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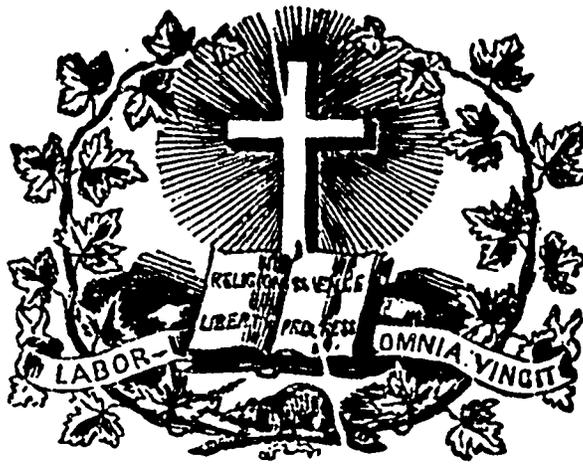
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SUMMARY.—**LITERATURE.**—Poetry: The Close of the Year.—Conversation. (continued from our last.)—**EDUCATION:** A Paper read before the College of Preceptors, England; by D. Nasmyth, Esq., Barrister-at-Law.—**Political Economy:** The Dominion of Canada and the Reciprocal Trade.—**Gymnastics:** Preservation of Health; by Thomas Inman, Esq., M. D.—**SCIENCE:** Improvements in Automatic Telegraphy—Electrical Phenomenon.—**Fun at Home.**—**OFFICIAL NOTICES:** Separation, Annexation, and Erection of School Municipalities.—**EDITORIAL:** Report of the Superintendent of Education for Lower Canada, for the year 1866.—**Geographical, &c.:** The Parks of Colorado, (continued from our last.)—**Number of Useful Plants.**—**MONTHLY SUMMARY:** Educational Intelligence.—Literary Intelligence.—Statistical Information.—Miscellaneous Intelligence.

LITERATURE

POETRY.

THE CLOSE OF THE YEAR.

When thy heart was young, and thy mind was gay,
And thou hadst not heard of ill,
And the sun that rose and sat on thy day,
Was genial and lovely still;
When thy youthful temples were wreathed in flowers,
How little to thee was the march of hours!

The autumnal leaf was as gay to thee,
When it floated and fell in the wind,
As the vernal bud and blossom could be,
On the flourishing plant reclined:
For then thou wast reckless and young as they,
And alike to thee was their bloom and decay.

But now perchance, with an altered eye,
Thou beholdest the passing year;
And with sorrow thou vicwest the hours go by,
And the last sad day draw near;
When the Giver shall call for the soul He gave,
And thy clay shall commix with the kindred grave.

And thou watchest perhaps the changeful year,
At times with a pensive sigh;
And the leaves of November all strewn and sear,
Will remind thee that thou must die;
And the season's change, and the year's decline
Speak loud of the changes that must be thine.

And the year that is gone,—as it died away,
Didst thou see it expire unmoved?
Or didst thou not muse on thy own decay,
And farewell to the things beloved;
And feel that its day and its months, for thee,
Were all sunk in eternity's boundless sea?

It is time to think when the days of men,
Thus rapidly hasten on,
And the glass of Time, though it's turned again,
Will too quickly again be run,—
And these are the thoughts which the pensive sage
Will love to revolve in maturer age.

The autumnal blast may despoil the tree,
And scatter its foliage round;
And the drifted snow may a girdle be,
Where the ivy had fondly bound:
But the widowed stem and the leafless spray,
Shall be green again on a sunny day.

Not so with man;—there's a fearful hour
That will blight his joyous bloom;
When his leaf shall be in the whirlwind's power,
And his trunk lie low in the tomb:
And no genial sun, and no glad some spring,
To him a new verdure of life shall bring.

Conversation.

(Continued from our last.)

There are one or two popular fallacies on the subject of conversation which, perhaps, help to make it more difficult than it need be. One of these is the outcry against "talking shop." Of course, for any two or three individuals in the company to insist on making the staple of the conversation something which can only interest themselves personally, and on which others are necessarily either uninformed or indifferent, is simple rudeness and ill-breeding. And although the name given to it assumes this to be a kind of *bourgeois* offence in its origin, it is at least as common in what affects to be very good society indeed. The fashionable "shop" with which some people will persist in boring their neighbours, sometimes with a premeditated malice, because they know that they are speaking in a sort of unknown tongue to those whose habits and interests are quite of a different kind, is a much graver social offence than any commercial or professional discussion could be. It is good, no doubt, for all of us, in the society of others, to throw off for a while the trammels of our working-hours. We should meet, as far as possible, on common ground, and try to recognise a common interest. The more confined and individual our own sphere of action is, the more wholesome it is for ourselves, and the more agreeable for others, that we should at such times step out of its contracted circle into a

freer atmosphere. The business man is not to take his business out to dinner with him, nor the physician his patients, nor the parson his parish, nor the officer his regiment, nor the lawyer his briefs. But this rule has its limits. Of all vices which infest conversation, none is more fatal than talking of what we do not understand. Now understanding, in every one's case, is limited; whereas modern society very much affects universal knowledge. The result is that a good deal of nonsense is talked, of a very different kind from the nonsense which Talleyrand enjoyed—the nonsense which passes for sense. The talkers rush in with their opinions, positive and emphatic, upon subjects of the day, which wiser men are at their wit's end to find the true bearings of. Many men who would be worth listening to on some special subject, with which circumstances have made them well acquainted, insist on enlightening you on some point about which they know simply nothing. Sir Walter Scott said that he never failed to get amusement and information of some kind from every person with whom he was accidentally thrown into company. He talked to them about their special business and occupation; here at least they were on their own ground, and had something to say which might be worth hearing. Locke had, long before, attributed much of his own extensive information to a habit of the same kind; he had made it a rule, he said, throughout his life, to talk to all sorts of people on the subjects with which their own business or pursuits had made them most familiar. Very often, in what claims to be refined society, this dread of seeming to "talk shop" is carried to an extreme, and it is thought bad taste to talk of the things which every one knows the speaker must understand. It is the same sort of feeling which sometimes leads a painter to pride himself especially, not on his acknowledged powers in his own line, but upon some trick of indifferent rhyming; which makes the barrister affect the sportsman, and the scientific man the *flâneur* of fashionable life. We might listen with pleasure to an Indian officer's anecdotes of the Delhi campaign, though the political opinions which he melts down for us from his yesterday's 'Times' or 'Standard' are wearisome in the extreme. Even the Rector's views on the agricultural labour question will commonly be better worth listening to than his criticisms on the pictures in the last Exhibition. If he is but gifted with common observation, he ought to have something original to tell us about a class whom he has special opportunities of becoming acquainted with; while his judgment in the fine arts is only endurable when we are sure it is second-hand. A courteous and sensible host, who wishes to have all his guests show themselves at their best, never fails to remember and take advantage of their specialities. He does not allow them to flounder long in the stream of general talk, in which that which is really in them may never find an utterance; but he draws them out upon some point on which he knows they have something to say, and the courtesy finds its own reward in the transformation of a dull and silent guest into a pleased and animated talker. To do this well, the master of the house should be himself, as they say the complete barrister should be, well armed at all points of knowledge: or it may chance that he comes to some grief himself in the laudable endeavour to lead the conversation. And since we cannot always expect to find in the host of the day these great qualifications—it would be hard indeed for society if none but modern Grichans were allowed to entertain—it might be well if the company were permitted to elect a leader of conversation, in the same way as the ancients, at their symposia, elected an *arête bibendi*. As some struggling aspirants, who hang on with difficulty to the outskirts of high life, submit the list of their guests to some fashionable friend for revision, or even leave the invitations altogether to much more experienced hands; so those who are conscious that they are more hospitable than brilliant might depute some accomplished friend to direct "the feast of reason and the flow of soul," contenting themselves to be responsible for the more material entertainment. Awkward blunders result sometimes from the laudable attempt of the master of the house to talk all things to all men. An Oxford tutor, a very sensible man, once invited a party of

undergraduates—good fellows enough, but not the reading set in the college. With a praiseworthy desire to suit his talk to his guests, he took up the papers of the day and looked at the names and position of the favourites for the Derby, to be run next day. Among them was one rejoicing in the name of "Ugly Buck"—why so called is best known to his breeder and owner. The tutor had just been reading Hans Andersen's charming fable of the Ugly Duck, which was much more in the line of his own taste than race-horses. To break a pause rather longer than usual, he turned to a "horsy" looking youngster who sat next him, and bringing to bear, as he thought, his innocent "cram" of the morning, asked him, in the off-hand tone of one to whom such speculations were familiar, what he thought of the chances of Ugly Duck for the Derby? The boys had too much respect for him to laugh—much; but he felt ever afterwards that it had been safer for him to have started the most abstract literary discussion, or even confined himself to the familiar ground of plucks and passes, at all risks of his talk being considered "shoppy."

Another protest has been raised, chiefly by transcendentalists, against the teller of good stories as one of the natural pests of conversation. De Quincey, among others, has hurled his anathema against him. But Mr. de Quincey, like many other clever men, was fond of hearing his own voice; it was disagreeable to him, no doubt, to find the attention of the circle, who ought to have been listening to some of his finer fancies, drawn off by a commonplace anecdote. But the objection is too widely taken. It is not the man who tells a good story well, but he who inflicts on us one which is tedious and pointless, or, still worse, who tells a good story badly, who is the unpardonable offender. Really good story tellers are few. But, with all respect to Mr. De Quincey, they are very valuable contributors to the social circle, and are listened to with perhaps even too flattering attention. The clever raconteur is as popular a character now as in the days when he was the oral novelist of the non-reading audience. Only the conditions of excellence in the art have changed; for us moderns he must be brief, pithy, epigrammatic; whereas for those old winter evenings, when lights and books were scarce, and readers scarcer, he could hardly be too elaborate and descriptive. The drawback naturally is that they are apt to repeat themselves to the same audience. A good story is a good thing if you have never heard it before. Some will bear being told twice very fairly; but a third and fourth repetition is too much. There is no reason, of course, why a man should not tell the same half-a-dozen times over in different companies; but in very few cases is the narrator's memory accurate enough to remember every individual who was present at the last telling. It would be very desirable if all who are really good story-tellers could endorse some mental memoranda upon each, as preachers are understood to do upon their sermons, to record when and in whose presence it was last delivered. The want of some such safeguard is the real explanation of the reproaches which have fallen upon story-tellers in general of being social bores. The great art here, as in other cases, is to conceal the art, and to let the story come in naturally as an illustration of some particular point in the conversation. And perhaps the worst use to which a story can be put is to bring it out to "cap," as it were, another which has just been told. If the first was anything of a good one, the second will be apt to fall flat: especially as the capability of being amused, in the case of grown-up and grave members of society, will commonly be found very limited indeed. On the other hand, if the first story was poor, and the second is evidently brought out to beat it, the teller is convicted of what is admitted to be bad taste in any company above that of the tap-room—of purposely displaying his own abilities in the way of triumph over others.

Our gay neighbours the French are commonly supposed to be far more ready than ourselves in at least the lighter artillery of talk. Yet, if we may trust a keen observer among themselves, French society is getting too lazy to do its own talking. Alphonse Karr has laid the scene of the following amusing *jeu d'esprit* in

Brussels, but we may be sure that the satire is aimed at the Paris drawing-rooms. It is a burlesque advertisement, the authorship of which he attributes to one of his literary friends:—

"A gentleman who is at present in Brussels and whose name is Baron Frederick d'A—, has the honour to inform the public that, being endowed with very distinguished conversational talents, reinforced by a course of solid study (a practice becoming more and more rare), and having gathered in his various travels a fund of instructive and interesting observations he now places his time at the disposal of those gentlemen and ladies who receive at their own houses, as well as of such persons as are tired of finding no one pleasant to converse with.

"Baron F. d'A— undertakes conversation both abroad and at home. His apartments, open to subscribers twice a-day are the rendez-vous of a select circle (twenty-five francs per month). Three hours of each morning are devoted to a *causerie*, instructive, but at the same agreeable. Novels, literary and artistic subjects, observations on the manners of the day in which the prevailing tone is a piquancy which has no bitterness, with polished discussions on various subjects, politics being rigidly excluded, form the staple of entertainment for the evenings.

"His terms for conversation parties at the houses of his patrons are at the rate of ten francs the hour. The baron cannot accept more than three invitations to dinner in the week, at twenty francs. (This does not include the evening party.) The spirit and brilliancy of his conversation is graduated according to the liberality of the entertainment. (Puns and witticisms are the subject of special arrangements.)

"Baron F. d'A— undertakes to supply professional talkers, in correct costume, to keep up and vary the conversation, in cases where his employers do not choose themselves to be at the trouble of replies, observations or rejoinders. In the same way he can offer them as friends to strangers or to individuals who are but little known in society." (1)

The professional diner out has become a rarer character in England since dinners have been put off to such a very late hour that there is really little time for conversation at all, and the talk, such as it is, is confined to a few remarks made to the neighbours next to whom chance or the providence of the hostess may have placed you. We have almost come to need the caution which the lamented Miss Jenkins of Cranford so earnestly impressed upon her young friend at a morning call—never to start any subject of sufficient interest to risk its over-lasting the ten minutes.

No wonder that, as a rule, women are the best talkers. There is no need to account for the fact by the uncourteous explanation that they have most of the small change while men hold the weightier and more valuable coinage. The truth is, we can most of us talk, if we are pleased ourselves, and sure of a pleased and sympathising audience. Now of this a woman is always sure more or less: if she be a beautiful woman, only too sure; and hence arises a great deal of that silliness in conversation which is so commonly laid to the charge of the fair speakers, but of which the fault, in nine cases out of ten, rests with the listener. If you will have a woman open her lips at all hazards, you have no right to complain if that which they pour out is what Solomon expected; it is unreasonable to demand a succession of wise parables or sparkling epigrams. But the commonest chivalry and courtesty make men listen patiently, if not deferentially, to anything which a woman is pleased to say; and if she be personally attractive, this endurance is almost limitless. It is not only that the listener finds

"The fairest garden in her looks,
And in her mind the wisest books;"

but the veriest nonsense, interpreted by the light of those looks, passes for wisdom. As was said in a different sense of Jeremy Taylor—"From her lips all truth comes mended;" which is very well, so far; but not so well, when what is very far from

truth comes in such pretty disguise that it is admired and welcomed. Poor Madame de Staël, famous as she was for the charms of her conversation, found to her mortification that this ceased in great measure to attract, when the supplementary charms of youth had deserted her; men failed, she said to recognize in the woman of fifty the wit which they had so admired in her at twenty-five. There was nothing remarkable in the discovery, whatever there may be in the confession.

BLACKWOOD.

(To be continued.)

EDUCATION.

College of Preceptors, England.

Paper read before this body, by G. D. Nasmyth, Esq., Barrister-at-Law, Dr. W. B. Hodgson, occupying the chair, on Popular errors concerning Education, and their influence.

As the title selected for this paper indicates that it is the intention of its author to attack certain prevailing notions and practices connected with Education, it is perhaps but just to preface the Lecture with the statement, that an intimate acquaintance of several years with the internal working and external influence of the College of Preceptors has induced the firm conviction in the mind of the lecturer that, as an Educational Institution, this College does not stand second, in many and in most important particulars, to any in the kingdom; that the impartiality and fairness with which its Examinations are conducted have secured for them a degree of public confidence that is not extended to institutions where the examiner has the means of ascertaining the name of the candidates upon whose papers he is to pass judgment; and that its failings are attributable rather to foreign influence than to native defects.

That those who have adopted Education as their profession, who have resolved to devote their time and energies to the training of youth, and who have therefore foregone the wealth or distinction they might have acquired in other walks of life, may not imagine themselves assailed, personally undervalued, or their labors held in light esteem by the lecturer, it is proper to state, at the outset, that which it is trusted this paper will support, viz., that the main object which prompted its preparation was the desire to do justice to a class whose importance to the State cannot be too highly estimated, and to secure for the educator that position in public esteem that is steadily withheld from him owing to the public misconception of this true province. And while pointing out what appear to be prevailing errors, it is necessary to shew that the blame is not attachable to the individual tutor so much as to the system, for the existence of which he is not responsible. For as in Medicine, so long as the practitioner has recourse to the treatment recognised by his profession for the time being, he is held blameless, even though his patient dies. So must the school master who adopts the best recognized system of his day, even though it result in the ruin of his pupil. A Nelson might dare to place the glass to his blind eye, and, declaring he did not see his Admiral's signal, pursue his own course; but a less man than Nelson might have seen his victory consummated by a court-martial and the loss of his commission. A Dr. Arnold can remould a large public school, and obtain wide-spread and well-deserved fame; where an equally intelligent but less influential man may lose the whole of his pupils through the stupidity of their parents.

If, then, the system, and public opinion, are attacked, let the conscientious and intelligent practitioner rest satisfied that no shafts are levelled at him. The other preliminary observation that should be made is, that as any one of the topics to which your attention will be directed would require more than the time allotted to the whole to discuss it, you will perhaps accept this

(1) "Les Guêpes," IV. p. 41.

paper rather as a few hints concerning, than as expositions of, the different matters it purports to bring under your notice. Those subjects are:—

- I. The common belief that all persons understand Education.
- II. The error of confounding Education with Instruction.
- III. The right of parents to interfere with School Discipline.
- IV. The neglect of Physical Training.
- V. The Voluntary System, and the Duty of Government.

I. *The common belief that all persons understand Education.*

—Society admits that the theologian possesses knowledge peculiar to his profession; that the lawyer must be consulted, and his advice acted upon, in our legal difficulties; and that our lives must be trusted to our physicians. We recognize a peculiar skill in our tailor and in our shoemaker, and never presume to teach either his craft. But men deny to the schoolmaster any knowledge that they do not themselves possess; nay, they scarcely yield him a claim equal to their own in their acquaintance with the mysteries of his peculiar calling, for, from the Sovereign to the cottager, the parent in England believes himself able, and entitled, to dictate to the instructor of his child; and not unfrequently rewards his labours by adopting all the credit of a successful training, and rejecting every particle of the blame of a failure. The clever child is the mother's darling—a genius from the womb; whereas the little creature not blessed with native precocity is held up as the monument of his tutor's neglect.

If it is a fact that the mysteries of Education are common property, there is no hope for the profession; indeed nothing can be more absurd than to designate it a profession. If it is a fact that this intuitive knowledge exists, the less we talk about education the better. But let us look into the pretension. If we are all equally wise upon this one point—relatively, if you will—i.e., the parent of the middle-class boy with his educator, the parent of the lower class boy with his, we cannot avoid the conclusion that the educator is less wise than the parent; for, in addition to this common knowledge concerning the art of managing youth, the butcher knows the market value of his meat, understands the conduct and capabilities of his particular business, he is in fact the superior; perhaps this is his conviction, hence the light in which his child's tutor is regarded.

Again; granting the existence of this common knowledge, no training is necessary to prepare a man for the office of tutor; this may explain the fact that broken-down tradesmen set up schools, and that French and German conscripts, when their military services have disqualified them for every thing else, can forthwith become professors of their native language in English schools. Even if we were prepared to admit all this, surely education is not an exception to the great law of nature, that practice makes perfect; and if it is not, then the tutor who commenced with the common stock must have obtained a superiority, and therefore the proposition cannot be true. As men know generally that the doctor's is a healing art; so do they, we are ready to admit, know generally that the schoolmaster's is a training art. And if it is a fact, that the experienced educator is the possessor of peculiar knowledge, whether derived from experience or otherwise, and that in proportion to the extent of it, so is he qualified to discharge the duties he undertakes, it is manifestly a *sequitur*—admitting that it is of the highest importance that youth should be well trained—that, so far from inferior men being sufficient for their task, the highest talent should be secured and unquestionable capacity be deemed a *sine qua non*. "Poeta nascitur, non fit," is true so far only as implies that, without natural aptitude, no training can make a poet; but it is equally a fact, that no talent, without training, can make him worthy of that name. This, we apprehend, is precisely the case with the tutor; without the natural aptitude, plus the requisite training, no man can become entitled to the name of an educator.

It will be objected, and with some force, that, if education is not common property, it is entitled to be designated an art or a science; and we shall be asked, where are the books revealing its principles? where are the institutions that train future

candidates, and honour with distinctions those who signalize themselves in its researches? There is but one answer, and it must be given—there are none; or, to be strictly correct, there are scarcely any. Our Universities certainly do not pretend either to train men as educators, or to reward them for their successes as such; and certainly, so far as they go, the graduate who goes into the Church is entitled to say to the graduate who opens a school, 'I know as much about that as you.' There are a few so styled training colleges for the masters of National and British Schools, but it would appear that their chief duty is to give a certain amount of information to persons who are without it. Reading, writing, and other branches of knowledge, occupy their time and attention; but, according to our notion of education, they are little more than inferior, and more economical, adult boarding schools; and do incalculably more damage than good to the community, inasmuch as, by drawing their recruits from the lower orders, and returning them inflated with a little elementary knowledge as educators, they lend their sanction to the error now before us, and tend to lessen public respect for a profession that in any of its departments can be represented by a boor. The fact then appears to be, that the two chief sources open to the intended educator are, a certain amount of traditional lore, which he obtains from old practitioners, and his self instruction, from experience. In one word, each generation of educators has, to a great extent, to commence *de novo*. It is from this deplorable state of affairs that education has to emerge; and the only hope for the profession is an Act of Parliament similar to that passed in the reign of Henry VIII, which prohibited doctors from practising the double art of Medicine and Barbbery. There are schoolmasters sufficient, who, from long experience and unquestionable ability, are able to inaugurate a profession which would do honour to themselves and its members, and which would prove a blessing of unspeakable worth to the nation. We should then be spared the farce of gentlemen being appointed by Government as Inspectors of Schools, who, be their talents what they may in other respects, cannot, at least for a considerable time, have the slightest idea of the national requirements; and we should then cease to hear the absurd prattle now dinned into our ears on every hand, that the education supplied by Government should consist of, and be limited to, reading, writing, and arithmetic.

II. *The error of confounding Education with Instruction.*
—By the term Education, men in general, indeed with but few exceptions, simply intend that which is purely the province of Instruction; and appear unable to understand that Instruction and Education are two distinct things; and still more difficult to convince that Instruction, when compared with Education, is of comparative insignificance. An Astronomer Royal once said, that the most insupportable annoyance he was exposed to was the questions of fashionables who where privileged to obtrude themselves upon him, because he could not understand them, nor could they understand him. Such is the nature of ignorance about any given subject, that the ignorant cannot perceive that a certain amount of preliminary knowledge is necessary to enable them to grasp even elementary principles.

That the two arts have been recognised as distinct, may be presumed from the fact, that the vocabularies of our own and other nations have the two terms, Education and Instruction. The etymology of the words is simple—to educate, is "to draw out;" to instruct, is "to build up," "to put together in order," &c. Thus far the tyro in his Latin vocabulary recognizes a difference between the two terms; but what does he mean by them? How does he understand them? One reads symbols as symbols, another as indices or shadows merely, of great truths that lie behind. So to one the term Education may stand but as an equivalent for Instruction; while to another, the difference between the two things is barely described by their respective applications. To the former, a good education signifies a tolerable acquaintance with a given amount and kind of knowledge, the possession of habits suited to a gentleman of the period; to the

latter, neither any specific knowledge, nor the peculiar mould adopted by the fashion of the day, has anything, or at best not much, to do with it; these studies and peculiar habits being no less valuable, but certainly not necessary in an educational point of view.

One of the facts visible to all men is, that no one can know everything; its sequent, not so apparent, is, that if an individual will know one thing well, he must be content not to know other things, or to know them but imperfectly. As it is impossible, while a lad is at school, to state (that is, in the majority of instances) what he will be in after life (that is, professionally); it would appear self-evident that, in the first place, the specific knowledge demanded by his future calling cannot be imparted; and in the second, that, if good care is not taken, such habits will be acquired at school as will almost preclude the possibility of his ever subsequently attaining that specific knowledge to any degree of perfection. In other words, it is admitted that the school is not the place to learn the profession; but it does not appear equally clear that the fact is recognized, that he may there lose his capacity to learn it. Accepting the assumption that the school is not the place to learn the profession, and uniting it with this theory of common knowledge, it is difficult to escape the conclusion that due regard to the future passes away, and we are able to understand how it is that at present the notion is that youth should be spent in cramming itself, or being crammed, with the greatest possible amount of miscellaneous and incongruous matter, dignified by the term Education. If we take any list of subjects for competitive examinations, if we take any respectable schoolmaster's prospectus, and examine the number of subjects professionally required and taught; is it possible to deny the fact that, if what is exacted is secured, if what is promised is performed, our youth are systematically being trained in the habit of doing nothing well. Let us not shrink from the fact, that they are being trained in the daily habit of hypocrisy. A learned and honest man says of a subject to which he does not profess to have turned his attention, I do not know it; whereas the tendency of our present system is to make a schoolboy blush at the charge of not knowing everything, and eventually to turn him out a crammed and inflated ignoramus, knowing nothing thoroughly, and, what is worse, not having acquired the habit of learning.

It is not, of course, intimated that there is any intention to make hypocrites; but it is affirmed that, losing sight of the real end of education, and supposing it to be confined to the acquisition of a certain class and amount of instruction by a boy within a given time, the whole thing partakes of the tendency of the age—hand to mouth display. By some, we are not considered respectable without grand houses, have no chance in life without appearances, will not be believed in without preposterous pretensions; our heads therefore, our constitutions, and our pockets are put into forcing houses—is it unnatural that we should turn out hollow, though gaudy, exteriors? Thousands are daily doing what they hourly curse, and that solely because they weakly believe it necessary. Let the voice of intelligence say away with show as the criterion of worth, and these things will cease; and first amongst them, away with this mental cramming of boys to gain the bubble reputation of being clever lads. Let but those who are wise, and not yet within the power of this fatal gulf, struggle to keep youth from its brink and influence; for, by so doing alone can their true interests be secured.

We may be asked, what is education? We answer, it is not reading, writing, or arithmetic; these are but the tools from the chest of the apprentice to learning. Is education the ability to repeat a catechism? That is but an initiation into the mysteries of sectarianism. Is it instinctive crouching before the presence of authority? That is the dark spot upon the heart of the slave, whether black or white, whether bound in fetters of iron or the still more ignoble bonds of meanheartedness. What, then, is it? Consider a new-born child. In that tiny and helpless being are lodged the germs of every feature, of every cha-

acteristic, of every passion, of every vice and of every virtue of its entire ancestry. Latent it may be, but there; and readily yielding to the first influence congenial to their respective natures to burst into active existence, or certain, by brief neglect, to perish yet unborn. As the fertilizing beams of one spring-day's sun tinge the brown earth with welcome green; so the soft touch, the tender smile, the sympathizing glance, the encouraging whisper, unfolds human virtues. And as one hour's parching rays of a torrid sun would blast that tender verdure, and in its stead call into being hateful and noxious worms still slumbering in the womb of death; so will the coarse touch, the rude rebuke, the sarcastic sneer, and the hireling's lie, wither youth's tender virtue, and vitalize the entire brood of human vices. Education, then, is the development of the faculty for good or for evil innate in man, whether moral, mental, or physical; and the educator is every person and everything that influences the senses of the educated. Is it possible successfully to maintain this proposition to be unsound? If not—if it is true, it is impossible to stop education; and the only alternative is between a more or less good, and a more or less bad, education—between one tending to benefit, and one calculated to ruin, the being subjected to its influence. With this view of education, the objections opposed to government compulsory education vanish; for it ceases to be a question of education or no education, and resolves itself into that of one beneficial to the State that provides it, and the other ruinous to the State that permits it. And here it would be easy to prove, as in other matters, that prevention is not only better but cheaper than cure. From this view of the subject it is manifest that each parent and guardian of youth is actively and hourly, though unconsciously, engaged in educating; and that in proportion as it is wisely done, so is the labour of the professional educator lessened, and *vice versa*. These facts would induce the conclusion that the child must become the photograph so to speak, of the educator. And, with necessary deductions, such is the case. No one human being is confined or subjected entirely and solely to the influence of any one other. Therefore, as anything foreign passing between the lens and the object would confuse the photograph, and commit to the paper an imperfect representation, so do the various influences to which we are all subjected tend to destroy the individuality of any given influence, and produce the endless diversity of combinations of character. Neither the mother nor the father is singly reflected in the offspring. Nature, from the first, exhibits its aversion to uniformity. These differences being stamped, both by birth and early circumstances, upon every youth, it follows that each has proclivities in certain and fixed directions: that one inclines for one class of amusement, study, or occupation; another to others. This natural aptitude should be carefully ascertained, attended to, and followed in the selection of the life profession; and, on the other hand, should be opposed in the elementary education. It should be opposed—or, perhaps more correctly, neglected, because nature and the influence of circumstances have sufficiently watched over its birth, and will continue to develop its growth.

If we examine more closely into this matter, and, with this idea before us, ask what is a human being? the question may evoke, as we are considering education, answers that will bring us to an issue, and enable us to ascertain whether we are at one from the beginning. Let us then, for the present, first assert him to be a being susceptible of ideas, and by ideas to understand impressions from external objects. The means at his disposal for contact or communion with the external world are his five senses. To one or more of these every object foreign to himself must appeal. He recognizes the sound of the clarion and that of the lute, and marks the difference between them by his organ of hearing. He takes note of colour by his organ of sight, and appreciates variety in form by his organs of sight and touch. By his organ of taste he accepts or rejects viands agreeable or otherwise. It will be readily granted that a being defective in either of these senses is not perfect; because, if totally destitute of any one, he

cannot take note of those objects which appeal to it alone. If the total absence is imperfection, the partial is equally imperfection, though in a less degree; if, by the total absence of the sense of hearing, the deaf is wholly unimpressible by sound, with imperfect hearing he cannot arrive at a just notion of sound. So on with each of the senses. Wherever the sense is imperfect, the estimate it entertains of the object appealing to it is erroneous, and man's imperfect ideas, despite his best intentions, are, like himself, imperfect and unjust; hence the hourly need of exercising and inculcating charity of opinion. Our conception, then, of a perfect human being in this respect, would realize one in whom each of the senses is fully developed. If fully developed, they will be equally developed; because equilibrium is a universal law of nature. Our experience, however, teaches us that anything like equal development is rare, if not non-existing; but granting it to be even impossible, our duty as educators and instructors is not less manifest. The harpist seeking harmony knows full well that he cannot secure, by any amount of tuning, perfect accord; nevertheless, he strives to approximate to it, and having attained the degree within his power, pours forth his measured strains in tuneful harmony. That which the harpist does, the educator should do; selecting one string which appears to him to represent the capacity of his instrument, he should loosen by temporary neglect those that surpass it in pitch, and turn his attention and devote his time to the screwing up, so to say, of those that are low and flat. This is the great art of the educator. The discovery of the calibre, the strength and weakness, of his subject, is, in other words, his Diagnosis; how to treat his subject, his science; and the mode of treatment suited to the case, his practice. Is this the habit of schools? Does it accord with popular notions? It is contended that the very opposite is the fact; that the parent, conscious, on the one hand, of the child's talent for music for instance, desires it to be cultivated to the partial neglect of other matters, and glories in his youthful successes. Aware, on the other hand, that he cannot distinguish between a straight line and a crooked one, it is deemed a waste of time and money for him to study drawing. Would that it were also recognized to be an act of gross injustice to punish him for his slovenly habits, while he is refused the education that would make him see what disorder is!

Nor is the parent the only sinner in this particular. Unfortunately society does not reward the schoolmaster for the labour he bestows underground; and therefore, as, like most other beings, he must live, he gets up to the surface as soon as possible, and sets each boy, according to his wont, to work at ornaments that can be readily seen and appreciated by the curious; and thus to flatter paternal vanity, and satisfy the tutor's necessities, British youngsters are kept hard at work at turning themselves into little monsters.

If the mode suggested is the proper one of treating youth, and it is difficult to think that it can admit of much doubt, its neglect must result in damage; and there is some reason to suppose that a youth, left to himself for the first twelve years of his life, would do better, and more surely advance his future interests, than one who, during the like period, was exposed to the artificial system of cramming and developing his idiosyncracies; for the unsophisticated lad would at the same time be destitute of conceit and habits of study, and therefore be ready to be broken-in in a proper manner; and at the same time, left to himself and nature, his senses would be more equally developed, and be consequently in the highest sense a more perfect being, though destitute of certain specific knowledge.

These ideas are not easily separated from two classes of persons, who, while they have admittedly done immense service to the human race, have at the same time given rise to an infinite variety of speculation—we mean "self-made men," and the so-called "nature's geniuses." It is hard for the man who has been moulded in the customs of his time,—who from his baby-hood has sat at the feet of the Gamaliels of his day,—to whom nothing has been wanting that wealth and interest could do to secure his

advancement, to be compelled to admit that, when compared with another who, apparently destitute of every advantage, has cut his way to distinction, he stands as a cipher. But it is interesting to observe, that in the midst of the so-called learned with whom they have no communion, surrounded by the results of a steady-growing civilization to which they have little access, these same self-made men and nature's geniuses stand virtually in the position of a Homer, a Shakespeare, a Columbus, or a Stephenson.

It is not the man who reads much,
It is not the man who speaks much;
But it is the man who thinks much,
That makes the man who's worth much.

Educated by nature, these men have communed with her. Untrammelled by prejudice, they have thought for themselves; and as they have been free to think, so have they freely spoken and acted; and being unassisted, they have had to grope a slow but certain way from the clear understanding of first principles. No curse ever fell more heavily upon man than that which forbids him to exercise his reason, except that which pushes him prematurely forward in learning, and disenables him ever to understand anything aright.

Having endeavoured to shew that the first thing necessary in education is a development of the senses, without which it is impossible to form a just estimate of external objects, we are led to the consideration of the means of retaining and storing up the impressions produced; or, in other words, to the consideration of memory. Here we are again met with the fact, that memory is inseparable from the development of the senses. In the first place, it is impossible to retain that which has never been possessed; let us add to this the fact that time wears off the sharp edge of the mental picture as surely as it does that of the object pictured. If the first impression is clear and sharp, it will be proportionately permanent; if dull and confused, it will be equally transient. Memory is dependent upon a physico-material operation—if it may be so styled—of which time is an essential, and without which there cannot be an impression. Let us walk through a picture-gallery—do the Exhibition of the Royal Academy, as it is termed—what do we bring away? If we doubt as to the answer that should be given, let us take a pencil and sketch the outline from memory of a few of the productions we have seen. Oh, but I cannot draw, urges the facile apologist. Test him; let him draw an outline of his bedroom and its furniture; he will find that he will not make a mistake, worthy the consideration, in the place of a single article. The fact is, that it is not so much his sketching powers that are at fault, as his memory. If he doubts it, let him go to-morrow to see any one picture; let him study it for an hour, and then try whether he cannot, three months hence, at last make such a sketch of it as to properly localize its characteristics. But why able to localize, and not to form or colour correctly? Simply because from childhood we have practised the one; whereas, according to our systems of education, unless the natural aptitude for these has been displayed, we have given no heed to them. Nationally, in this particular we have been of late years compelled to acknowledge our inferiority. And if nationally we wish to attain to our proper position, we shall do well to turn our attention to this department; and, while doing so, to heed the advice of Gainsborough, who, seeing a young artist copying a picture, said, "If you want to be a painter, throw away your copies, and paint nature. Here, draw that," he added, holding up his stick. One word more upon drawing. We are beginning slowly to recognize its importance. Let the time be spent about outlines, and outlines, mainly. Be they ever so elaborate, outlines make sharp eyes, firm and steady hand, and cultivate discernment. Shading covers defects, though it may please the vulgar eye. More time than would otherwise be justifiable has been given to this particular were it not a fact that the proper study of drawing is one of the most educating occupations of the school-room; and that, what is said concerning it, bears with double

force upon the memory when considered with relation to the retention of those subjects presented to it solely by the aid of symbols. The process that takes place in symbolical mental imagery is much overlooked. When we see a group of say three persons engaged in a combined act,—for example, A. struggling with B., while C. is in the act of rifling B.'s pocket,—the mental image is regulated in its accuracy by the distance, light, background, costume, and similarity or dissimilarity of the actors and other circumstances. Having seen the act in question, if we desire to reflect that image in writing, we are necessitated to employ symbols, which we take it for granted signify the same thing to the reader as to the writer; but it is manifest that the actual spectacle has lost by conversion into symbols, even admitting that it is accurately symbolized. Again, the process must be inverted by the reader: first, he must grasp and retain the symbol *seriatim*, and in their proper places; and secondly, he must convert the symbols into mental imagery, and see as it were before him the whole affair as it was seen by the spectator who reduced it to symbols. It is unnecessary to spend time in examining the series of difficulties that have attended this double process; but we remark that the difficulty of reconstruction must be greater than that of reduction, and must require considerable time in order to give that materiality to the scene that will render it as permanent upon the mental canvas of the reader as it is upon that of the writer. If it does not assume that reality, it is perishable, so perishable as not to be worth the effort of realization. Rapid reading, much to commit to memory, are thus obviously the sure precursors of superficiality, confusion, and forgetfulness.

If, then, our mental lore has a material origin: if its worth depends upon its accuracy, and its accuracy upon the correctness of minute observation; the proper study and practice of drawing is one of the best methods of cultivating memory. I am of opinion that the Chinese largely owe their remarkable power of imitation, and their great skill in elaborate art, to the fact that, not having an alphabet, their written language is composed of symbols so infinite in their variety as to cultivate and necessitate the most accurate observation; which accuracy, once habitual, manifests itself in their ordinary labours.

What we have already seen is sufficient to commend illustrated books, diagrams, and every possible reduction of knowledge to the material form—provided it is well done—to the master who desires at the same time to educate and to instruct his pupil.

Immediately connected with this branch of our subject is “the art of reading,” concerning which the most ludicrous and baneful ideas and practices prevail. Suffice it to say, that of oral reading it is exceedingly difficult to meet with a decent specimen either in the Church or out of it. But it is not so much to what is generally termed elocution—which, however, should be diligently studied by all who seek to receive or give the pleasure they are capable of when endeavouring to acquire or communicate the written ideas of others—that we now turn our attention, as to the more important subject, the cultivation of the mental process of reading. We have already observed, that reading is a complex act; and that in reading, it is not the words, but the ideas for which the symbolic words stand, that we seek. The difficulties that the reader meets with are—first, the composition of the fractional symbols, letters, into the individual symbols, words; second, the mental substitution of the idea for the individual symbol; third, the erection in the mind of what we may term the grammatical symbol, *i.e.*, phrases or distinct parts of the pictorial composition; fourth, the realizing, as a whole, the different parts. This process, and these difficulties, exist in the reading of the most simple form of composition; but beyond these there are others, and difficulties which arise from the complexity of the ideas, or even from the existence of what may be termed reflections or symbols of complete pictures. Take for example a sentence selected at hazard from the first volume of Austin's Jurisprudence:—“Governments which may be styled *aristocracies* (in the generic meaning of the expression) are not

unfrequently distinguished into the three following forms:—*viz.*, *oligarchies*, *aristocracies* (in the specific meaning of the name), and *democracies*.” Is it too much to say that but few could readily seize the force of his sentence? The word government is a simple symbol for a most complicated idea or picture; for in the sentence quoted it is employed to indicate at least two genera of government; one of which is divisible into three different species, each description having, therefore, at the least, one distinctive feature. The difficulty of fully and readily grasping this sentence is at once apparent; and it is equally clear that that difficulty would be infinitely increased by its being lengthened: hence the necessity of the power of concentration, accurate and instantaneous appreciation of minute differences and the ability to fix and retain the several parts in the memory during the construction of the whole, and finally the power of contemplating it in its entirety, objectively.

Such power is possessed, and there is no reason why it should not be widely enjoyed, but the neglect of the proper training to secure it while at school and college, is the main, if not the sole, reason why the reading public occupy their leisure with light literature, and besmear their minds with misty recollections of useless things.

The course that suggests itself as that which should be followed to ensure the easy reading of difficult books, is somewhat this:—The pupil being able to do what is commonly called “read,” should be taken through a course of books (not such as are usually styled Readers or Reading Lessons, for with those we are supposed to be finished), say, for the sake of illustration:

1. Any good ordinary History of England.
2. A portion of Macaulay's History of England.
3. Hallam's Constitutional History.
4. Austin's Jurisprudence.
5. Locke on The Human Understanding.

During morning school, parts of these should be read aloud slowly, page or chapter at a reading, according to time and the strength of the pupil, he being skilfully questioned to ascertain the extent of his memory, accuracy, and comprehension. During the afternoon they should be continued by mental reading, the pupil being required from memory to commit the substance of what he has read to writing.

The result of such a system would be, first, the power of reading with pleasure—by the time compulsion is removed—useful works; second, a taste for such works and information; third, the strengthening of the mental faculties: fourth, rendering school more attractive, fifth, teaching the pupil to distinguish between the different modes of learning and the different degrees of knowledge, sixth, it would render strict memory work less laborious, and, seventh, it would effectually prevent the hypocrisy of knowledge inseparable from the cramming system.

The scope of this paper does not permit the further pursuit of this subject; but what has already been advanced, if correct, is ample to show that, in this particular, popular notions concerning the very elements of the tutor's art are far from correct; and it is submitted that the same reasoning is largely applicable to the two other subjects which, together with reading, are supposed to be the essentials of elementary instruction. It is, we apprehend, thus clear that reading, writing, and arithmetic are matters of instruction, and that it is only when treated in a scientific manner that they become instruments of education; as such, however they are invaluable, and cannot be too attentively studied.

We should not, however, dismiss this part of the subject without calling attention more particularly to the division of memory into the three classes or degrees which universally obtain, to the necessity of these degrees, and to the consequent advisability of providing for each. To illustrate the present point, let us recall the scene already used by way of illustration. The facts—that there were three persons present; that two were struggling; and that the third was attempting to rifle the pockets of one of those struggling—are so sharply impressed upon the

memory as to enable the relater of the scene to communicate his knowledge without prompting, and at the same time with great precision. His memory, however, as to the characteristics of their respective costumes, is of a very different quality. He is quite aware they were dressed, and also able to say that there was not anything remarkable in their dress; but to define it, he is powerless. Again, if the three men have been arrested and placed promiscuously with three others, he may not be able to select from the six his peculiar three; but he may be able to exclude from the six a particular one, as being so different from the three that he is able to say with certainty that he was not one of them. This last species or degree of memory we may with propriety term negative; the first, positive; and the intermediate, generally memory. We are all conscious of the fact of the existence of these degrees; and furthermore, we recognise their respective advantages, not to say their natural necessity. But is provision made for them in general instruction? If not, there is a defect. For example, connected with the study of all subjects—take for illustration, history—these three degrees of memory are essential. It would therefore be only reasonable to expect to find in every school-room three sets of books upon the subject: first, a memory book or chart; second, a general school-book of liberal pretention; and third, a series of elaborate works. For it is manifest that the student cannot commit Macaulay or Hallam to memory. It is equally clear that if he is confined to the matter on a chart, or in an "Ince," he is a mere parrot; and with the middle book alone he is likely to turn out of school believing himself a great historian, whereas he neither knows the bones perfectly, nor has felt the breath of the spirit of history. Of the three, the middle is the most dangerous. By this triple system, the positive memory work is clearly defined, and the evils that we constantly deary avoided. Examination papers, we contend, should be constructed in three corresponding parts. And here, with reference to examination papers set by bodies like this College, we would remark, that it should not be the object merely to set questions that reasonably informed boys should be able to answer, but that the primary object should be to set questions that induce a proper mode of instruction: for a master, preparing his boys for a given examination, desires chiefly that the candidates he sends up should gain certificates; and to ensure success, he obtains a series of previous examination papers, and, be his opinion what it may concerning the class of questions and the mode of putting them, he instructs his pupils accordingly therefore without further comment; whereas such examinations, if wisely conducted, must induce the most perfect system; if otherwise, they are equally powerful in retarding all progress.—*Educational Times.*

(To be continued.)

The Dominion of Canada and the Reciprocal Trade.

Absorbed as we are in the regulation of our own internal affairs, after the derangements of a great war, it is not surprising that we should overlook the importance of cultivating advantageous relations with our neighbors. It is nevertheless a fact we can ill afford to ignore that on our northern frontier we have a young nationality, rapidly growing in population and rising into commercial importance. Our misfortunes have indirectly advantaged Canada; for while the war has augmented the burthens of our people and diminished the profits of industry, our neighbors have escaped these ill fortunes and thus gained a higher vantage ground in competing with us for the markets and the surplus population of the Old World. The Dominion of Canada now occupies the same position, in respect to foreign trade, we occupied in 1795, while its population is about 600,000 less. Compared with our rapid growth, its increase in population may appear trivial, but its progress, nevertheless, is equal to our own at the same stage of our history. Judging from the progress of the provinces since 1860, it is not to be deemed

among the improbabilities of the future that fifty years hence the population of the united provinces may equal that of the United States at the date of our last census. It is estimated by the Canadian authorities that since 1861 the population of all the provinces combined has increased from 3,300,000 to about 4,000,000; and although this increase may not be considered in itself as specially important yet it indicates a ratio of progress which, at no very remote period, is destined to give to our neighbors a commanding national importance. The following statement shows the area of the respective provinces, their populations in 1861 and the estimated population in 1867, as published in the Canadian reports:

AREA AND POPULATION.

	Area sq m.	Population, 1861.		Total. est. Jan 1, 67.
		Catholic.	Foreign.	
Ontario (U. Can.).....	121,260	258,151	484,128	1,396,091
Quebec (L. Can.).....	210,020	943,253	93,641	1,111,566
New Brunswick.....	27,105	85,233	43,881	252,047
Nova Scotia.....	18,660	86,291	31,522	320,807
Existing Dominion.....	377,045	1,372,913	655,179	4,090,561
Prince Edward.....	2,100	35,852	13,557	80,857
Newfoundland.....	40,200	57,214	12,414	124,283
Projected Dominion.....	419,345	1,465,979	678,843	3,295,706

The commerce of the Dominion is large compared with its population. The combined imports and exports of the former Province of Canada, for the last fiscal year, amounted to \$105,000,000; which is equivalent to about \$34 per head of population. In 1860 the foreign commerce of the United States averaged \$27 per capita. This comparison shows great vigor and prosperity on the part of our neighbors. The standing of the new Dominion in respect to tonnage and foreign commerce is shown by the following statement:

COMMERCE AND TONNAGE; AVERAGE FIVE YEARS, 1861-65.

	Tonnage.		Commerce.		Shipping owned '65.
	Cleared.	Entered.	Exports.	Imports.	
Canada.....	953,124	941,381	\$36,081,436	\$40,493,535	\$230,429
New Brunswick.....	731,727	674,602	4,786,933	7,168,630	309,685
Nova Scotia.....	772,017	929,929	6,794,250	10,647,193	363,069
Existing Dominion....	2,448,868	2,545,912	47,662,628	58,307,358	903,192
Prince Edward.....	172,657	151,405	1,228,369	1,433,550	39,549
Newfoundland.....	132,319	149,834	5,427,351	5,218,416	87,023
Projected Dominion....	2,751,844	2,846,151	54,318,328	64,959,324	1,029,764

The tonnage above given for Canada is the seaward tonnage; besides which there cleared from inland ports to the United States on the average of the same five years 3,291,069 tons, and entered at inland ports from the United States 3,144,207 tons. This is exclusive of ferry navigation.

Thus far the Provinces have conducted their finances with commendable economy. Their total debts amount to about \$75,000,000; an aggregate, it is true, equal to the whole debt of the United States seven years ago; but yet less than one-fifth the rate per capita of the present Federal and State debts of this country. The total governmental expenditures of the Provinces are, in round numbers, \$15,000,000; which, with a population of four millions, amounts to a burthen of \$3.75 per head of the population. Our own Federal taxation at present averages \$13.95 per capita, to say nothing of our State burthens. As illustrating the finances of the several sections of the Dominion, we present the following statement of receipts, expenditures and debts:

REVENUE, EXPENDITURE, DEBT, ETC., 1865. (EXCLUSIVE OF LOAN ACCOUNT.)

	Receipts.		Expenditures.		Public debt.
	Cust. & excise.	Total.	Interest.	Total.	
Canada.....	\$6,963,716	\$10,435,259	\$3,703,773	\$11,534,691	\$61,744,461
New Brunswick.....	775,941	1,070,604	360,596	1,168,074	5,821,445
Nova Scotia.....	1,047,891	1,517,306	284,333	1,470,306	5,627,458
Existing Dominion.....	8,787,548	13,023,169	4,413,707	14,173,071	73,193,554
Prince Edward.....	163,648	217,732	17,876	214,396	161,560
Newfoundland.....	427,509	482,460	49,744	579,453	1,161,564
Projected Dominion.....	9,378,705	13,723,361	4,481,327	14,966,920	74,516,678

In reviewing the resources and condition of the Dominion we have purposely kept in view our own relative position in the respective details, because it appears to be thought good national policy to exclude our neighbors to a certain extent, from com-

mercial intercourse with the United States. The physical conditions of Canada correspond very closely with those of the most active and prosperous sections of our own country. Its natural conditions for trading in the products of the forest, the field and the sea also compare favorably with our own, while as respects governmental burthens—a matter bearing very essentially upon the inducements to both labor and capital—it has important advantages over ourselves. Can it then be considered wise statesmanship to shut ourselves out from intercourse with a people thus circumstanced, and drive them as competitors into others markets where we are ourselves sellers? So homogeneous are the interests of the two countries that there has long been a latent feeling among our people in favor of the annexation of the Provinces. One motive of the repeal of the Reciprocity Treaty was an idea that the Canadians might thereby be made to feel their dependence upon our trade, and to infer hence the desirability of political union. Events, however, have proved that the means we selected were ill-adapted to the end sought. Canada has suffered little, while a heavy penalty has fallen upon some of our own interests. The imposition of a heavy duty upon timber has caused severe injury to our shipbuilding interest, otherwise subjected to embarrassing disabilities; while it has placed a premium on shipbuilding at St. John and in the ports of Great Britain. The returns of the former Province of Canada show that during the last fiscal year their imports increased six millions, and that the increase was entirely with Great Britain, while the purchases from the United States were below those of 1865-66; indicating that the diversion of the exports of the Province to other countries is attended with an increase of its purchases from such countries. The exports of the Province show a decline of about five millions upon 1865-66, the prospect of the abrogation of the treaty having induced large purchases by our people to save the subsequent import duties, but they are, at the same time, about fifteen millions in excess of the figures of 1864-5, showing that our neighbors are by no means dependent upon us for a market for their products. It was certainly a most unwise policy which led to the abrogation of the treaty. The fact of our being able, under the agreement, to exchange a much larger amount of products than had proved possible previously, was a sufficient evidence of its advantage to both parties, and no stronger argument for its continuance needed to be advanced, for every exchange implies a mutual profit. Now, however, we are beginning to see the results of our act, and yet, in this year's trade returns we only have a slight indication of what we may expect in the future. The natural course of Canadian trade is to this country: but as we have built a wall around ourselves, and thus obstructed the natural channel, a new one is being forced. The movement at first was hardly perceptible, but is at length beginning to indicate its course; and let it once work out for itself another route, and it will require more than the restoration of the reciprocity treaty to restore it. We have a good illustration of this idea in the course of Western trade, which formerly sought the seaboard by the way of New Orleans. The war shut up the Mississippi and all trade was forced towards the East. Now, although that river has long been open, the new channel continues to carry off the prize.

But there are already among us palpable symptoms of a desire to negotiate a new treaty. Several interests complain of injury from the repeal, while none profess to be specially benefited. Probably the question of resuming reciprocal relations with the New Dominion may be introduced into Congress at the coming session; and we trust will result in the re-opening of negotiations for that object.—*Hunt's Merchants' Magazine.*

Preservation of Health.

By THOMAS INMAN, M.D., IN THE MEDICAL MIRROR.

EXERCISE—Again, let us turn our attention to the health of those men whose occupations are essentially sedentary. Perhaps

there are few if any who sit so closely and so long during the day, as our great lawyers and our Church dignitaries. For days and weeks and months together a judge has no opportunity of taking exercise, and a bishop is so tied to his study by his various duties, that the day is often all too short for him to fulfil them. Men, also, who are at the head of the state, and have not only to originate investigations and draw up schemes for the general improvement, but to defend their position through many hours of weary debate, have scant time for a gallop in Rotten-row or a constitutional in the park. Yet, as a rule, none are so long-lived, and on the whole have better health than such men as we have described. On the other hand, we know that both men and horses succumb under excessive labour. A hunter too often used, a dog too often put on the scent, a man kept in a sinking ship too long 'at the pump,' will all lie down at times and die. To be more particular, we know that excess of muscular exertion will bring on a singular disease for which no cure is known, and which consists in a gradual wasting of all the muscles in the body, until the eye, indeed, is unable to give a glance of love to the dearest friend, and the tongue is unable to utter a sentiment of gratitude to a devoted nurse, until the throat refuses to swallow, and at last the chest becomes unable to breathe. Such cases are, however, rare. Much more common is it to see a young man train himself so as to be able to do feats of strength which are all but astounding, yet when he has attained this end he suddenly breaks down and dies. Something like this occurred to the American pugilist Heenan, who after his fight with Mace became so enervated as barely to escape. I have had under my own charge somewhat similar cases. The first was a sturdy-looking Irishman, who seemed so ill that I augured badly for his life. The nature of the complaint was at first doubtful, but it had clearly been induced by a race against 'time' in which he had run some two miles along a crowded street in some such period as ten minutes. As the symptoms developed themselves it was clear that the man had brought on acute consumption. Since then I have met with another instance of precisely similar kind, in which the winner of a foot race was immediately (within two days) affected by 'decline' and a third, in which a similar result followed from a pedestrian expedition, during which the patient had shown himself the most active and enduring of the party. A fourth occurred in the person of a fine young man, who was the stroke oar of his college, and apparently one of the most powerful athletes of the university, yet he broke down in a week, and when I saw him he had a large cavity in one lung. All these cases survived for a time, but became complete wrecks; two died of consumption within three years, and two I am now unable to trace. Whilst attending the patient last mentioned the family doctor told me that a brother had broken down in a similar fashion. Apparently of powerful frame, he had worked at gymnastics until his father, proud of his son's muscular development, had taken him, as a show, to the leading surgeon of the town. His 'biceps' was enormous, his 'pectorals' wonderful, his 'deltoids' immense, there were few feats of strength that he could not compass—yet in a fortnight from that proud visit the youth was dead of consumption. Again, I have seen in the dead-house the pericardium of one whose equal in rowing was scarcely to be found amongst all the amateurs of his city, yet that not only did not prevent ill-health, but positively seemed to induce it. Being determined myself 'to prove all things,' I essayed for a time to adopt the exercise involved in hunting the hare with beagles. Whilst doing so, I was struck with the remarkable activity of the huntsman, who after a long run, when all the amateurs were glad to rest, and take breath, continued to run and shout as if it was as easy for him to run as for a swallow to fly. For two seasons only did I see him thus; at the third he was very sluggish, got leave of absence and means to consult a doctor; his heart was found seriously diseased, and after his second visit to the distant physician, which was effected on foot, he reached home just in time to lie down and die. Now, in all these cases, except two, there was no constitutional tendency to disease, and the

effects were due solely to the excessive bodily exertion and fatigue. This surely suffices to demonstrate that muscular power and constitutional vigour are not synonymous and that gymnastic training may bring on decline rather than tend to longevity. Now, if an excess of exercise will induce fatal effects in the healthy, it is far more likely to do so in those whose health is somewhat impaired—and though these essays are chiefly intended to apply to the preservation rather than to the restoration of health, I will give a few illustrations of the effect of exertion, when the frame is from any cause enfeebled. I shall never forget the first—a decent-looking seaman applied to the Liverpool Infirmary, whilst I was house surgeon, for admission; he told us he had walked from a certain dock, a distance of about a mile and a half, the road being a continuous but not rapid ascent. He said that he had bronchitis and was obliged to knock off work. Seeing that he was a fit case I at once took him in, and directed the porter to see him at once to his ward—up one flight of stairs—and no sooner did he reach his bed than he lay down and died. During the same winter two such events occurred, and in all the occurrence was as unforeseen as unexpected. Since then I have known a walk across the room to be fatal, the patient falling dead between his bed and the night chair; and another only just able to reach the bed, and there dying within three hours after the most energetic means for restoration. I have known such simple exercise as walking from room to room bring on the most distressing symptoms of heart disease, which has been again quelled by the most rigid enforcement of laziness. Between the extremes thus indicated there is a great number of degrees. Some simply find that they have indigestion, which being attributed, as it too often is, to want of exercise, the individual attempts to cure by still farther exhausting himself. Many is the instance which has come under my notice, in which a man or woman, not content with the toil which his daily business imposes, undertakes to supplement it daily by an hour's walk, and often by two; thus increasing his sufferings till they force him to take a perfect rest.

SCIENCE.

Improvements in Automatic Telegraphy.

Since the 11th September, 1867, the directors of the telegraphic lines have made use, in the service between Paris and Lyons, of a new system of rapid transmission invented by MM. Chaudassaignes and Lambrigot, telegraph clerks. This telegraph acts automatically, transmitting the dispatches between the two towns at the rate of 120 or 180 dispatches per hour by a single conducting wire, a velocity three times as great as that obtained by other systems, and capable of being augmented proportionately to the diameter of the wire. The transmissions are made by a band of metallic paper on which the signals composing the dispatch are traced in insulating ink. The reproduction is obtained on a band of unsized paper, the center portion of which is impregnated with a chemical liquor necessary for the formation of the characters existing on the metallic band. In order to obtain regularity of execution in the different operations, such as the composition, transmission, and reception, they pass through several hands according to the requirements.

One instrument in communication with the line is composed of—1. A clock-work movement. 2. A double roller which sets at work either the metallic or the chemically prepared. 3. A ringing apparatus for calling the attention of the correspondent. 4. A "Morse" manipulator of ordinary construction for the exchange of the conventional signs necessary for setting in movement or stopping the rollers. The clock-work movement is set at work by a weight easily wound up by means of a pedal; it serves to maintain the rollers in movement. Near the roller round which the metallic band passes, is a point which represents the extremity of a conducting wire. The roller communicates with

the electric pile. When the band is drawn into movement by the rotation of the roller, the point is placed sometimes on one of the metallic parts of the band, and sometimes on the written parts of the dispatch where the insulating ink is, so that the conducting wire marks the message by the alternate passage, and breaking of the current. Near the roller, on which is coiled the unsized paper, is placed a cup filled with a solution of nitrate of ammonia and ferrocyanide of potassium. In the middle of this cup is a small roller which dips into the liquid in its lower portion, and the upper portion of which rises a little higher than the edges of the basin and supports the band of unsized paper which, drawn by the rotation of the two rollers, turns the small dipping roller and becomes impregnated with the solution.

A point of iron representing, like that of the metallic band, the extremity of the conducting wire, leans slightly inclined, resting by its own weight upon the damp paper band, and is in communication with the earth. The voltaic current decomposes the wet portion, and leaves a colored deposit which represents the signals of the dispatch. The working of this apparatus is entirely mechanical. The transmission and the reception of the dispatches take place automatically; one clerk superintends the machine. In order to compose the dispatches into conventional signals on the metallic band, another instrument, called the compositor, is employed, similar to that of Morse, the signals of which are employed. The band of metallic paper unrolling itself is raised by a lever so as to touch a thick roller covered with a resinous preparation in fusion, which cools suddenly as soon as it is applied to the metallic band. One clerk can prepare alone 35 to 40 dispatches per hour; the telegraphic staff acquainted with the Morse apparatus can, without any study, compose dispatches. For the service between Paris and Lyons three compositors suffice completely for the transmissions. The dispatches reproduced on a band of chemically prepared paper are handed over to other clerks, who translate them for the printed dispatches distributed to the public.

The result is that two composing clerks, two translating clerks, and a superintendent of the machines of reception and transmission, do as much work by aid of a single conducting wire as six clerks with three wires by the ordinary telegraphic system. A composing apparatus furnished with electro-magnets has been established on a line from London to Paris. When the employé in London wishes to transmit a telegram to Paris for the Lyons line, the only line in which this rapid service is installed, he manipulates as for the ordinary transmissions of the Morse apparatus; the letters or conventional signs are printed on a metallic band, and a few seconds afterwards are transmitted to the chemically prepared paper. Thus we have before us a great improvement in modern telegraphy. Up to the 11th September last the service of the Lyons line was carried on by aid of two or three Hughes' apparatus; each apparatus occupies two clerks and three batteries. By the new system five clerks do all the service with one line only. The new system works admirably and without a single hitch, and we can affirm that the invention of MM. Chaudassaignes and Lambrigot is destined to render great service to the telegraphic service. The economy of installation, and the saving effected in the number of clerks, the maintenance, wear and tear, etc. are marvelous.—*Chemical News.*

Electrical Phenomenon.

The Rochester *Union* says that one of the most beautiful electrical phenomena imaginable was lately witnessed in the office of the Atlantic and Pacific Telegraph Line. Wire No. 1 of this line was down between this city and Syracuse. Suddenly it was discovered that neither wire would work. A continuous current of electricity was then observed to be passing over the wires through the several instruments, and this while the batteries were detached. The current seemed to be of the volume of a medium-sized pipe stem, and it gave the several colors of the rainbow, beautiful to behold. With the key open, the current flowed in

waves or undulations, and from the surcharged wire it would leap over the insulated portions of the key and flow along the wires beyond. The same phenomenon was observed at Buffalo and at Cleveland. The gas in the office here was lighted without difficulty by holding the end of a wire within an inch or two of the gas burner. The current was intense enough to shock one holding the wires or instruments—indeed, one of the employés of the office had his fingers scorched by the current. With closed keys the current was continuous, as before stated.

The theory advanced by an experienced electrician is this. The electrical equilibrium of the atmosphere had become disturbed by the sudden and extreme cold of the past two days—and we may say here that this phenomenon has never been witnessed except when cold weather prevails extensively—the electricity, instead of descending to the earth as in a thunder storm or in warm weather, ascends in the atmosphere, thus destroying the equilibrium and producing these magnificent displays. The broken wire spoken of, which rested on the ground, was the point of communication for the current from the earth. The electrician advances the theory that Aurora Borealis is produced from the same causes, and we submit that it is not an improbable theory. Every one has seen, undoubtedly, the wavy or undulating motions of the Aurora Borealis, and the wavy motions of the current last night with the batteries off and the key open were precisely the same.

Here we may notice one thing not generally known. A portion of the Irrepressible Conflict speech of Wm. H. Seward in this city, a few years since was telegraphed to New York and from Boston to Portland by the electrical influences of the Aurora Borealis—all the batteries on the line being detached. This feat, it is said, has never been repeated.

Fun at Home.

The *New England farmer*, published in Boston, contains every week sensible hints for family rule and life. The annexed article on home amusement is worthy of regard by the heads of families everywhere:

“Don't be afraid of a little fun at home, good people! Don't shut up your house lest the sun should fade your carpets and your hearts; lest a hearty laugh shake down some of the musty old cobwebs there. If you want to ruin your sons, let them think that all mirth and social enjoyment must be left on the threshold without, when they come home at night. When once a home is regarded as only a place to eat, drink, and sleep in, the work is begun that ends in gambling houses and reckless degradation. Young people must have fun and relaxation somewhere: if they do not find it at their own hearthstones, it will be sought at other and perhaps less profitable places. Therefore let the fire burn brightly at night, and make the 'mstead delightful with all those little arts that parents so perfectly understand. Don't repress the buoyant spirit of your children. Half an hour of merriment, round the lamp and firelight of a home, blots out the remembrance of many a care and annoyance during the day; and the best safeguard they can take with them into the world is the unseen influence of a bright little domestic sanctum.”

OFFICIAL NOTICES.



SEPARATION, ANNEXATION, AND ERECTION OF SCHOOL MUNICIPALITIES.

His Excellency the Lieutenant-Governor of the Province of Quebec, was pleased, by an order in Council, date 27th. January last:

To annex that part west of Rivière-aux-Brochets, in the Municipality of

St. Charles of Standbridge, county of Missisquoi, to the Municipality of St. Sebastian in the county of Iberville, for school purposes.

To annex part of the Municipality of the Township of Stanfold in the county of Arthabaska, namely from the 1st. lot as far the 10th. inclusive, in the first range of said Township, to the Municipality of St. Calixte of Somerset, in the same county for School purposes.

To annex part of the Municipality of the Township of Stanfold, from the 11th. lot as far as the 28th. of the first range of said Township, formerly known by the name of St. Eusèbe of Stanfold, to the Municipality of St. Louis of Blainford, for School purposes.

To erect into a School Municipality, under the name of St. Michel of Yamaska, in the county of Yamaska, all that portion, already erected into a Municipality for School purposes, by proclamation of His Excellency the Governor General of the Province of Canada, dated 11th. September 1866.

JOURNAL OF EDUCATION.

QUEBEC, PROVINCE OF QUEBEC, FEBRUARY, 1868.

Report of the Superintendent of Education for Lower Canada, for the year 1866.

EDUCATION OFFICE,
Montreal, 29th June 1867.

The Hon.

THE PROVINCIAL SECRETARY,
Ottawa.

SIR,—I have the honor to submit to you my Report on the state of Public Instruction, in Lower Canada, for the year eighteen hundred and sixty-six.

Being only a few days returned from my tour in Europe, I cannot do more than give you a synopsis of statistics compiled in my absence.

Probably in a few months, it will be possible for me to present you with a detailed report of a part of the mission confided to me by the Government, at the earnest solicitation of the Council of Public Instruction, who were desirous that I should visit the Educational Establishments, and study the systems pursued in Europe and the United States.

I left Montreal the 12th November last, and returned the 18th of the present (June) month. I visited Ireland, Scotland, England, France, Belgium, Italy, and part of Germany.

I have collected quite a number of documents, consulted with those specially engaged in education, and visited a great number of educational establishments. The comparison of our system, in its entirety, with those of the different countries of Europe, is by no means discouraging. The obstacles, which, in our own country, retard the general diffusion of knowledge among all classes of society,—obstacles which I have particularly pointed out in my previous reports,—exist in different degrees in other countries, and the questions discussed there differ but little from those discussed among ourselves.

The question of Professional Education, (1) which has arisen several times in Canada, has for years, engaged the attention of the Governments of France, Belgium and Prussia.

In France and Belgium they have tried to remedy the inconveniences of a classical education, too generally diffused, by the introduction of separate scientific courses in the Lyceums or (Athenées.)

It has been considered necessary to supplement this reform by the founding of numerous institutions specially adapted to prepare young men for commercial and agricultural pursuits.

L'Ecole Normale Special of Cluny, quite recently founded, and at the inauguration of which, it was my privilege to assist, is destined to furnish Teachers for those special or professional establishments, just as l'Ecole Normale Supérieure of Paris supplies the University and Lyceums.

Prussia is perhaps in advance of any other country of Europe on this question.

Here there are three different kinds of institutions between the Universities and the primary schools: 1st. the *Realshule* or schools of *Practical knowledge*, which prepare their pupils indiscriminately for commerce or industry, or even the civil service, save that they

(1) By professional education we mean here the contrary of what many consider it; it is an education which gives special preparation for the ordinary careers of life, as distinguished from a classical education which prepares for the liberal professions.

must afterwards perfect themselves in the *Gymnasium* (classical college), or in either of the other two institutions hereafter mentioned; 2nd. the *Gewerbe Schule*, or Schools of arts and trades whose pupils, if they wish to apply themselves to the higher industrial pursuits, pass to the *Polytechnic Institutes* or *Superior Schools* of Arts and Trades; 3rd. *Handel Schule* or Commercial Schools.

Everywhere in Europe, as in America, the establishment of Normal Schools, the regular inspection of schools by salaried functionaries of the State, the examination of candidates for teaching, by commissioners or school inspectors, are the principal means to which recourse is had to raise the standard of education and maintain it at the desired status.

The British Government has made great sacrifices in the three kingdoms for all that concerns these important objects. The inspection of schools, particularly for some years past, has been carried out with great regularity, and the system of examination, according to the new regulations, has produced remarkable results. This system is very detailed and very effective; it constitutes, in itself, so to speak, all the mechanism of governmental action in public instruction in England and Scotland. Large sums are every year paid by the government, in the three kingdoms, for the inspection of schools; in fact, they form a large proportion of the budget for public instruction.

In Ireland, the Normal, or Central Training School of Dublin has no less than twenty-eight succursales, branch establishments, or feeders, under the name of Model Schools, in all the great centres of population, which perform a task similar to its own. To each Model School is attached a model farm, or more truly an Agricultural School with theory and practice, where the pupils of the Model School receive instruction, the advantages of which they can afterwards give to the country, and where they, moreover, contract tastes in harmony with their profession and acquire a particular aptitude for rendering themselves useful to the inhabitants in the midst of whom they live. In the maritime Towns there are also attached to these Model Schools, schools for navigation, and the Pupil-Teachers of these Schools, who in their turn will give nautical instruction to a certain number of young men, receive, from the Chamber of Commerce, a grant proportioned to their success. To all these Model Schools are attached Infant Schools where the Female Pupil-Teachers are trained, by means of the methods pursued in these institutions, to be of essential service to the poorer classes in the large Towns. In the founding of the Queen's Colleges, the English Government had in view the decentralization of Superior Education, and the advancement or development of Scientific teaching conjointly with literary teaching. The collections, the laboratories and all the necessary apparatus for scientific teaching in these institutions, of even recent organization, appear to me to leave little to be desired. On the other hand, the new University of Dublin, so ably directed, under the auspices of His Eminence the Cardinal Archbishop of Dublin, by Monsignor Woodlock, is probably destined at no very distant period to become a rival of the ancient University of Dublin. Apart from the religious question which is so important and so bitter in this country, the organization of Public Instruction here is as complete, if not more complete than in any other country, and many of the measures adopted here are worthy of imitation. The mode of remunerating Teachers, the organization of inspection of schools, of which I shall take another occasion to speak, and lastly the establishment in Dublin of a vast *dépôt* of works and objects necessary to Schools, and the distribution from this central point, precisely as in Upper Canada, are measures well worthy our attention. In Ireland as well as in France, Belgium, Prussia, and indeed throughout Europe, the greatest importance is attached to instruction in linear and architectural drawing. It is said, and with reason, that this species of instruction is a powerful stimulus to industry and the culture of the useful arts. It is well known that in England the culture of the Fine Arts by the operative classes and the diffusion of knowledge and artistic tastes among all classes of society, were greatly furthered by the first London Exhibition. It has been considered as one of the most effective means of developing national industry and rendering it capable of competing, under the head of elegance and beauty of form, with continental industry. His Royal Highness Prince Albert bestowed great attention on this important subject, and under his auspices the founding of the Museum of Education at South Kensington, the affiliation of this Museum to other institutions of the same nature, the establishment of numerous schools of design, in different parts of the three Kingdoms, have contributed largely to infuse into all classes a taste for art.

On the continent, the same movement is felt, and several Universities, amongst others that of Bonn which I visited, have added to their establishments galleries of statues, paintings, and models of design,

as well as schools of design, similar to what is attached to the Normal School, Toronto, all of which have proved a success. It is doubly to be regretted that nothing similar exists in Lower Canada where there is so much natural talent for the fine arts, and where such a want is felt for new and honorable careers for its youth.

The work of the museums and schools of design is greatly developed by adult classes and evening schools where linear drawing, geometry, and architecture are generally taught. Those of Rome, which have been so long established and maintained by the Pontifical Government, and in which instruction is entirely gratuitous, appear to me to hold the first rank, if I might judge by the results. In these curt remarks, I cannot do more than glance at those matters which struck me as being of importance; but at a future period I will treat in detail the different systems of school organization, and methods employed in the primary schools which I visited.

For the present I will confine myself to merely giving a list of the institutions visited and to an expression of grateful thanks to the Governments and individuals who aided me in the accomplishment of my mission. Everywhere was I received with marks of cordiality and attention, and I must say all seemed to take a *lively interest* in the future of our country, as well as to show an evident desire of being informed, in detail, of our social, material and political condition.

I profited of the occasion to distribute, to Public Libraries and distinguished writers, works on Canada, in return for which I have already received, and count on receiving many more valuable donations to the library of the Department of Public Instruction.

I owe and hereby tender my special thanks to the Right Honorable Alex. Macdonell, Resident Commissioner of Education, Dublin, Ireland (an office equivalent to that of Superintendent of Public Instruction); to His Eminence the Cardinal Archbishop of Dublin; to Monsignor Woodlock, Rector of the Catholic University, Dublin; to Right Revd. Dr. Delaney, Bishop of Cork; to the Directors and Professors of the Queen's Colleges, Cork and Belfast; to Sir William Thompson, Professor in the University of Glasgow; to Mr. Brown, Trustee of the Free Church Schools, Glasgow; to the Principal and Directors of the High School, Edinburgh; to Mr. Cummin, Secretary of the Education Commission; to the Revd. Pastor of St. Patrick's Congregation, Edinburgh; to His Excellency M. Duruy, Minister of Public Instruction in France; to M. de La Saussaye, Rector of Lyon's Academy; to M. Nisard, Principal of *l'Ecole Normale Supérieure*; to M. Eugène Rendu, Inspector General of Public Instruction; to M. Rameau, already so favorably known in Canada; to His Eminence Cardinal Reisach, Prefect of the Congregation of Studies at Rome; to Monsignor Persichelli, Secretary to the same Congregation; to His Excellency the Minister of Public Instruction for the Kingdom of Italy; to Chevalier Corsini, Chief of the direction of the Municipal Schools of Florence; to our Canadian artist, Chevalier Falardeau; to Mr. Vandenpeerboom, Minister of the Interior and of Public Instruction in Belgium; to Mr. Romberg, Ex-Director General of Science and Arts in Brussels; to Monsignor Laforet, Rector of the University of Louvain; to Mr. Alphonse LeRoy, Professor in the University of Liege, and to the Directors and Professors of this University; to Mr. Gillon, Superintendent of Public Instruction at Liege; to His Excellency Dr. de Muhler, Minister of Public Instruction at Berlin; to Mr. Imelmann, Professor in the College of Frederic William; to Mr. Huffer, Professor in the University of Bonn, and to Mr. Schmidt, Editor in Chief of the *Encyclopædia* of Public Instruction at Stuttgart. There are many other functionaries, men of letters, and friends of education to whom I am largely indebted, but those named took such a special interest in my mission and all that concerned Canada, besides showing me so much personal attention, that I have singled out their names, from among many, for the grateful remembrance of my fellow-country men.

The circumstances in which our country is placed — circumstances new and exceptional — render still more important the object of this mission, — for as the work of public instruction is henceforward to form part of the functions of the local government, it can, without any outside control, make provision for the expenses necessary to overcome the great difficulties which retard its progress, and which, for several reasons, are much more serious than in Upper Canada. I have therefore no doubt, but that as soon as possible after the arrangement of the finances of the future Province of Quebec, the government of this Province will give its serious attention to the different suggestions that I shall have the honor to make, and will adopt them according to the full measure of the means that it may find at its disposal.

It is only just to remark that on my arrival in England, the public schools were closed on account of the Christmas Holidays, which explains the small number of institutions visited in this country.

Here now follows a list of the institutions, schools, libraries, and museums that I visited.

GREAT BRITAIN AND IRELAND.

Model School, Cork, (succursale of the central Training School, Dublin), and the Primary Schools attached thereto.
 Model Farm near Cork, in connection with the Model School.
 Christian Brothers Schools, Cork.
 Young Ladies Boarding School, Convent of the Ursulines, Blackrock, Cork.
 Elementary School, Blackrock.
 Queen's College, Cork.
 Trinity College, Dublin.
 Catholic University, Dublin.
 Normal, or Central Training Schools, Dublin, and Model Schools attached.
 Catholic Normal School, directed by the Sisters of Mercy, Dublin.
 Catholic Seminary, All Halows, near Dublin.
 Glasnevin Model Farm, in connection with the Central Training Schools, Dublin.
 Male Deaf and Dumb Institute, near Dublin, under charge of the Christian Brothers.
 Female Deaf and Dumb Institute and young Ladies' Boarding School, near Dublin, under the charge of the Dominican Sisters.
 Museum and Botanical Gardens, Dublin.
 Education Office, Dublin, with its *dépôt*, stores and collections of objects necessary to education.
 Model School, Belfast, and Primary and Infant Schools attached.
 Christian Brothers Schools, Belfast.
 Queen's College, Belfast.
 Elementary School, near Coleraine.
 Glasgow University, and Library and collections.
Andersonian College, Glasgow—gratuitous teaching in the Evening Schools of this Institution.
 Jesuit College, Glasgow,
 Normal, Model, and Infant Schools of the Scotch Established Church.
 Normal and Model Schools of the Free Church of Scotland.
 Primary School of the Free Church.
 Primary School of the Established Church, near the University.
 Advocates Library, Edinburgh.
 Edinburgh University.
 Museum of Science and Art.
 Museum and Gallery of Paintings, Edinburgh.
 Herriott College, known by the name *Herriott's Hospital*.
 Edinburgh High School.
 Normal and Primary Schools of the *Free Church*, Edinburgh.
 Industrial School for poor children, Gray's Close, Edinburgh.
 Farms in the vicinity of Edinburgh.
 Parochial Schools in the vicinity of Edinburgh.
 Evening Classes at the Artisans' Institute,—Industrial School for adults.
 Office of the Commission of Education, sitting in Edinburgh.
 Office of the Privy Council of Education, London.
 Museum of Education, South Kensington.
 Oxford University.
 Zoological Gardens, London.
 British Museum Library and collections.

ITALY.

Bureau of the Congregation of studies, Rome.
 Ecoles Régionales, Rome.
 Roman College.
 Primary and Superior Schools, Rome, directed by the Sisters of Providence.
 Evening Industrial Schools, Rome.
 Museum and Library of the Vatican, Rome.
 Museum of the Capitol.
 Museum of St. John of Lateran.
 Corsini Borghese, Rospigliosi, and Barberini Galleries.
 Victor Emmanuel College, Naples.
 Evening Industrial Schools, Naples.
 Royal Library and Museum, Naples.
 Ministry of Public Instruction, Florence.
 Male and Female Primary Schools, Florence.
 Infant Schools, Florence.
 Library of San Lorenzo, Florence.
 Musée Pitti, des Uffizi, de Michel Ange, etc.
 Brignoli Gallery, Genoa.

(To be continued.)

Geographical and Topographical, &c.

THE PARKS OF COLORADO.

(Continued from our last.)

Forming the pediment of this stupendous mural escarpment is the second brim or bench (being the lowest) in the general mountain descent. Here the approaching elevation of the plain, the increase in size of the streams, the accumulating debris from above, and the increased atmospheric abrasion, all unite to obliterate the angularity of the rocks and impair the striking distinctness of formation. Forests of pine and deciduous trees prevail. The flora and vegetation is abundant and various. The atmospheric irrigation becomes uncertain, and the rocks are covered with soil or the fragments of their own superficial destruction. Immediately following is the broad space occupied by the fusion of the mountain base and the plain gently descending to meet it. Here is a profile infinitely indented and broken; alternately the sloping ridges protrude their ribs into the plain, and the plain advances its valleys between them to receive the streams. This is the region of the placers, where is checked in its descent and lodged beneath the alluvial soil the free gold washed down by torrents from the overhanging summits.

This sketch of the normal structure and configuration of the Cordillera is illustrated by a chequered list of details in its minute elements. The primeval rocks, heated to incandescence, rest in their vertical positions unaltered from their original form; they have been roasted but not liquefied. Original strata of limestone and gypsum, uplifted on high but not destroyed, rest upon the summit as a torn hat. Gypsum, limestone, slates, clays, shales, are thus found near the highest summits. The decay of the secondary rocks gives extraordinary fertility to the mountain flanks and to the alluvial bottoms below. Hence the luxuriance of the arborescence, the pastures, and the flora. The altitude of the summits gathers and retains the snows, whose glaciers give birth to innumerable rivers. These gash the precipitous flanks with chasms, up which roads ascend; the composition of the rocks is here revealed; the mysteries of their interior contents are unravelled, and the secretions of nature subjected to the human eye and hand.

Thus, then, erects itself the primeval Cordillera, constructed of horizontal plates, vertically thrown up by stupendous volcanic forces, partially altered or roasted by incandescent heat, but neither destroyed nor recast in form; the secondary rocks are tossed and scattered high in the upper regions, but are not calcined by flame. The metallic ores are as various as is the variety of the rocks, enriched by heat and exposed by upheaval and corrosion. No lava, no pumice, no obsidian, nothing of melted matter from the plutonic region is seen. This furrowing of the terrestrial crust has alone occupied and exhausted the stupendous volcanic throes of the subterranean world of fire.

Sierra Mimbres.—The Sierra Mimbres, forming the western envelope of the park, is not dissimilar to the Cordillera in its origin, composition, and configuration. Rising from the level of the great plateau, it is of inferior bulk and rank. It forms the backbone from whose contrasted flanks descend the waters of the Rio del Norte on the east, and of the Colorado on the west.

Craters of extinct volcanoes are numerous; streams of lava, once liquid, abound; pedrigals of semi-crystalline basalt submerge and cover the valleys into which they have flowed, and over which they have hardened.

This Sierra, then, has a general direction from north to south, corresponding with the 109th meridian. It has all the characteristics in miniature of the Cordillera, but is chequered and interrupted by the escape of subterranean fires, having areas overflowed and buried beneath the erupted current. Where the nascent springs of the Rio del Norte have their birth, the Sierra Mimbres culminate to stupendous peaks of perennial snow, locally named Sierra San Juan.

The concave plain of the San Luis park, begirt by this ellip-

tical zone of the Sierras, thus capped with a ragged fringe of snow projected upward against the canopy, is the receptacle of their converging waters. It is a bowl of vast amplitude, which has for countless ages received and kept the sedimentary settlements of so prodigious a circuit of Sierras, builded up with every variety of form, structure and geological elements elsewhere found to enter into the architecture of nature. Hither descend the currents of water, of the atmosphere, of lava. The rocks rent from the naked pinnacles, tortured by the intense vicissitudes which assail them; the fragments rolled by the perpetual pressure of gravity upon the descending slopes; the sands and soils from the foundations of rocks and clays of every gradation of hardness; the humus of expired forests and annual vegetation; elements carbonized by transient fires; organic decay; all these elements descend, intermingle, and accumulate.

This concave plain is, then, a bowl filled with sedimentary drift, covered with soil and varnished over as it were with vegetation. The northern department of Rincon, closely embraced by the Sierras and occupied by the San Luis lake, is a vast savanna deposited from the filtration of the waters, highly impregnated with the mountain debris. Beneath this soil is a continuous pavement of peat, which maintains the saturation of the super-soil, and is admirable for fuel.

The middle region of the plain, longitudinally, displays a crater of the most perfect form. The interior pit has a diameter of twenty miles, from the center of which is seen the circumferent wall forming an exact circle, and in height five hundred feet. This wall is a barranca, composed of lava, pumice, calcined lime, metamorphosed sandstone, vitrified rocks, and obsidian. This circumferent barranca is perforated through by the entrance and departure of the Rio del Norte, the Calcebra, and the Costilla rivers, which traverse the northern, western and southern edges of the interior. By this and other forces of corrosion this barranca is on these three sides cut into isolated hills, called *corritos*, of every fantastic form and of extraordinary beauty of shape and tints. The bottom of the crater has been filled up with the soils resulting from the decay of this variety of material, introduced by the currents of the water and of the atmosphere. It is beveled by these forces to a perfect level; is of the fattest fertility, and drained through the porous formation which underlies it.

From this crater to its southern rim, a distance of sixty-five miles, the park expands over a prodigious pedregal formed from it in the period of volcanic activity. This pedregal retains its level, and is perforated by the Rio del Norte, whose longitudinal course is confined in a profound chasm or canon, of perpendicular walls of lava, increasing to the depth of 1,200 feet, where it debouches from the jaws of this gigantic flood of lava, near the village of La Joya, in New Mexico. Such are the extraordinary forms and stupendous dimensions with which nature here salutes the eye and astonishes the imagination. The expansion of the lava is all to the south, following the descent towards the sea. Toward the north, repelled by the ascent, are waves demonstrating the defeated effort to climb the mountain base.

Such is an imperfect sketch of this wonderful amphitheater of the Sierras. Its physical structure is infinitely complex, exhibiting all the elements of nature piled in contact, yet set together in order and arranged in harmony; its cloud-compelling Sierras, of stern primeval matter and proportions; its concave basin of fat fertility; its atmosphere of dazzling brilliancy, tonic temperature and gorgeous tints; its arable and pastoral excellence, grand forests, and multitude of streams; its infinite variety of mines and minerals, embracing the whole catalogue of metals, rocks, clays and fuel; its capacity to produce grain, flax, wood, hides, vegetables, fruits, meats, poultry, and dairy food; the compact economy of arrangement which blends and inter-fuses all these varieties; these combine to provoke, stimulate, and reward the taste for physical and mental labor.

Entrance and exit over the rim of the park is everywhere

made easy by convenient passes. Roads re-enter upon it from all points of the compass and every portion of the surrounding continent. These are not obstructed at any season. On the north is the Poncho pass, leading to the Upper Arkansas river, and into the south park. On the east, the Mosca and Sangre de Christo passes debouch immediately upon the great plains. On the south is the channel of the Rio del Norte. On the west easy roads diverge to the rivers Chamas, San Juan, and towards Arizona. In the northwest, the Cocha-to-pee opens to the great Salt Lake and the Pacific. Convenient thoroughfares and excellent roads converge from all points and diverge with the same facility.

The system of the four parks, extending to the north, indefinitely amplifies and repeats all that characterizes the San Luis park. Smaller in size and less illustrated by variety, each one of the three by itself lingers behind the San Luis, but is an equal ornament in the same family. Their graceful forms, their happy harmony of contact and position, make their aggregated attractions the fascinating charm and glory of the American continent.

The abundance and variety of hot springs of every modulation of temperature is very great. These are also equalled by waters of medicinal virtues. It has been the paradise of the aboriginal stock, elsewhere so abundant and various. Fish, waterfowl, and birds of game and song and brilliant plumage frequent the streams and groves. Animal life is indefinite in quantity and abundantly various.

The atmospheric currents which sweep away every exhalation and all traces of malaria and miasma have an undeviating rotation. These currents are necessarily vertical in direction and equal in force, alternating smoothly as land and sea currents of the tropical islands of the ocean. The silence and serenity of the atmosphere are not ruffled; the changing temperature alone indicates the motion of nature.

All around the elliptical circumference of the plain, following as it were its shore, and bending with the indented base of the mountain, is an uninterrupted road of unparalleled excellence. This circuit is five hundred miles in length, and is graced with a landscape of uninterrupted grandeur, variety and beauty; on the one hand the mountains, on the other hand the concave plain, diversified with groves of alames and volcanic *cerritos*. At short intervals of five or ten miles asunder are crossed the swift-running current and fertile meadows of the converging mountain streams. Hot springs mingle their warm water with all these streams, which swarm with delicate fish and waterfowl.

The works of the beaver and otter are everywhere encountered, and water power for machinery is of singularly universal distribution. Agriculture classifies itself into pastoral and arable; the former subsisting on the perennial grasses, the latter upon irrigation everywhere attained by the streams and artificial *acquiás*. This concave configuration and symmetry of structure, is remarkably propitious in economy of labor and production, favored by the juxtaposition and variety of material by the short and easy transport, and by the benignant atmosphere.

The supreme excellence of position, structure, and productions thus grouped within the system of the parks of Colorado, occupying the heart of the continental home of the American people, is conclusively discernible. Here is the focus of the mountains, of the great rivers and of the metals of the continent. The great rivers have here their extreme sources, which interlock and form innumerable and convenient passes from sea to sea. From these they descend smoothly to both oceans by continuous gradations. The parks occupy the line of the fortieth degree, and offer the facilities for a lodgement in force, at the highest altitude, where the highest divide of the continent exists, half way between the trough of the Mississippi and the Pacific shore. Being immediately approachable over the great plains their mines of precious metals are the nearest in the world to the social masses of the American people and to their great commercial cities. Their accessibility is perfect. All the

elements of a perfect economy, food, health, geographical position, innumerable mines of the richest ores and every variety, erect, assist, and fortify one another.

The San Luis park has twenty-four thousand population. These people are the Mexican-American race. Since the conquest of Cortez, A. D. 1520, the Mexican people have acquired and adopted the language, religion, and in modified forms the political and social systems of their European rulers. A taste for seclusion has always characterised the aboriginal masses, heightened by the geographical configuration of their peculiar territory. Upon the plateau elevated seven thousand feet above the oceans, and encased within an uninterrupted barrier of snow, reside nine millions of homogeneous people. An instinctive terror of the ocean, of the torrid heats and malarious atmosphere of the narrow coasts in either sea, perpetually haunts the natives of the plateau. To them navigation is unknown and marine life is abhorrent. The industrial energies of the people always active and elastic, and always recoiling from the sea, have expanded to the north, following the longitudinal direction of the plateau, of the mountains, and of the great rivers. This column of progress advances from south to north; it has reached and permanently occupies the southern half of the San Luis park.

At the same moment the column of the American people advancing in force across the middle belt of the continent, from east to west, is solidly lodged upon the eastern flank of the Cordillera, and is everywhere entering the parks through the passes. These two American populations, all of the Christian faith, here meet front to front, harmonize, intermarry, and reinvigorate the blended mass with the peculiar domestic accomplishment of each other.

The Mexican contributes his primitive skill inherited for centuries without change, in the manipulations of pastoral and mining industry, and in the tillage of the soil by artificial irrigation. The American adds to these machinery and the intelligence of expensive progress. The grafted stock has the sap of both. As the coming continental railroad hastens to bind together our people isolated on the seas, a longitudinal railroad of 2,000 miles will unite with this in its middle course, bisecting the Territory, States and cities of 10,000,000 of affiliated people. This will fuse and harmonize the isolated peoples of our continent into one people, in all the relations of commerce, affinity and concord.

San Louis di Calcebra, July 5, 1866.

Number of Useful Plants.

A German author states that the number of useful plants has risen to about 12,000, but that others will no doubt be discovered, as the researches yet made have been completed in only portions of the earth. Of these plants there are 1,350 varieties of edible fruits, berries, and seeds; 108 cereals, 37 onions; 460 vegetables and salads; 40 species of palms; 32 varieties of arrowroot, and 31 different kinds of sugars. Various drinks are obtained from 200 plants, and aromatics from 266. There are 50 substitutes for coffee, and 129 for tea. Tannin is present in 140 plants, caoutchouc in 96, guttapercha in 7, rosin and balsamic gums in 387, wax in 10, and grease and essential oils in 330; 88 plants contain potash, soda, iodine; 650 contain dyes, 47 soap, 260 weaving fibres; 44 fibres used in paper making; 48 give roofing materials, and 100 are employed for hurdles and cosses. In building 740 plants are used, and there are 615 known poisonous plants. One of the most gratifying developments is, that out of 278 known natural families of plants, there are but 18 species for which no use has been discovered.

MONTHLY SUMMARY.

EDUCATIONAL INTELLIGENCE.

—The first periodical educational congress, convened in pursuance of a resolution arrived at by the Scholastic Registration Association, was held in the Midland Institute, yesterday. The Rev. Dr. Collins, of Bromsgrove, presided.

A paper read by the Rev. James Ridgway, (Principal of the Diocesan Training College, Culham), on "The development of Education by the more specific training of Educators, and by such measures as the institution of a special faculty of Education in the universities of Great Britain and Ireland."

Another by Professor D'Arcy Thompson, entitled, "What is a Schoolmaster?"

A third by Mr. Barrow Rule, entitled "How far will the proposed Scholastic Registration Act tend to raise the standard of Education throughout the country, and promote the interests and efficiency of the scholastic profession?"

And a fourth by the Rev. Joshua Jones, D. C. L., (Principal of King William's College, Isle of Man), "On the Training of Teachers for Upper and Middle-class Schools."

The three resolutions carried, after much spirited discussion, by the meeting were these:

1. "That Education is entitled, as much as medicine, divinity, or law, to be regarded as a distinct profession, and that liberal culture, and special training, are as much required by the educator as by the physician, the lawyer, or the divine."
2. "That a Scholastic Registration Act, by giving to teachers a legally recognised position, would tend to increase their efficiency, and consequently to improve their social status, while, by discouraging unqualified persons from engaging in the business of teaching, it would gradually raise the standard of Education throughout the country."
3. "That, as the need of special training for teachers of both sexes is now practically recognised in the case of schools for the poorer classes, a similar provision ought, *a fortiori*, to be made for teachers in schools of the middle and upper classes, involving as these do a greater variety of subjects, and a greater depth and breadth of instruction."

Resolutions in the House of Lords.—Earl Russell will, on Monday, Dec., 2nd, move the following resolutions in the House of Lords:—

1. "That in the opinion of this house the education of the working classes in England and Wales ought to be extended and improved; every child has a right to the blessing of education, and it is the duty of the state to guard and maintain that right. In the opinion of this house the diffusion of knowledge ought not to be hindered by religious differences; nor should the early employment of the young in labour be allowed to deprive them of education."
2. "That it is the opinion of this house that Parliament and Government should aid in the education of the middle classes by providing for the better administration of charitable endowments."
3. "That it is the opinion of this house that the Universities of Oxford and Cambridge may be made more useful to the nation by the removal of restrictions, and by the appointment of a Commission to consider of the better distribution of their large revenues for purposes of instruction in connection with the said Universities."
4. "That the appointment of a Minister of Education by the Crown, with a seat in the Cabinet, would in the opinion of this house, be conducive to the public benefit."

—Mr. Lowe delivered a brilliant speech on middle-class education at the annual dinner of the Liverpool Philomathic Society. He argued that the middle classes required more culture and elevation of *morale*, and that their education should not be an imitation of that of the higher classes. He denounced the old-fashioned system in vogue of teaching dead languages, history, logic, and grammar, as the alpha and omega of education,—arguing that English composition, French, and German, the study of physical science and pure mathematics, were the most desirable and useful studies for a class who had to work for their living. In conclusion, he advised the middle classes, while statesmen were trying to give them their ancient rights in endowed schools and the Universities, to combine and set up schools for themselves like those originated and developed so successfully by Mr. Woodward, at which a good education may be had for £30 per year.

Education in Parliament—Parliament was opened by Commission on the 19th November. The Queen's speech, as might have been expected, gave a contribution to educational history, which was elaborated by the mover and seconder of the address in both houses, and by subsequent speakers. Ministerial references are necessarily vague as to any special scheme, but at the same time they indicate an earnestness on the part of the Government in dealing with this paramount matter. The paragraphs in Her Majesty's speech are the following:—

"The Public Schools Bill, which has already been more than once submitted to Parliament, will again be laid before you.

"The general question of the Education of the People requires your most serious attention, and I have no doubt you will approach the subject with a full appreciation, both of its vital importance, and its acknowledged difficulty."

House of Commons — The Address was moved by Mr. H. Dyke. "Although on the subject of middle and low class education it might be difficult to deal with the enormous mass of evidence, he trusted they would be able to arrive at a satisfactory settlement of the question. Looking to the returns of prisoners committed for trial, and the large proportion of persons who can neither read nor write, it seems a short-sighted policy not to have dealt with the subject sooner; for, regarding it in a mere pounds, shillings, and pence point of view, there can be little doubt of the saving to the county rates which may be effected by an efficient measure of legislation." Mr. Disraeli's observations upon educational legislation were short but impressive:—"I can only say, with reference to education, it has not been inserted in the Speech as a mere rhetorical flourish."

The Minister of Education, Lord R. Montague, has been exceedingly active during the recess in getting information upon the practical working of schools, to assist him in the preparation of a national Bill. Amongst the features of such a Bill it is probable that itinerant science lecturers and drill masters will be proposed for districts, assimilating the art masters now employed by the Science and Art Department. The importance of such a scheme admits of no second words.

LITERARY INTELLIGENCE.

Germany.—*Death of Francis Bopp.*—Some months ago, Berlin lost the most distinguished Hellenist of the age, Boeckh, in his eighty-second year; and now the same university is deprived by death of the father of comparative philology, Francis Bopp. To write the life of Bopp would be to write the history of his science. The following are, however, the chief landmarks. Born on the 14th September 1791 at Mayence, he studied at Aschafenburg under Windischmann, whose instructions determined him to oriental studies. In prosecution of these, he went to Paris, where Sanscrit studies had already taken deep root, thanks to a rich collection of manuscripts, and to the lessons of Hamilton an Indian officer and prisoner of war. He remained in Paris till 1816, in which year he published his comparison of the Sanscrit conjugation with that of the Greek, Latin, Persian, and German languages. After several years spent in England, Bopp was at length, in 1821, appointed professor of Oriental languages in the young but illustrious University of Berlin. That university was the scene of his whole subsequent career; and he continued his prelections in it till quite recent years. He died in his seventy-sixth year, and therefore may be presumed to have had a less vigorous constitution than Boeckh, who reached the age of eighty-two, and continued teaching to the last day of his life. Besides Bopp's first publication mentioned above, the jubilee of which was celebrated last year at Berlin, there remain his *Comparative Grammar*; tracts on the Celtic, Malay-Polynesian, Georgian, Borussian, and Albanian languages; a critical Sanscrit Grammar; an abridged Sanscrit Grammar; and a Sanscrit Glossary, of which the third edition is now in course of publication.

—*Quebec Historical Society.* Yesterday evening, a distinguished audience assembled in the hall of the Historical Society, to listen to the inaugural address of the new President, the Hon. Mr. Chauveau.

Mr. Chauveau thanked the society, in very feeling and appropriate terms, for the honor it had conferred upon him. "What are my claims, said Mr. Chauveau, 'to the distinguished honor of being elected to preside over a society, in the main composed of the English element, after having been so long absent from Quebec?' None, except that of being, probably, the oldest member; for I was a member in 1838.

I had then for colleagues, Dr. John Carleton Fisher; the venerable Dr. Wilkie; the laborious Mr. Faribault; the national historian, Mr. Garneau; men whose names and memories are revered by all friends of science and letters; not one of this illustrious group now survives. Mr. Chauveau recapitulated the services rendered to history, by this the oldest society in Canada, services recognized abroad by such men as Bancroft, J. Sparks, Parkman, John Gilmary Shea, &c.

Dr. Anderson then read a charming essay on the life of the Duke of Kent, particularly dwelling on, and refuting the calumnies whereby some historians sought to tarnish the memory of the father of our sovereign.

In referring to the voluminous correspondence which took place between the Prince and the De Salaberry family, during twenty-eight years, we shall discover the true character of the Duke, and find him the constant friend of the French Canadians, of whom he loved to become the governor and protector.

In treating his subject, Mr. Anderson took occasion to enumerate the numberless titles which the heroes of Chateaugay had to grateful recognition by their country men.

Mr. Chauveau, resuming his discourse, said a few words on the essay of Dr. Anderson, and recounted to the assembly some interesting souvenirs collected during his visit to Château de Salaberry, near

Blois, in France. In traversing the family portrait gallery, one was struck with the great family likeness between the French and Canadian branches of this noble house.

To sum up, the séance of yesterday evening was very instructive, and augured well for the series of conferences which the society intend giving during the course of the winter. Under its new direction it will, no doubt, regain the ancient vigor and eclat of by gone days. —*Journal de Québec*, January 16th, 1868.

This Society is publishing a memoir of the campaign of 1759. It was compiled by an English officer of Wolfe's army, and first appeared in the *New York Mercury* of the 31st December 1759.

STATISTICAL INFORMATION.

—*Risk to Human Life on Railways.*—Accurate statistics have developed some interesting facts, in England and on the continent of Europe respecting the risks incurred by passengers and employees on railway trains. Few persons in the respectable walks of life trouble themselves about the probability of their being hanged. Yet an Englishman's risk of dying by strangulation is six times as great as that of being killed on a railroad, whether by his own carelessness or by accident. If his own carelessness be excluded from the estimate, his risk of death by hanging is one hundred and thirty times as great. Ninety-times as many people die of cancer in England as are killed on railways. Excluding the element of carelessness, two thousand one hundred and sixty-five persons will die of cancer to one killed on a railroad.

The statistics of railroads in all countries of Europe prove them to be attended with less danger than any other modes of travelling. More persons are killed in Paris in a single year by carriage accidents than in all France, by railroads in ten years.

The statistics of European railways bring out some very droll results —if such an epithet is admissible in treating a subject that pertains to human life. They show that the absolute risk of a person's losing his life in a rail car is less than of his being struck by lightning or being hanged; that a passenger shooting along by steam power at a rate of seventy-two miles per hour, is more secure from bodily injury than the pedestrian in a crowded city, or a gentleman driving his private carriage on a country road; and that the oil begrimed and sooty pair who ride on the engine, on whom we look with pity, as predestined for destruction, have an average immunity from danger, and enjoy a better state of health than we, whose persons may be more presentable, but whose pity is entirely gratuitous. A person debilitated by dyspepsia or pulmonary disease would question the sanity of his physician, if recommended to take the position of fireman on a locomotive; yet statistics show that the employment tends to counteract these diseases, and to strengthen all the vital functions of the system.

The satisfaction we feel in reviewing these results is qualified by the regret that no statistics of any of our American railroads, equally favorable, are accessible —*Philadelphia Daily News*.

MISCELLANEOUS INTELLIGENCE.

A quiet Life —For my part, seeing the victims to fast life daily falling around me, I have willingly abandoned the apparent advantages of such a life, and preferred less popularity, less gains, the enjoyment of a sound mind in a sound body, the blessings of a quiet, domestic life, and a more restricted, but not less enjoyable circle of society. I am now approaching my seventy-fifth year. I cannot, indeed say, vigorous as I am, that I have reached this age without the assistance of doctors, for I have had the constant attendance of those four famous ones: Temperance, exercise, good air, and good hours. —Wm. Howitt.

Men are born with two eyes but with one tongue, in order that they should see twice as much as they say.

Effect of Darkness and Silence —Dr. Kane and other arctic voyagers have all testified that in those regions where eternal silence reigns supreme, "the effect upon the brain and ear from the absence of sonorous impulses in the atmosphere is exceedingly annoying and absolutely injurious to the auditory nerves. As the organs of hearing are destroyed by loud and continued noise, and an intense light will weaken and ultimately destroy the power of sight, so it would appear that the auditory, or optic, nerves become impaired by the partial or total deprivation of their natural stimulus, sound or light.

Dr. H. Ralls Smith, of Chicago, wishing experimentally to investigate this subject, recently spent a considerable length of time in the Kentucky Mammoth Cave, where silence and impenetrable darkness reigned supreme. The effect was very distressing and almost insurmountable, resulting in temporary deafness of hearing and aberration of mind. From his own experience this gentleman is firmly convinced that the blindness of the finny denizens of this cave has been brought about gradually through successive generations, and from his observations he is confident that the sense of hearing is also wanting in these beings, although originally existing in the species when first immersed in their living tomb.