Law Student, Montreal: "Traité des lettres de change," by himself. 1 vol. in-8o.

From Mr. J. Douglas Northwick, Montreal: The British American Reader, by himself, 1 vol. in-18o; 2 copies.

From Henry Driscoll, Esq., Q. C., Montreal: Dictionary of Quotations, 1 vol. in-12o.

Donations made through the agency of Mr. A. Leroy, by M. le président Grandgagnage; pamphlets in-8vo:—

Voyage d'Alfred Nicolas, 2 copies; Congrès de Spa, 3 copies (vol. 1); Pierre L'Hermite, 6 copies; Wallarades, 4 copies; Chaufontaine, 6 copies; Grotte de Tiff, 1 copy; Province de Liège, 3 copies; Congrès de Spa (fragment), 4 copies; Habitants des Grottes, 6 copies; Alfred Nicolas (Latin), 6 copies; un feuillet, 2 copies; la Belgique en cas de guerre, 6 copies; La Meuse, 2 copies.

By Mr. Ferd. Henaux, pamphlets in-8 Histoire du Pays de Liège, 2 vols; Charlemagne, 1 vol; Traditions Liégeoises, 1 vol; Robermont, 1 vol; Fabrique d'Armes, 1 vol; Etudes sur le Wallon, 1 vol; Constitution Liégeoise, 1 vol.

By Mr. Et. Hénaux: Le mal du pays, by the same.  
By the brother of the deceased: La statue de Grétry, 1 vol.  
By Mr. Victor Henaux. Pautus Studens, in verse, 1 vol; De l'amour des femmes pour les rois, 1 vol.

By Mr. le Baron de la Roussellere: Don Carlos, tragedy, 3 copies.

By Mr. Durivior, curé de St. Jean à Liège: La Cinéide, 1 vol.

By Mr. Terry, Professor in the Royal Conservatory of Liege: 22 Compositions musicales, in-8; 21 vol. in-4.

By Mr. Buekens, Professor in the Academy of Arts, Liege: Album de dessin industriel, 1 vol.

By M. le Capitaine Ferd, président de la chambre de commerce de Liège: Rapport de la chambre de commerce de Liège, etc., 9 copies; Notice sur M. Orban, 1 pamphlet; Notice sur L. Lombard, artiste, 1 pamphlet; Salon de 1858, by Helbéc, 1 pamphlet.

By Mr. Ul. Capitaine: Notice sur Placentius, etc., 4 copies; Notice sur la société d'émulation, 1 pamphlet; Notice sur Mgr. Van Bommel, 3 copies; Notice sur les journaux, 2 copies.

By the Editor: Revue populaire des sciences, 2 Nos, selected; Revue universelle de l'industrie, etc., 1 No. sel.; Olivier, Grammaire et Encyclopédie élémentaires, 2 copies; Klays, des pensionnats, 1 vol.

By Mr. Kupferschloger, Professor of Roman Law in the University of Liege: De la majorité, etc., 5 copies.

By Mr. Jules Pety de Rossen, de Tongres: Bulletin du Limbourg, 1 pamphlet; Souvenirs Rhénans, 3 copies; Histoire Monétaire, 1 copy.

By Mr. Ad Borquet, member of the Royal Academy of Brussels. Philippe II et la Belgique, 1 vol; Stockmans, 1 vol, Guide en Ardenne, 2 copies.

By Dr Fertrants: Le médecin de la famille, vol. II, III and 6 pamphlets.

By Mr A. Baron, member of the Academy, etc: Histoire de la littérature française, 2 vols; Œuvres de Baron, 3 vols.

By Mr. E. Polain, administrator and inspector of the University of Liege: Diplôme de Louis-le-Débonnaire, 1 pamphlet; Souveraineté de Maëstricht, 1 pamphlet; Brochures académiques, etc., 20 pamphlets; Mélanges historiques, 1 vol; Histoire de Liège, 2 vols.

By Mr. Fuss, professeur émérite. Poemata latina, 2 pamphlets, Du latin moderne, 1 pamphlet, De la rime latine, 1 pamphlet; divers pamphlets, 14.

By Mr. Joly, Professor, Brussels: Géographie, 3 vols; Atlas classique, 2 vols; Brochures administratives, etc., 10 vols.

By Colonel Coquilhart. Traité des bouches à feu, etc., etc., 3 vols.

By Captain Gillion: Des armes portatives, 1 vol; Des canons rayés, 1 vol.

By Mr. Jr. Kupferschloger, Professor of Chemistry in the University of Liege: 4 pamphlets on chemistry.

From Mr. Chandelon-ig: Produits chimiques, 1 pamphlet; and 28 pamphlets on chemistry.

By Professor Pâque: Traité de topographie, 1 vol; Dissertation sur les mathématiques, 3 pamphlets.

By Mr. D. Arnould, ancien administrateur, etc: Monts de piété en Belgique, 1 vol; id. de Liège, 2 copies.

Institut des Sourds-muets, Liège, 2 pamphlets.

By l'Institut archéologique Liégeois. Bulletin de l'Institut archéologique Liégeois, 3 volumes, issued in 10 Nos.

By Mr. Fabry Rossins: Note sur la technologie archéologique, 1 pamphlet; Catalogue des livres de médecine de la bibliothèque de Liège, 1 vol.

## JOURNAL OF EDUCATION.

MONTREAL, (LOWER CANADA) APRIL, 1860.

### Quebec Catholic Board of Examiners.

Mr. Jacques Crémazie, LL.D., of Quebec, who was appointed member of the Council of Public Instruction in the month of December last, has since resigned his trust as one of the Catholic Board of Examiners for the district of Quebec. His Excellency the Governor General in accepting Mr. Crémazie's resignation, was pleased to express his high appreciation of the zeal and disinterestedness with which this gentleman, for many years, discharged the duties of his office.

His colleagues have likewise rendered homage to his merit, by adopting the following resolution:—

On motion of the Rev. M. J. Langevin, seconded by Mr. Juneau, it was unanimously resolved:—

That this Board, in its solicitude for the interests of Education, learns with regret that the resignation of Jacques Crémazie, Esq., LL.D., one of its oldest members, has taken place, and cannot allow this occasion to pass without expressing publicly its sense of the assiduity, the zeal and devotion displayed by that gentleman in the fulfilment of the duties of his trust.

John Burroughs, Esq., advocate, has been appointed to the post vacated by Mr. Crémazie.

### Report of the Louisiana Superintendent of Schools for 1857.

Louisiana, one of the Southern States of the American Union, is bounded North, by the States of Arkansas and Mississippi; East, by Mississippi and the Gulf of Mexico; South, by the Gulf of Mexico, and West, by Texas, where the Sabine River separates it in part from the last mentioned State. Its greatest length, from East to West, being only 292 miles, and its breadth 250. Its surface covers an area of 41,225 square miles.

This surface nowhere rises to a greater height than 200 feet above the level of the Gulf. West of the basin of the Mississippi, in those parts forming the central portion of the State, rise hills beautifully wooded. It is watered by the Red River on the North-West, where the branches of this river expand into small lakes, and form numerous marshes. Below the mouth of the Red River, the Atchafalaya, separating from the Mississippi, forms the western boundary of the great delta, an extent of territory of several thousand square miles, being only ten feet above the level of the river at low water mark, often flooded when the freshets set in. The soil is extremely fertile. The cultivation of the sugar cane has been introduced, its valuable products finding their way to all parts of the United States, to Canada, and even to some parts of Europe. Cotton of an excellent quality grows in abundance. Indigo, the vine, hemp, flax, and tobacco thrive equally well, and constitute the wealth of the planters.

Coal, salt, iron, ochre, and gypsum, abound in a mineral state. The principal rivers are the Mississippi, forming the eastern boundary, which, after watering the south-eastern region, discharges itself by several outlets into the Gulf of Mexico; the Red River, which is a confluent of the Mississippi; the Washita, passing through the southern portion of Arkansas, unites its waters with those of the Red River; the Sabine, the Calcasieu, and the Mermentau, by which the western and south-western portions of the State are watered.

The climate of Louisiana is delightful during six months of the year, but the long enduring heat of summer, generating effluvia from the numerous marshes, gives rise to the terrible yellow fever. The devastating tornadoes of the West-Indies also extend to this country, from July to September.

The orange and the lemon tree, and almost all the tropical plants attain a vigorous growth.

The black bear, the wolf, the tiger-cat, and the panther inhabit its vast forests. Immense herds of Buffaloes, roam over the prairies. The alligator frequents the rivers and bayous, and the rattle-snake, viper and reptiles of every species abound in the luxuriant vegetation.

The inhabitants, almost exclusively agriculturists, are content to leave to the other States the enjoyment of their manufactures, preferring the products of the rich soil which they cultivate. Its trade, centred in New-Orleans, is very extensive.

The population of Louisiana now numbers 650,000 souls, including 300,000 slaves. The white race claims the Anglo-Saxon, who group together toward the north, and the first settlers or possessors of the soil, of French descent, who keep more to the south, retaining, as in Canada, almost unchanged, the habits, manners, and religion of the mother-country. The laws have been condensed into a code, on the model of the *Code Napoléon*.

The state is divided into 48 parishes. *Bâton-Rouge* is the capital. The principal cities are New Orleans, with 140,000 inhabitants, the commercial emporium of Louisiana and the south-western States; Lafayette, a suburb of New-Orleans, with 16,000 inhabitants, and *Bâton-Rouge*, with a population of 5,000. The other towns are Donaldsonville, Iberville, Alexandria, Shrewport, Thibodeauville, Natchitoches, Franklin and Gretna.

Louisiana was discovered by the Spaniards, in 1541. In 1691, LaSalle explored the country at the mouth of the Mississippi. An establishment was founded by d'Iberville, in 1699, but it was only in 1712 that his scheme of colonization was carried out.

The whole territory was then ceded to Mr. Crozat, who called it Louisiana, after the great French monarch Louis XIV., who had conferred the boon. It was afterwards purchased by the company of fur traders, which was formed in 1717, by the celebrated Law; but that enterprise was a failure, and the territory became once more the property of the State. In 1763, when Canada was ceded to England, Louisiana possessed a line of communication to and from the St. Lawrence, through her great artery, the Mississippi, and was of great importance. The country was ceded to Spain in 1764, and by virtue of a new treaty, made in 1800, it again became a dependency of the French Crown. In 1812, Jefferson, then President of the United States, obtained a cession of it from the government of the first Napoleon, giving 60 millions of dollars as the price. It was then a vast extent of territory, comprising Louisiana proper, Arkansas, Missouri, Iowa, and part of Wisconsin, besides also the territories called Minnesota, Nebraska, and Kansas. Louisiana was erected into a State in 1812.

The governor, lieutenant-governor, the Senate, and General Assembly, are elected by the people, the first three for four years, and the last for a period of two years only. The Senate is composed of 32 members, and the General Assembly of 97. These different powers meet every year, in January.

Justice is administered: 1. by a Superior Court, composed of one Chief-Justice and four Associate Judges; 2. by District Courts.

Louisiana sends four representatives to Congress.

A sum of \$300,000 is voted each year by the Legislature for the support of the schools of the State. The distribution of this fund is made under the supervision of a Superintendent, whose functions are limited to two years, and through the agency of Parish Secretaries. The Superintendent relying on the reports of the latter, yearly renders accounts of the moneys received and expended for education, and reports thereon. This is almost all that he is authorized to do. The law gives him no power either over the teachers, or the functionaries charged with superintending its execution.

The Legislative aid, distributed in the parishes, is paid to the teachers in proportion to the number of pupils attending the schools.

In 1857, the number of children of school age, or having a right to attend the schools, was 76,508, showing an increase of 3,186 on that ascertained by census in 1855, and upon which was based the distribution of the grant for that year. This number, however, does not appear to have corresponded to the population of the State, and the Superintendent is of opinion that the census was far from being correct, an observation which might be applied with equal force to those, or at least to some of those, which have of late years been made in Canada, where the execution of the duties devolving on the persons charged with their preparation, has been attended with many difficulties.

About 800 schools were kept open, and the time of teaching averaged from 6 to 10 months. English is taught in most of these schools, and French in a few only.

The course of instruction comprises all the elementary branches.

The parish of New-Orleans contains, in the first three districts, three superior education schools for girls, in which are taught history, rhetoric, philosophy, natural history, chemistry, physiology, algebra, and English and French literature. They are attended by 326 pupils. The same districts possess also three superior education schools, where boys receive about the same education as that which is obtained in our colleges. The number of students in those schools was 333. In the fourth district there were two schools, also for superior education; but the number of students is not given.

The foregoing information is derived from the French version,—only lately received,—of Mr. Hamilton's Report on the state of public instruction in Louisiana, in 1857. The educational system in operation in that important part of the American Union may have since attained more satisfactory results, to what extent, we are not yet, however, prepared to say. Still, from the Superintendent's statements, it does not appear that much progress was attained in the year under review, and he avails himself of the opportunity for urging the adoption, by the Legislature, of certain reforms. These reforms, where more extended powers are needed in the educational administration, would to all appearances, by strengthening the hands of the Superintendent, afford him better means of displaying his abilities, and of securing greater success.

In concluding his Report he indicates the results which are to be anticipated, if Normal Schools, and a journal of education, were established. Of this part of the Report, had we the English version, we should quote the text entire, but we are constrained, for the want of it, to continue our free translation.

The Legislature had, in the preceding session, authorized the establishment of a Normal School, in New-Orleans. The true friends of education had seen with pleasure, that a first step in the right direction had been taken, and every one anxiously anticipated the time when, in that session (1857), the Legislature would sanction the establishment of other Normal Schools in the State. Experience had taught them that in the other States of the Union and in Europe, in order to enable the youth to acquire that elementary knowledge which serves as the basis of a complete education, it is necessary that whoever undertakes to impart this knowledge should thoroughly understand the art of teaching. For this purpose, special schools had been founded, to which young men and young ladies resorted to study the science of teaching, and where, before obtaining diplomas, they had to undergo the same severe examinations as those who aspired to the learned professions. Whenever the schoolmaster, by his moral and intellectual qualifications, would be fit to occupy that position in society which is pointed out by the nature of his vocation and the intimate relations which must necessarily exist between him and the youth under his care; whenever the State, by some legislative enactment, would put his profession under that protection by which it might be raised to the standard of the other professions recognized by law, then, and then only, could the State rest assured that the funds granted annually were well laid out; it would also be easy to mark the contrast between the mere Pedagogue and the Educator; the barrier which shuts out the way to the other pursuits of life would be for ever removed, and the intelligent youth of both sexes would solicit admission to the Normal School, willing to engage in the work of fitting themselves to enlighten the young, and to place them on the path which leads to honorable callings and to a well spent life.

In order to ensure success for the work already begun, and for which future generations would feel grateful towards that Legislature, it would not be necessary to have recourse to any additional taxation. Of the three hundred thousand dollars yearly appropriated for the support of the schools, let one hundred thousand dollars be set apart for establishing and maintaining four Normal Schools; extend the powers and privileges of the one already founded in New-Orleans; establish one on the same basis in each of the Congressional districts, and let these four schools be made accessible to all the youth, boys and girls, who may wish to gain some distinction, and make themselves able to teach in the public schools of the State; do this and, in less than three years, they would possess a corps of teachers of which the State might well be proud. The profession would be raised at once to a proper standard, and by acquiring capacity, check the progress of the adventurous teachers, the majority of whom, bent solely on gain, came from the North to reap abundant profits, and this, too, in a State whose peculiar institutions they abhorred.

A powerful auxiliary in the development of the public school system, and education in general throughout the State, would be secured, if a journal of education were established, in which could be published, to the advantage of each district, city and parish in the State, every information relating to the condition of schools and the means adapted to the advancement of elementary education, and the suggestions that might be urged touching the organization and the working of the school system, and all things calculated to improve it, or to remove its defects. Such a journal would readily find circulation in every district, and wherever the reader had a child to educate, a vote to give, or some influence to exert on behalf of the cause of public instruction, its appearance would be hailed with joy. In less than two years, such a journal would be self-supporting.

It would be fully discussed the methods used in teaching the different branches usually taught in schools; those means by which that dislike to study natural to many children may be overcome; how lessons in collateral and incidental teaching should be given. In a word every thing relating to education, or to the pursuits of life, should be treated in a manner sufficiently intelligible to interest not only the master, but also the pupil.

The Legislature, by establishing such a journal, would not only act up to the noble and benevolent intentions proclaimed at the Capitol, but would also inaugurate a policy of economy. Sums of money were voted annually for the support of an asylum for the deaf and dumb, the inmates of which, on leaving it, found that they were as helpless as ever, through their inability to enter upon any

useful career. These unfortunate people are apt to learn with astonishing facility the printer's trade. Give them an opportunity to follow this, and they will be delighted to know that they have become mediums, chosen by the State, for the diffusion of knowledge throughout its territory, at the same time that it will have shielded them from want, and placed them on a par with their fellow-beings to work their way through life, by means of an art which may be said to be the preserver of all other arts.

The revenue that could be derived from the enterprise would tend very materially to reduce the expense incurred by the State for the maintenance of the asylum, and as a necessary consequence, the Legislature would have at command an establishment in which all the laws and public documents could be printed at a much cheaper rate than by the mode of publication which continued to be so expensive to the State, and the advantage could not but last, so long as the required materials, labour, and the necessaries of life might be obtained at the prices then prevailing in the South.

### Report of the Chief Superintendent of Public Instruction for Lower Canada for 1858.

*Translated from the French by the translators to the Legislative Assembly.*

Extracts from the Reports of the Inspectors of Schools.

Extracts from Reports by Mr. Inspector PARMELEE.

Education has on the whole progressed in all the schools in my district; they are all well kept, and a great number may with justice be classed as model schools. The masters generally speaking are competent, and do their utmost to perfect their systems of instruction. Those charged with the working of the law are zealous in the discharge of their duties.

To the above remarks I add a summary of the statistics contained in the tables which accompany the present report.

There are 20 school municipalities in my district. The number of divisions is 259, of school houses 349. Many of these school houses are excellent, and new ones are going up every year in place of those which are no longer suitable. The number of elementary schools in operation last summer was 233, of this number 204 are under the control of the commissioners, 2 of dissentient trustees, and 8 are independent schools. The number of model schools is 2, they are attended by 153 scholars. Scholars attending independent schools 173, dissentient schools 590, and all the elementary schools 7,321. Of this number 3,366 are boys, and 3,955 girls; 4,760 are of British or other origin, and 2,561 are French Canadians, 4,597 are protestants, and 2,724 catholics. Number of those who spell, 2,100; who read fluently, 2,946; read well, 2,275; learning writing, 2,618; simple arithmetic, 1,375; compound arithmetic, 1,032; geography, 1,206; French grammar, 449; English grammar, 554. Total number of children learning grammar and parsing, 1,023; learning composition, 701.

There are in my district 16 primary superior schools or academies, one of them is attended by French Canadian children, and the others by those of British origin; two of the latter are girls' schools.

The number of scholars attending the superior schools is 545; 248 boys, 297 girls. Number learning reading, 524; writing, 330; geography, 243; grammar and parsing, 334; arithmetic, 426; algebra, 72; composition, 301; Latin, 62; Greek, 8; French, 93; instrumental music, 51; vocal music, 48; drawing, 29; natural philosophy, 32; chemistry, 4; geometry, 31; astronomy, 28; physiology, 4; use of the globes, 103; book-keeping, 62; history, 121, and declamation, 187.

Of the common schools 17 are kept by men and 216 by women. 14 of the male teachers hold diplomas, and 3 do not; 24 female teachers also hold diplomas. The average of the ages of the teachers is 21½ years.

In charge of the primary superior schools, there are one minister of religion, three teachers holding diplomas authorizing them to teach in academies, 3 hold diplomas authorizing them to teach model schools, 2 have diplomas authorizing them to teach in elementary schools; 7 have no diplomas, 2 of these schools are under the charge of female teachers. There are also 13 assistants employed. The number of pupils is 7,879.

## Extracts from the Reports of Mr. Inspector PLEES.

My report for the present year relates solely to the schools under the superintendence of the Protestant Commissioners for the city of Quebec.

I have but little to add with reference to these schools, to what I have already said concerning them. The children are making progress, and the result of my visits convince me that the teachers do every thing in their power for the advancement of their pupils. Most of the latter can point out readily on the map of the world, the large divisions of the earth and the different countries of which they are composed, with the features distinguishing them one from another. They give from memory the names of the different countries, their climates, their natural productions, their manufactures, &c. During the last two years they have studied grammar, &c., and have learned the definitions and derivations of words, and writing from dictation. Among the branches which they have studied with success, are: elocution, English grammar, composition, and mental arithmetic.

The dissentient school for *Ste. Foye* and the *Banlieue*, which has been lately placed under my superintendence, is attended by 39 children of both sexes, most of them protestants.

On the day of my examination, a large number of the parents of the children were present, and took a lively interest in the proceedings. The subjects on which the pupils were examined were reading, spelling, (the more advanced students answering all the questions which were put to them on the derivation and signification of words) geography, English grammar, mental and general arithmetic, book-keeping, mensuration, sacred history, &c. The answers on all these subjects were such as to give me satisfaction. I remarked a great deal of neatness in the appearance of the children, and strict discipline in the school.

Some of the rates from which this school draws its support remain as yet unpaid, and those by whom they are due are persons who cannot exempt themselves from paying them, without incurring the charge of negligence. I was pleased to find that in this, as in all the schools under my control, the children of the poorer class are taught gratuitously.

On the whole, the result of my examinations has been satisfactory, and I am convinced that it would have been much more so, had there been a greater uniformity in the school books.

## Extracts from the Report of Mr. Inspector LEROUX.

In submitting the Report of my last visit, it becomes my highly gratifying task to inform you of the happy change which has taken place in most of the municipalities within my district.

In my last report, very much against my will, I was forced to tell you that out of twenty four municipalities composing this district, only seven complied with the requirements of the law and the instructions of the Department. But now, thanks to the support which I have received from you, thanks to your promptness in giving the instructions asked for, and to your firmness in maintaining what had been already laid down, thanks also to the concurrence of the Rev. Clergy of the different parishes and of numerous enlightened individuals, I have succeeded almost everywhere, in obtaining the reforms I desired. Twenty of the municipalities may now be classed with those in which the law receives its full execution. The necessary repairs to the school-houses have been either effected or commenced; they have been provided with the necessary apparatus, and they are all, as you may see by my statistics, much better attended. The assessments are regularly collected, and the teachers receive their salaries with more punctuality. The four parishes which have not as yet complied with your instructions, are: St. Césaire, St. Athanase, St. Hugues, and St. Dominique, and even these are now in the way of progress.

I have spent six months in going over the district under my inspection. I reduced the number of divisions, which was usually six for reading and arithmetic, and four for the other branches, to three for reading, arithmetic, and geography, and to two only for grammar and history. This reduction has produced a very unlooked for effect. The younger children whose time was heretofore lost in the schools, and who experienced nothing but disgust and home-sickness, now find the means of amusement combined with instruction. They are taught in some cases by the master or mistress, in others by a monitor. The system adopted for teaching the other branches to the more advanced pupils, is also productive of good results. In the latter there is still much room for improve-

ment, especially in the schools conducted by young female teachers.

The following may be considered the chief causes now obstructing the progress of education: the smallness of the salaries paid to masters, lack of uniformity in the books, want of skill and experience on the part of most of the young female teachers, who are generally selected in preference to more competent parties, because they are ready to accept a small salary; lack of assiduity on the part of the pupils; and the apathy of some of the parents. The books distributed in conformity with your instructions are well calculated to remove this indifference on the part of parents; for they are by no means insensible to such evidences of success and good conduct on the part of their children. Many of them willingly deprive themselves of their assistance, in order to enable them to attain the honour of these rewards, which are granted only to those who combine success with punctuality in attending school. The only thing to be regretted, is that a larger number of these books could not be given.

Before passing in review each of the different municipalities in my district, I wish to specify those which have evinced most zeal in favor of the reforms and improvements recommended to them. They are as follows: *Ste. Marie de Monnoir*, *L'Ange-Gardien*, *St. Paul d'Abbottsford*, *St. Simon*, *St. Alexandre*, *Ste. Rosalie*, *St. Ephrem*, *La Présentation*, *St. Mathieu*, *St. Grégoire*, *St. Jean-Baptiste*, and the town and parish of *St. Hyacinthe*. The commissioners in those various localities have displayed a degree of good will deserving of the highest praise. Every thing has been done by them with the greatest care, repairs to school-houses and their out-buildings, purchasing maps, registers, seats and proper desks, black-boards, paper and slates for the poorer children; all these duties have been performed in a manner to shew that the commissioners understand all the importance of their mission. Nor must I omit to mention a proof of generosity above the common, lately evinced by the rate-payers of the parish of *Ste. Brigitte*. This municipality in order to free itself at once from the burden of a heavy debt by which its movements were impeded, has lately voluntarily and without a dissenting voice, levied a special vote, notwithstanding that it had already been assessed for the year to an amount triple that required by law. The zeal displayed by this parish is the more creditable from the fact that the municipality is at present under assessment for the building of a church, which, in other parishes, is usually an obstacle to the payment of the ordinary school rates.

I now pass on to a very summary review of the different municipalities.

*Christieville*.—Almost all the schools in this municipality are on a good footing, and in general well attended. The model school is still under Mr. Auger, whose salary is only £60; it is on the best possible footing. The pupils learn French and English, and give proof of success. The salaries of female teachers in this parish, vary from £20 to £27. At the time of my first visit, two of the female teachers were unprovided with diplomas, but they have since obtained them. The dissentient school was not in operation at the date of my visit, and the trustees were inclined to think that it would not be opened this year.

*St. Alexandre*.—The two schools under my control in this municipality, are not in a condition calculated to reflect credit on their respective teachers; the children appear to be intelligent and assiduous, and yet they seem to know little if anything. The salaries of the masters vary from £40 to £42 10s

*Ste. Brigitte*.—At the time of my last visit, the schools had been but lately opened and the attendance was small. The affairs of the corporation were in a bad state, the sum of £143 having been wasted in law expences and the payment of interest. But thanks to the generous sacrifices which I have already mentioned, all the debts have now been paid off.

*St. Paul d'Abbottsford*.—I was very much pleased with the discipline of the schools in this municipality, and the proofs of progress evinced by the pupils. The schools are now supplied with the usual requisites. The Commissioners are building a school-house on the Papineau Line, and taking steps towards the purchase of a lot on which to build another in the village. The affairs of the corporation are in a very good state. The dissentient academy was not in operation at the time of my visit.

*L'Ange-Gardien*.—There are four schools in this parish. I found that they were better attended, and that the amount of progress made by the pupils was sufficiently marked. The commissioners

are about establishing a new school section. The affairs are in a satisfactory state.

*St. Jean-Baptiste.*—There is no change worthy of note in the schools of this parish. The commissioners having neglected to furnish records of visits, I could not, under your instructions, distribute any prizes in these schools. The affairs of the corporation are conducted in a satisfactory manner.

*St. Hilaire.*—The schools in this parish have not progressed as much as would be desirable. Two of them are very irregularly attended. The girls' academy under the Religious Ladies of the Sacred Names of Jesus and Mary is, as heretofore, well managed; the pupils gave proof of remarkably close application, this year. I had no difficulty in regulating the pecuniary affairs of the commissioners.

*St. Césaire.*—The schools of this parish, with two exceptions, are very well conducted. The pupils continue to advance with increasing rapidity, but it is to be regretted their truly devoted teachers should be the worse paid of any within the district under my inspection. The model-school of this parish, conducted by Mr. J. Bte. Delage, merits a special notice. French and English are both taught with equal success in his school. The girls' academy under the *Sœurs de la Présentation*, is undoubtedly one of the first of its class. This year it has been attended by 136 pupils. English, French, and all the branches of a good education, are taught in this institution. It is in every sense an honour to the worthy founder, Mr. Provençal, the parish priest of the place.

*St. Matthias.*—The salaries of teachers in this parish, vary from £50 to £56, and the schools are generally well attended. The pupils have made satisfactory progress. The commissioners, whose zeal is worthy of all praise, are about to establish two new sections, a step which is evidently necessary. The accounts are kept in a satisfactory manner.

*St. Marie de Monnoir.*—Five of the schools in this parish are well kept. The pupils gave proof that they had made progress. There is no change worthy of remark in the other four, since last year. I think this may be attributed, in great part, to the incapacity of the young female teachers, by whom these schools are conducted. As regards the college and the girls' academy, I have merely to repeat the favorable account contained in my last year's report.

*St. Pie.*—The schools in this parish are in general better kept than at the period of my first visit, and much better attended. The salaries of the male and female teachers are low. *St. Pie* would require a primary-superior school. The population of the village is large and desirous of possessing this advantage; I have every reason to hope that there will not be much delay in the matter. The school-houses are still in a very bad state, and devoid of almost every requisite. The accounts of the school corporation are kept in a very satisfactory manner; but its affairs are negligently managed.

*St. Damase.*—Two of the schools of this municipality are badly conducted, the others give proof of progress. The village school under Mr. Lussier, is, for an elementary school, every thing that could be desired. Several of the children are studying with success in the branches required for teaching, in the model schools. I hope the commissioners will soon take steps towards the establishment of a primary superior school. The pecuniary affairs of this municipality are now in a very satisfactory position; but the school houses are in very bad order.

*St. Dominique.*—The lack of progress prevailing in the schools of this parish with but one exception, is owing to the apathy of parents in neglecting to send their children to school regularly. The commissioners' accounts and the records of their proceedings are kept in a very unsatisfactory manner. There is, in fact, neither a register nor books.

*St. Simon.*—The schools are well kept, and the pupils progressing remarkably well. The manner in which the affairs of the corporation are managed, is such as to reflect credit on those to whom they are entrusted.

*St. Hugues.*—This parish is behind the others in many respects. At the date of my visit, it was the only parish in my district in which the teachers had received nothing, or next to nothing, of their salaries. With the exception of the girls' academy, under Mrs. Blanchette, the schools are very inferior. The former displayed very satisfactory evidence of progress. At the girls' academy, conducted by the *Sœurs de la Présentation*, the day pupils

whom I examined impressed me with a very favourable idea of that institution. The accounts of the school corporation are kept in a very satisfactory manner, but there are large arrears to be collected.

*St. Ephrem.*—Two of the schools in this parish are on a footing which leave nothing to be desired. The other gives no evidence of progress. The dissentient school is very well conducted. The accounts of the commissioners are well kept. I was unable to see those of the dissentients.

*St. Hélène.*—There are now two schools under control. That which was last opened, and which I visited, appeared to me to be in a satisfactory condition. The commissioners have dismissed one of the teachers on a charge of immorality, they have also changed the secretary-treasurer. The affairs of the corporation are now in good order.

*St. Rosalie.*—The state of the finances of this municipality, is now every thing that could be desired, and the accounts are very well kept. This cannot be said of the schools. With the exception of the village school, the progress of which becomes more and more marked, they all seem to recede in place of advancing. Last year the commissioners discharged a good teacher, without cause, and they now regret having done so.

*Notre-Dame de St. Hyacinthe.*—All the schools of this parish are provided with the usual requisites. The progress made in most of them is very marked, and the attendance is also more regular than at the period of my first visit. The teachers' salaries vary from £30 to £35. The affairs of the corporation are in very good order, and the accounts are well kept.

*Town of St. Hyacinthe.*—Mr. Kerouac's school is conducted, as heretofore, with zeal and success. His salary, and that of Mme. Kerouac, who is entrusted with the division including the younger children, amount to £105. The school under the Sister of Charity is attended by 186 pupils, nearly all of them being the children of the poorer class, who but for the intervention of these good Ladies, would be condemned to grow up in ignorance and idleness. The Sisters of the *Présentation de Marie* have taken the place of the Sisters of the *Congrégation de Notre-Dame* at the girls' academy. Their house is the mother-house of the order, in the diocese of St. Hyacinthe. There are 11 Sisters and 175 pupils. The education imparted is at once very solid and very refined.

*La Présentation.*—I am happy to state that the recommendation which I deemed it my duty to make to the commissioners and rate-payers of this parish, during my first visit, has had the desired effect. The schools were then but poorly attended, and they are now filled with pupils, and except in one instance or so, the greatest progress has been made in every respect.

I devoted a considerable time to examining the accounts and registers of the commissioners, in each of the parishes within my district, and I repeat, that the great evil, is the delay in paying the teachers. This, again, is caused by delay in collecting the school rates and monthly fees. I am convinced that if the commissioners were bound to collect these rates in the Autumn, the time when the rate-payers are best able to pay, and to furnish at the same time, with their semi-annual report, a certificate from the inspector testifying that there are no arrears and that the teachers have been paid, many of the abuses complained of would cease to exist.

The following statistical summary will enable you to judge of the progress made within my district during the year. In 1857 the number of pupils attending the different institutions was 6,378; in 1858 the number has been 7,666, increase 1,288; number of pupils reading fluently in 1857, 1,803; in 1858, 2,749, increase 946; number of pupils learning to write in 1857, 2,862; in 1858, 3,183, increase 321; number of pupils learning simple arithmetic in 1857, 1,699; in 1858, 2,187, increase 488; number of pupils learning the compound rules in 1857, 1,041; in 1858, 1,576, increase 535. In 1857, only 64 pupils were taught book-keeping; this year, 1858, it has been taught to 115, increase 51. Only 980 were taught geography; this year it has been taught to 1,546, increase, 566. Only 1,749 were taught French grammar; this year it has been taught to 2,677, increase 928. History was taught to 1,146; this year to 1,677, increase 531. Literary composition, mensuration, linear drawing, English grammar, singing, and instrumental music, also show an increase of about one hundred per cent. The sum contributed by the rate-payers has increased by £657, and the salaries of the teachers have also been somewhat increased.

(To be continued.)

## MONTHLY SUMMARY.

## EDUCATIONAL INTELLIGENCE.

—Mr. Rogier, minister of the Interior and of Public Instruction in Belgium, announced to the House of Representatives during a debate on the subject of public instruction, that it was the intention of the Government to increase the Professors' salaries, with a view to raising the standard of studies, and to induce learned foreigners to repair to that country.

—The *Institut Polytechnique* of Montreal, on motion of Mr. Ossaye, Professor of agriculture in the Jacques Cartier Normal school, has resolved to petition Parliament to the end that certain scholarships be founded by Government to be given in competition to the students in the different colleges, so as to enable the successful competitors to enter special schools of arts and trades in Europe, in order that in course of time the knowledge they will have acquired may be diffused in Canada.

## LITERARY INTELLIGENCE.

—Mr. Leopold Ranke, the celebrated German historian, whose *History of the Popes* is, in France, the most popular of his works, has been elected a foreign member of the Academy of Moral and Political Sciences.

—The widow of the late Jolu Paul Richter, the celebrated German author, died at Munich, on the 28th of January last, at the age of 84 years. The only son left by this great writer, died long ago in great poverty, when a student at Heidelberg.

—Mr. Monmerqué, member of the French Academy of Inscriptions and Belles-Lettres, died in Paris, aged 80 years. His obsequies took place on the 3rd of March. The funeral oration was pronounced by Mr. Berger de Xivrey. His first historical and literary publications appeared in 1818. He had been for some time occupied in finishing a new and carefully compiled edition of Mme. de Sévigné's Letters, an authoress whose life and writings he, for many years, had made the object of his minute inquiries, and it was while thus engaged that he was snatched from his labours. The memory of Mr. Monmerqué will be cherished by Canadians. He, on all occasions, took the liveliest interest in every thing relating to Canada, and it was partly through his exertions, we believe, that donations of books and works of art were procured for the Canadian Institute of Montreal, by Mr. Barthe, while in Paris, some years ago.

—Mrs. Jameson, the distinguished authoress, died on Saturday, aged sixty. Her illness lasted but a few days. After a visit to the reading-room of the British Museum she complained of a cold, and in two or three days a severe attack of bronchitis succeeded, from the effects of which she never rallied. Mrs. Jameson was the eldest daughter of Mr. Murphy, painter in ordinary to the Princess Charlotte, a well known artist in the early part of the present century. She married Mr. R. Jameson, the late Vice-Chancellor of Canada, whom she survived six years. Her literary labours commenced with the 'Diary of an Ennuyée' in 1826, followed by numerous volumes on various subjects of biography and art. Her principal and most popular publications were her 'Characteristics of Women,' chiefly studies from Shakspeare; 'Visits and Sketches at home and abroad,' 'Winter Studies and Summer Rambles in Canada;' the latter work she regarded as peculiarly a record of her own social views and convictions. In 1842 she published the 'Hand-Book to the Public Galleries of Art in and near London,' which was the first of a series of artistic works of subsequent production,—viz., on 'Sacred and Legendary Art,' 'Legends of the Madonna,' &c. One of her last publications was a revised and enlarged edition of 'Memoirs of the Early Italian Painters,' published by Mr. Murray. For two years past she had been engaged on a laborious and elaborately illustrated work, announced by Messrs. Longman, and nearly completed, the 'History of Our Lord and of his Precursor, St. John the Baptist, with the Personages and Typical Subjects of the Old Testament as represented in Christian Art.' In the completion of this labour she had re-visited Italy, and passed several months in Rome and other continental cities. As an art-critic Mrs. Jameson was almost unrivalled. But her intellectual excellence extended in other and nobler directions—in a deep interest in all social and moral questions, as evidenced in her printed lectures on 'Sisters of Charity at home and abroad' and the 'Communion of Labour,' prefaced by an earnest and eloquent introduction. —*London Paper.*

THE MCGILL NORMAL SCHOOL LITERARY ASSOCIATION.—This Association is composed of the young-lady students of the McGill Normal School. We had the pleasure of assisting, as the French say, at the Annual Meeting of its members, held in the hall of the School, on Tuesday evening. Where all were so good it would be invidious to make selections and we shall, therefore, content ourselves with recording the gratification which we derived from the exercises of the evening. Some of the essays read were extremely creditable to their authors, displaying much sound

knowledge and correct reasoning, conveyed in appropriate and forcible language. The musical exercises, as well vocal as instrumental, were also rendered in a manner alike creditable to the young performers and to their instructors, and elicited repeated rounds of applause from a large and discriminating audience. At the close of the exercises, Miss Costigan, the President of the Association, read a well-considered address, in which the advantages to be derived from the voluntary labors of its members were clearly explained and eloquently urged upon her fellow—or rather, we should say, sister-students. On Miss Costigan's resuming her seat, the Rev. Mr. Kemp, on the part of the company, thanked the ladies for the pleasing entertainment they had provided, adding a few kind and considerate words of encouragement and advice to the young associates. The national anthem was then sung and the company dispersed to their homes, animated, we have no doubt, one and all, with the kindest wishes for the welfare and professional as well as social advancement of their interesting and accomplished entertainers.—*Montreal Herald of 12th instant.*

—We have to record the death of two remarkable men, both from Quebec, whose names deserve to be held in honor by all who know how to appreciate virtue or talent.

The Rev. Mr. Gingras, a theologian of high merit, died at Paris, aged 51 years. All Canadians in that city at the time, attended his funeral. Mr. Gingras had received his education in the Seminary of Quebec, where, in 1831, after going through his studies with great success, he entered the holy orders. In the following year he became Professor of belles-lettres, and was, from 1833 to 1834, successively appointed Director of the Seminary and of the College of Quebec. In 1844, he visited Europe and the Holy Land, in company with Mr. Bélanger. When in Rome the degree of Doctor in Divinity was conferred on him. On his return to Canada he published two volumes containing an account of his travels in Egypt, Arabia, Palestine, Turkey, and Greece. In this work no account of his travels in France, Italy, Germany, Belgium, and Ireland is given, and this is the more to be regretted especially with regard to Germany and Ireland, as but very few French Canadians ever visit these two countries.

Having returned to Quebec, he, for sometime, had charge of a class of philosophy, and also of a Theological Conference. He became once more Director of the Seminary, but as he found it necessary to undertake another voyage for the benefit of his health, he had to abandon this post, which he did accordingly, in May last. His illness was one, however, not to be overcome, and the consolation of breathing his last in the midst of his old school-fellows, of his friends and pupils, was denied him. His meekness, piety, devotion, and countenance expressive of deep piety had acquired for him the name of *saint*, an appellation by which all were happy to know him.

Mr. Réal Angers, one of the most eloquent advocates of the country, died in his 47th year. He had been admitted to the bar at an early age, and by his brilliant imagination and energetic mind soon attracted notice. His taste for literature was strong, but he had to yield to that necessity which had directed his course toward the sterner and somewhat thorny practice of the law. He has left testimonials of his literary talent in the form of pleasing poetical essays, and of two short works in prose. His *Révélation du Crime* might have laid him open to the reproach of having attempted an imitation of the *Mysteries of Paris*, were it not well known that it was written long before that of Eugene Sue, and that the fearful descriptions it gives, unfortunately are realities. His other production is a treatise on stenography, written at the time he was engaged reporting parliamentary debates. To him,—and to Mr. Aubin,—are due perhaps the only able reports extant of the speeches delivered in the Lower Canada House of Assembly during its three or four last sessions. Mr. Angers was, together with Mr. Loranger, entrusted by the Government with the defence of the *Censitaires* before the *Seigniorial Court*. In the fulfilment of this duty he showed much learning, and sound and eloquent argumentation. As one of the Editors of the periodical in which are published the Lower Canada Law Reports he has likewise contributed highly to the fund of our jurisprudence. His health, through over-exertion, had become impaired, and great efforts were necessary to enable him, for some years, to attend to the duties of his profession. His death has caused universal regret, although, under the circumstances, the sad event could not but have been anticipated. We may add that, in the next number of our French journal, some stanzas of his poetry will appear.

## SCIENTIFIC INTELLIGENCE.

—Up to the present time the moon had been considered as a heap of dried earth, without water, without an atmosphere, without inhabitants. But popular opinion has always given these last to the moon, to the great perplexity of many, who were troubled at the thought that its inhabitants had no air. Euler, however, had found an atmosphere for them. His observations, however, were not able to satisfy astronomers. Lately, Mr. de la Rive, and still more recently, Father Secchi have, they think, been able to confirm Euler's opinion. An atmosphere, they say, really exists though of a very inconsiderable height.

Mr. Schwabe, a distinguished German astronomer goes further: he announces in one of the last numbers of the *Astronomische Nachrichten*, that he has seen in the moon a kind of vegetation, and the following are his reasons: The surface of the moon presents to the view numerous



narrow streaks similar in appearance to furrows, which, at times, appear laid over in straight, at other times in circular lines. Many explanations are given of these lines; some consider them as the former beds of now dried up rivers, others as torrents of lava vomited forth from the volcanoes, and reflecting more vividly than the other portion of the lunar surface, the rays of the sun. Mr. Schwabe offers this explanation: according to his theory the streaks which extend from the summit of the Tycho, one of the most elevated of the mountains of the moon, have, at certain periods, a greenish tint, which they loose at the end of a few months. Hence he infers that there exists in the moon vegetables, which shoot forth at season corresponding with our spring, and die at a season corresponding with our autumn, like all the plants of our globe. The existence, therefore, of a vegetation is strongly suspected. But what now becomes of the assertion commonly admitted that there exists no water on the surface of the moon? If the vegetation, which Mr. Schwabe has remarked on our satellite, reflected a blue, red, or yellow ray, we could admit that its nature was different from that which exists on our earth; but which as it is green, must we not conclude by analogy that it is the result of the same chemical combinations. Water should then become a necessity. We know, it is true, that the cactus does not require to be watered; but we also know that it absorbs the humidity of the atmosphere, and for the existence of this humidity, there must exist seas, lakes, and rivers. To this difficulty we call the attention of astronomers.

— Vegetable parchment is the name given to a product arising from the action of sulfuric acid (oil of vitriol) on unsized paper. It is superior to animal parchment, prepared at a far less expense, superior by its uniformity of surface, by its resistance to the action of chemical agents, and particularly to that of water. It possesses the same physical quantities as animal parchment, being white, transparent, of a semi-lubrous texture, folded without injury to the paper, torn with difficulty; it will probably altogether replace animal parchment, which is prepared with so much trouble.

— A society, under the name of *La Société d'acclimatation*, exists in France. The object of this association is to import and to propagate the animals and the useful plants of all the regions of the globe. France on account of its central position and its temperate climate, is naturally a good site for the permanent exhibition of all the useful species contained in the animal and the vegetable kingdoms. The *Jardin des Plantes* (Garden of Plants) presents already something similar; but the institution lately created is one of a more practical and more experimental nature. On this subject we read in the *Union*: "The work of preparing the ground for this experimental garden advances with great rapidity; the enclosure is completed; the river is running in the bed prepared for it; the excavation of the lake finished, the aviary, the aquarium, and the building destined for the larger quadrupeds, are now in readiness for their future occupants." Numerous donations of rare animals have already been made, and the ramification of the association will secure an illimitable supply of species from all parts of the globe, in every department of natural history. This garden will become one of the wonders of the city of Paris, and a visit of no ordinary delight to the citizen and to the traveller.

#### STATISTICAL INTELLIGENCE.

— Well grounded statistics prove that the number of persons who succumb annually to the effects of alcohol amounts in England to 50,000, in Russia to 100,000; the life of those unfortunate beings is one of aggravated suffering.

Spirituous liquors powerfully affect the glands of the mouth and of the stomach, their secretions becoming exceedingly abundant. Sensibility is finally blunted, and the taste so much injured that it is a frequent occurrence, to see a man pass from the use of weak to strong drinks, and ultimately distinguish no taste in pure alcohol and in bitters.

Under the action of those fatal liquors, the mucous membrane hardens, the tissues, the brain, and the nervous system, so wonderfully ramified over the whole body, become disorganized, and the individual contracts a morbid habit which soon assumes the chronic form. At this period all the effects of this disease become visible; there is a trembling of the limbs, loss of vital power, impotence; the body loses its erect form, the head turns grey, and at forty all the traces of age appear. "Alcohol, says Liebig, by its action on the nerves, is like a note drawn on the health of the labourer, and which he must always renew in default of means to pay it. He thus inevitably brings on the bankruptcy of his health."

One of the most ordinary results of the abuse of alcohol is paralysis. I have somewhere read that a carpenter, enjoying excellent health and of a robust frame, but who had contracted the fatal habit of drinking large quantities of brandy, was attacked, at the age of thirty five years, with a paralysis of the tongue; the words he pronounced were unintelligible. A few months after this first accident he lost the use of his right arm, and death finally followed on paralysis of the brain.

Such are the consequences of the abuse of alcoholic liquors. To those above described and which attack the body, are to be added in a parallel line, those which attack the mind. It is there that may be seen, and may be fingered so to express it, the intimate relations which unite the body to the soul, the organs to the intellect.

All the faculties of the individual disappear one after another. The memory fails, hebetude supervenes, and soon madness takes the place of the intellectual powers the man had possessed. The propensity to all crimes, to suicide, becomes developed, and what should strike terror is this, that all the evils the individual entails upon himself, by the abuse of liquors, he transmits as an inheritance to his children, who suffer for the faults of the parent; fatal consequence, and which affords much matter for reflection.—*Courrier du Canada*.

#### MISCELLANEOUS INTELLIGENCE.

A List of Wonders.—Among the thousands of marvelous inventions which American genius has produced, within the last few years, are the following, compiled in an abstract from the Patent Office report:

The report explains the principle of the celebrated Hobb's Lock. Its "unpickability" depends upon a secondary or false set of tumblers, which prevents instruments used in picking from reaching the real ones. Moreover, the lock is powder proof, and may be loaded through the key-hole and fired off till the burglar is tired of his fruitless work, or fears that the explosions will bring to view his experiments more witnesses than he desires.

Doors and Shutters have been patented that can not be broken through with either pick or sledge hammer. The burglar's "occupation is gone."

A harpoon is described which makes the whale kill himself. The more he pulls the line, the deeper goes the harpoon.

An Ice-Making Machine has been patented, which is worked by a steam engine. In an experimental trial, it froze several bottles of sherry, and produced blocks of ice the size of a cubic foot when the thermometer was up to eighty degrees.—It is calculated that for every ton of coal put into the furnace, it will make a ton of ice.

From Dr Hale's (Examiner) report, we gather some idea of the value of patents. A man who had made a slight improvement in Straw Cutters, took a model of his machines through the Western States, and after a tour of eight months, returned with forty thousand dollars. Another man had a machine to Thresh and Clean Grain, which in fifteen months, he sold for sixty thousand dollars. These are ordinary cases—while such inventions as the Telegraph, the Planning Machine, and India Rubber patents, are worth millions each.

Examiner Lane's report describes new electrical inventions. Among them is an Electrical Whaling Apparatus, by which the whale is literally "shocked to death." Another is an Electro-Magnetic Alarm, which rings bells and displays signals in case of fire and burglars. Another is an Electric Clock, which wakes you up, tells you what time it is, and lights a lamp for you at any time you please.

There is a "Sound Gather," a sort of huge ear-trumpet, to be placed in front of a locomotive, bringing to the engineer's ear all the noise ahead, perfectly distinct, notwithstanding the noise of the train.

There is an invention that Picks up Pins from a confused heap, turns them around with their heads up, and sticks them in papers in regular rows.

Another goes through the whole process of Cigar Making, taking in the leaves and turning out finished cigars.

One machine cuts cheese; another scours knives and forks; another rocks the cradle; and seven or eight take in washing and ironing.

There is a Parlor Chair patented that can not be tipped back on two legs, and a Railway Chair that can be tipped back in any position without any legs at all.

Another patent is for a machine that counts passengers in an omnibus and takes their fares. When a very fat gentleman gets in, it counts two and charges double.

There are a variety of Guns patented that load themselves; a Fishing Line that adjusts its own bait, and a Rat Trap that throws away the rat, and then baits itself, and stands in the corner for another.

There is a machine also, by which a man prints, instead of writes his thoughts. It is played like a piano forte. And speaking of Pianos, it is estimated that nine thousand are made every year in the United States, giving constant employment to one thousand nine hundred persons, and costing over two millions of dollars.—*Christian Times*.

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