

Technical and Bibliographic Notes / Notes techniques et bibliographiques

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

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

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

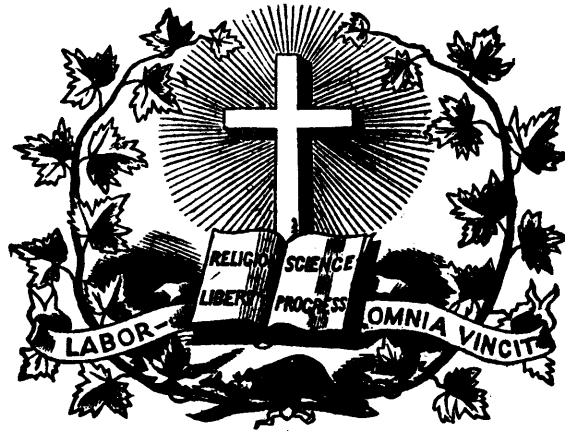
- Additional comments /
Commentaires supplémentaires:

Continuous pagination.

- Coloured pages / Pages de couleur
- Pages damaged / Pages endommagées
- Pages restored and/or laminated /
Pages restaurées et/ou pelliculées
- Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées
- Pages detached / Pages détachées
- Showthrough / Transparence
- Quality of print varies /
Qualité inégale de l'impression

- Includes supplementary materials /
Comprend du matériel supplémentaire

- Blank leaves added during restorations may
appear within the text. Whenever possible, these
have been omitted from scanning / Il se peut que
certaines pages blanches ajoutées lors d'une
restauration apparaissent dans le texte, mais,
lorsque cela était possible, ces pages n'ont pas
été numérisées.



THE JOURNAL OF EDUCATION

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

Volume XIX.

Quebec, Province of Quebec, September & October, 1875.

Nos. 9 & 10.

TABLE OF CONTENTS.

On Cramming.....	129	Convention of the Provincial Association of Protestant Teachers.....	148
Address on the Elements of Education.....	134	OBITUARY :	
Boys at Home.....	138	Miss Murray.....	155
Success in Teaching.....	139	EDUCATIONAL :	
Laughing Children.....	140	Education in Ireland.....	155
A Day in the Kindergarten of Fräulein Held, at Nashua, N. H.....	140	Object of Higher Education.....	156
POETRY :		Female Education in Egypt.....	156
Growing Up.....	141	School-Punishments.....	156
OFFICIAL NOTICES :		Schoolrooms.....	156
Appointments—School Commissioners—School Trustees—Erection of School Municipalities.....	141	MISCELLANEOUS :	
Report of the Minister of Public Instruction.....	142	A Boarding School in 1570.....	156
		Care of the Eyes.....	157
		Laughter.....	158
		The Art of Swimming.....	158
		Teachers Wanted.....	159
		Meteorology.....	159

On Cramming.

(Paper read by Professor J. PAYNE before the College of Preceptors.)

It is a great advantage for me, in treating the subject I have chosen for our evening's entertainment, or instruction, as the case may be, that I am not called upon to fight against prejudices or prepossessions. I know, in fact, beforehand, that you all agree with me in a thorough detestation of cramming; and that you will echo back the most vituperative epithets that I may apply to it. The voice of public opinion, of teachers generally, and of the Lecturer, all unanimously pronounce its condemnation.

I have never yet fallen in with a teacher who did not denounce cramming, and declare himself innocent of the crime. Every teacher admits, of course with regret, its existence. He even believes that it is common. He more than suspects that some of his neighbours are guilty of it. "There is Mr.—, for instance, whose name makes such a figure in the examinations—It is all done by cramming!" If, however, we call on Mr.—and charge him with the offence, he indignantly denies it, and hurls back the imputation on our informant. And so with other cases. As this experience is general, we are forced to the theoretical conclusion that cramming is a thing that all teachers professedly hate, but really practise.

This conclusion is, however, no doubt far too sweeping. There are exceptions to every rule, and I flatter myself that my audience this evening is composed of exceptions to this; and I have therefore no hesitation in calling on you to join with me in abusing the *criminal absentees*.

But before we proceed further, it may be as well to enquire what this heinous crime, the mere imputation of which every teacher so earnestly deprecates, really is. What is cramming? Perhaps the Dictionary will help us to answer the question. Let us see. "*Cram, v. a., literally to draw together (according to some, another form of *cramp*), to press or drive in, to ram down, to stuff, to fill to excess; or, in polite slang, to prepare anyone, in a limited time, for passing an examination, by the stuffing in of intellectual food.*" Thus far the Dictionary, which apparently confines the application of the term to a special category. As, however, we know that common usage sets aside this limitation, and designates as cramming all kinds of intellectual feeding which consist of stuffing in, we unhesitatingly accept the most general interpretation. But, having done so, we are no longer surprised that teachers all round vehemently deny their complicity in a transaction which involves the treating of children as Strasburg geese or prize pigs. "Stuff or ram down intellectual food!" Not they, indeed! They leave that to the crammers by profession, who live—and handsomely too—by practising acts of this kind. For themselves, all the world knows that they are educators as well as instructors; and as such, of course, mind-formers, and therefore promoters of natural feeding, not stuffing.

It appears, then, on the whole, that cramming is a crime "abhorred by Gods and men," but that no one—no teacher, that is—owns to being concerned in it. Still, as all writers on education recognize its existence, speak of it as extensively prevalent, and declaim against it, we cannot help believing that some, perhaps many, of those who disown it are really guilty of perpetrating it. Amongst other authors we find Professor D'Arcy Thompson eloquently inveighing against it in all his writings. He illustrates it by quoting his own experience while a pupil at Christ's Hospital, and proves beyond all question that the system pursued throughout the entire course of instruction, at the time he was there, was one of cram

ming. It was forced feeding, which had no relation to the nature of the mind, and the food rammed down was indigestible. After a long time, he says, some of it was, indeed, partially digested by the much enduring mental stomach; but this was in spite, not by virtue of the system. The system was, by its nature, destructive of digestion; and though it did not ultimately destroy, it permanently injured, the digestive organs. In one of these works he gives a graphic description of cramming by comparing it to the process by which a boa constrictor is fed. Once a fortnight the boa is ready for a meal, and accordingly a goat is given him. By slow degrees this tremendous morsel finds its way down the creature's gullet, and in due time what was goat becomes boa—is incorporated, and assimilated. Up to the point at which the bolus is stuffed down into its destined receptacle, Mr. Thompson finds a considerable resemblance between the two processes; but there, he says, the resemblance ends. The boa's meal, after all, does get digested; but the goat stuffed into the human boa in many cases never gets digested at all, and people go about, all their lives with the undigested goat in their stomachs, or, at least, with large limbs of it which have never been assimilated, and therefore, instead of invigorating the system, lie like a dead weight burdening and oppressing it. Even you (I can certainly speak of myself) have at this very moment, there is no doubt, in your mind big lumps of undigested goat, and much of the mental dyspepsia, and the consequent weakness and incapacity for intellectual action of which you are sometimes conscious, is ultimately due to the boa constrictor cramming of early days. (1)

In fact, it is rare to meet with a man who has fully digested his goat, and in the case of children under instruction infinitely rarer still. But surely this is only another way of saying that they have been crammed, not naturally fed (for what may be very suitable for a boa is certainly not necessarily suitable for a human being), and that the infrequency of sound digestion testifies to the frequency of cramming.

I remember myself reading long ago, I think in Mungo Parke's travels, an account of the fashion in which, some where in Africa young girls are prepared for the matrimonial market. They are drenched every morning with enormous draughts of butter-milk, which the mothers, stick in hand, compel them to swallow. The object is to make them fat, and therefore beautiful; and when they are so obese that they are unable to walk, the end is gained—they are beautiful for ever! All their active powers are extinguished, they are made inert and stupid; and this is the triumph of cramming. I need not stop to point out that similar results are often seen in the parallel case of drenching children with floods of words, which however do not always tend to fatten though they do frequently produce sluggishness and stupidity.

But to return to our enquiry. It appears that no teacher owns to cramming, and yet that the practice extensively prevails. In order, then, to bring the matter to a practical test, I ask you who are now before me, every one of whom has gone through a school course, were you, or were you not, crammed at school? Was the food supplied such as you had a relish for, and such as you could and did digest? That is the question. I will answer for myself, though possibly my own experience may not precisely correspond to yours. I remember as if it was yesterday, though it is considerably more than half a century ago, that I was taught what was ridiculously called Geography, by being compelled, two or three times a week, to gulp down an inch of close black type from

Goldsmith's Manual, and to regurgitate it whole, just as I swallowed it, in the presence of the master. Not a question was asked, no reference to a map even hinted at, not a single idea gained from it. The consequence was, of course, that I never learned Geography at all. It was the same with other things. I was dosed with columns of spelling, with pages of words with "meanings" which had no meaning to me, and the Arithmetic was a dreary grind of mechanical operations which I performed by word of command, without having the least idea of what I was about. Have you ever been victimised in this style? Perhaps not to the same extent, but yet I know perfectly well that, with some notable exceptions, you have all passed through a discipline of the same kind. It is, in fact, as rare to find a man who does not declare that he was crammed more or less at school, as it is to find a teacher who owns to being a crammer. This is surely a singular phenomenon! But I need not press my question home upon you. The evidence required to prove my case is only too abundant. Here are two or three specimens.

A child about 11 years of age, in one of our primary schools, was told by an Inspector to write down the "Duty towards God," which he had learnt from the Church Catechism. He wrote down, "My duty toads God is to bleed in him to fering and to loaf withold your arts withold my mine withold my sold and with my sernth to whirchp and to give thinks to put my old trast in him to call upon him to onner his old name and his world and to save him truly all the days of my life's end." &c. Don't you see here, plainly enough, the great lumps of undigested goat?

A little girl at school was once reading, in the presence of a visitor, a passage in which the word *dice* occurred, and was asked what it meant. To the surprise of the questioner, she replied, "Little cubs at play;" and on enquiry it was found that she had been crammed with columns of meanings, as they are called, and among them this, "*Dice*, little cubes used in gaming."

Another curious instance presents itself. In one of the western islands of Scotland a visitor to a primary school was requested to examine a particular scholar on the capitals of Europe. The boy named one after another with perfect correctness. It occurred to the visitor to ask the boy the name of the island in which he lived. He could not answer; and when at last the examiner said, "Now tell me what a capital is?" No answer. "Is it a man, or a beast?" "It's a beast," replied the boy, quite decisively.

A very short time ago, Mr. Meiklejohn, as the Examiner appointed by the Endowed Schools Commission for Scotland, asked a class of boys in English literature to state what they knew of Bacon's writings. They wrote respectively,—"Lord Bacon's principal work is the *Incompendium Organum*;" "Lord Bacon wrote the *Ovum Organum*;" "Lord Bacon wrote the *Instratione Magna*;" "His great work is *Imstrantio Magna*;" and the other answers to questions in English literature were of the same kind. In all these cases, the actual condition of the stomach shows, as plainly as if we had been present at the feeding, what sort of feeding it was. The goat had not even begun to be digested.

But it may be said that such instances as I have quoted are only to be found in inferior schools. If, however, we turn for a moment to the public schools, whose merits are eulogized by persons of authority (the late Bishop of Winchester, for instance), we find specimens of the same kind. The public tutors and examiners of Oxford and Cambridge declared in 1863 (at the time of the Public Schools Commission) that the average of youths entering the Universities from Public Schools were "badly

(1) The only German verb which answers to our "cram" is *einochsen*, to stuff with an ox—a every significant word.

grounded," "in knowledge, absolute ignoramus," "had everything to learn and little desire to learn anything," "had very unawakened minds and habits of mental indolence and inaccuracy," "were deplorably ignorant of English literature, English history, and English composition." &c., &c. What sort of feeding must that have been which produced these wretched results? Do they not unmistakably testify to the flagrant cramming, which had not only failed to nourish the system, but had ruined the digestive powers?

But really it is not worth while any longer to beat about the bush. If the goat remains undigested, it is simply because the digestive powers cannot act—because no account has been taken of their condition, and the food has been rammed down to take its chance. In spite, then, of all reclamations from teachers, we say decidedly, if this state of things be general—not to say universal—it bears witness to a cause as general; and if cramming is a sufficient cause, we need seek no further.

The position, then, I now take is, that much—I might say most—of the teaching that goes on in our ordinary schools is of the nature of cramming.

We shall see this more clearly by quoting Prof. Blackie's pithy definition of cramming: "*Cramming*," he says, "*is a species of intellectual feeding, which is neither preceded by appetite nor followed by digestion.*" This definition is noticeable, both for what it asserts and what it implies that intellectual feeding of the right kind is preceded by appetite, and is followed by digestion. This is my own opinion. I believe with Quintilian, that it is as natural to the mind—and especially to the child's mind—to seek for occasions to exercise its powers, to gain knowledge, and to think, as it is for birds to fly or horses to run; that is to say, that the child is born with an intellectual appetite for food suited to his nature—that he is not only not indifferent to it, but eagerly desires and hungers for it, and is always struggling to obtain it, the only condition being that it is food adapted to his digestion, food which is capable of becoming, by assimilation, a part of his system, and giving him the consciousness of strength and happiness. Such food not only may, but must, in the nature of things, be digested. The whole question lies here. The very word cramming denotes unnatural feeding; and unnatural feeding is antagonistic to digestion. There is no escaping from the dilemma. You offer food unsuited to the stomach, which turns away from it; there is no natural appetite. You therefore ram it down; but because no appetite has preceded, no digestion can follow. In ordaining the means, you ordain the end. You know that cramming means indigestion; yet you cram, and wonder at the result, which could not possibly be other than it is. (When I say you who hear me—I mean those outsiders who say that they abhor cramming.)

Now, what is the fact? There is a child brooding over something that he is interested in, feeding with real gusto on knowledge which he is gaining for himself—knowledge which he is gaining for himself—knowledge of flowers, of stones, of butterflies, of birds; knowledge which, as it were, offers itself to him, and invites him to feel, and is found in the area of his daily life and experience. Has he an appetite for it? Look at him; observe his eye, his animated countenance, the satisfaction and pleasure, the keenness, with which he feeds. Everything about him betokens appetite, and promises a happy digestion. You see the food he chooses, and his manner of feeding. Can you not supply him with more pabulum of the same kind, and, by sympathizing with his *modus operandi*, help him in his efforts at self-nourishment, and so make the digestion more complete? Can you not, in short, by natural feeding, increase his appetite, and make all the

food he takes conducive to his health and strength? You can do all this effectually, if you only let him feed himself; that is, if you practically admit the correlation between appetite and digestion, and employ all your powers to promote the natural exercise of his. If, further, you have a strong conviction that this very exercise is itself a source of pleasure and satisfaction, that he delights in it for its own sake, you may make it productive of vigorous development and growth—and all this without the slightest approach to cramming.

But you don't believe in his natural capacity of self-nourishment. You laugh at the idea of feeding him on what he has an appetite for; you care nothing for digestion, and accordingly give him the Public Schools Latin Grammar. Look at him now, is this the same child? Why, the first glance at the book has petrified him. The Medusa's head could not more effectually have done it. Every power is numbed and frozen into inactivity. He still wishes to feed; but his stomach turns at the dish set before him. Appetite is out of the question. What is there in the dish? A mess of nouns, parasyllabic, imparasyllabic, heterogeneous, and heteroclitic, of verbs deponent, quasi-passive, trajective, with moods concessive, dubitative, hortative, and prolate infinitive; of adverbs consecutive and causal; of relations epithetic, attributively ethetic, annexive, prolative, proprietive; of asyndetons, congruents, syncopes, apodoses and protases, and scores of other ingredients of the same sort. Isn't this a pretty dish to set before a—boy hungering for real knowledge? You ask him to sit down to his meal and feed? But how can he feed, when there is nothing for to eat? You know that there is not slightest appetite—that digestion is impossible, for "good digestion waits on appetite;" but you also know that you have the power to ram down the unsavoury mess; and, in spite of the wry faces he makes, you accomplish your object. Down it goes. It is out of sight, and it is also, in the strictest sense of the term, "out of mind." The mind—the understanding and reason—the powers of intellectual digestion, will have nothing to do with it. It is left to the grinding of the roto (1) or hurdy-gurdy memory and the intelligent, knowledge-seeking child is reduced to the rank of a parrot, that chatters words without ideas. You have performed a wonderful feat; you have stuffed the memory with a heap of crude, incoherent rubbish, which the child's mental stomach can no more digest than his bodily stomach can digest flints, slates, or cinders. You are, therefore, the very man that Prof. Blackie had in his eye, when he declared that cramming is a species of intellectual feeding, neither preceded by appetite nor followed by digestion; and the essential vice of your proceeding is, that you have not only quenched appetite and rendered digestion impossible in this particular case, but that you have created a distaste even for wholesome food, and enfeebled the digestive powers—you have deranged and disordered the whole system.

The reply sometimes made to the charge thus brought against the crammer is, "All your talk about appetite and digestion is bosh. What appetite can a boy have for for this sort of thing; and if we wait until a boy hungered, as you call it, after knowledge, we might wait for ever." There is, no doubt, some reason in the reply. We cannot, however, no make and excursion into the field to which the objecter virtually invites us, and discuss with him the value of and necessity for classical studies. I can only

(1) It is not universally known—as it should be—that roto (from Latin *rota*, a wheel, is only another name for that churning instrument called the hurdy-gurdy, from which music (?) is literally ground out.

express my opinion very decidedly, that they constitute an invigorating discipline for the mind is duly prepared for them, and that all minds may be so prepared; but that prematurely to force them on young children is a mistake which involves the most disastrous consequences. I further maintain, 1st, That there are foods which children receive with gladness and are able to digest, and by natural feeding on which their mental stomachs may gain, in time, healthy tone and power that will make them strong enough to attack, and with an appetite too, the very crudities against which they at first revolt, and obtain nourishment from them; and 2ndly, That children have not only a natural craving for *knowledge*, but also for *work*, and that cramming checks this natural instinct, and condemns it to inaction. A system of feeding, then, which takes no account of the suitability of the food for digestion, and actually injures the digestive powers, must be condemned, as defeating the very end of its existence.

It is now sufficiently obvious that the question of cramming really underlies the whole question of education. Wherever a child is undergoing the process called teaching, he is either being naturally fed on suitable food, which he consequently digests and converts into life blood for the nourishment and invigorating of the system; or he is being crammed with crude, unpalatable, and therefore indigestible messes, which produce mental atrophy and ruin the digestive powers. The feeding is either a savour of life unto life, or a savour of death unto death. Nor is it too much to say that the process of cramming, which a comparatively few children of strong natural constitution manage to survive, kills or permanently enfeebles the great majority.

I am compelled, then, consistently with the purpose I have in view, to denounce the crammer *pur et simple* as an enemy to education. By his defect of sympathy with the wants and aspirations of the child, by his defiance of the laws by which the mind naturally gains and digests knowledge, by his neglecting to train the active powers to their appointed work, he defeats the ends of education, and converts it into a machinery for "the artificial production of stupidity." (1)

Leaving, however, behind us the crammer *pur et simple* who stuffs the memory with words and leaves digestion to the chapter of accidents. I am further compelled by my general argument to include in the category of crammers all those teachers who give the learner what he ought to gain—who force upon him the ready-made cut-and-dried results of other people's labours, and who generally, do for him what he ought to do for himself. All such teachers set at nought natural feeding, and I know of no name so suitable for their procedure as that of cramming.

To justify this assertion fully, would require, of course a lengthened discussion of the fundamental principles of education. We should have to define the true functions of the teacher, and establish their correlation with those of the learner; to determine what the laws of psychology prescribe or proscribe to both; to settle the natural order of studies, &c. It is clear that we have no time for such a discussion now. I will therefore comprehend all I have further to say in one proposition, which presents the essence of the subject.

Cramming, then, I maintain, is the unlawful appropriation, by the learner, of the results of other people's labours, and the teacher who aids and abets in the transaction, and in proportion as he does so, is a crammer.

* (1) I borrow this pithy expression from the heading of a most valuable Essay by Mr. Brudenell Carter which is reprinted in the May Number of the Monthly Journal of Education. I strongly recommend it the attention of teachers.

This large proposition, which brings into the category of crammers hosts of teachers who usually regard themselves as innocent of the crime of cramming, which will of course, at first hearing, be generally rejected. But let us see what it means. It means that definitions made for and not by, the learner—made by the constructor out of facts which he knows, but the learner does not know—rules made for, and not by, the learner, out of principles which the maker has, but the learner has not, investigated—general propositions, of whatever kind, framed and particulars which the framer has, and the learner has not, manipulated—are the results of other people's labours, and, if appropriated by the learner without previous exercise of his own mind upon them, are unlawfully appropriated—crammed, in short; and the teacher who is an accomplice in the transaction is, *de facto*, a crammer.

For instance: Somebody or other, say Mr. Blank—a man, not a child—after well considering what is meant by "language," its "nature" and "use" and the relation of what is called Grammar to it, writes down. "Grammar is that art which treats of the nature and use of language." He looks with complacency at his work, considers it very simply and clearly expressed, and assumes that it is admirably suited for the first lesson in English Grammar. He therefore confidently offers it to a child, who is utterly ignorant of the abstractions "art," "nature," "use," "language," contained in it. But what, after all does it really represent? It represents Mr. Blank's knowledge, thought, and experience; but it represents no knowledge, thought, or experience of the child. It is a result which he has had no share in gaining. It is a matter, therefore, which his mind cannot possibly digest. The words are absolutely unintelligible. They do not stand for ideas to him at all. He can understand, *apple, stone, house, flower*, &c. and when he sees these words, they called up ideas more or less definite of the things they represent; but *art, nature of language, use of language*, call up no ideas whatever. He may have heard the words, but he has heard them merely as sounds, and they are sounds and nothing else now. The definition might almost have been written in Chinese. What, then, is to be done? It is obvious that the mind—the understanding—cannot be roused to action by sounds which mean nothing, which suggest no ideas, which excite not the smallest interest, which provoke no appetite. Natural feeding, then, is out of the question. The teacher has, however, one unfailing resource. He knows that the child is a compound of the sensational and intelligent—that he has something in him of the parrot as well as of the rational man. He knows, moreover, that in this case it is of no avail to appeal to the rational man. He therefore sets altogether aside the distinction between the intelligent child and the unintelligent parrot, and forces him to cram down into his memory the empty words which mean to him absolutely nothing; and if at some examination the child, when asked, "What is Grammar?" can answer, "That art which treats of the nature and use of language," he flatters himself that he has been successful in teaching Grammar, and probably gives himself out to the world as an educator. An educator, forsooth! He is nothing but an adept in the artificial production of stupidity!

This is one instance of the unlawful appropriation of the results of other people's labours; though appropriation is not the right word, for in this case the knowledge contained in the definition becomes in no sense the property of the learner. The only property he gains is the empty sounds, *voces et præterea nihil*, and a fine property it is, just as useful for feeding his mind, as a dish of chaff for feeding his body. The epithet *unlawful*,

however, is strictly correct. The child, as a learner in the elementary stage, has no business with other people's results; his business is to gain his own. He can do this if the subject is suited to his powers; if it is not, it ought to be postponed until he can grapple with it himself. It is still a question of feeding, an operation which he must perform for himself, which can not be performed for him. The masticating, the insalivating, the entire preparation of the alimentary bolus, must be his own work. Just as the subsequent digestive process must be his own. If the food is obviously unsuitable to him, why give it him at all? But if it is suitable, every operation by which it is to be converted into life blood should be performed by himself. It is unlawful to attempt to gain the result in any other way.

Take another instance. The teacher holds up some object before the learner, and, looking at it in his own hand, proceeds to describe it. It is, he says, "hard, cold to the touch, heavy, divided into such and such parts," &c. Having finished his comments, he puts it away. That teacher is a crammer; he is abetting in the act of unlawful appropriation; he is preventing the learner from gaining experience for himself, by handing over to him the results of his own experience, and stuffing him with them. He knows, because he has exhausted the action of his senses upon the object, that it is "hard," "heavy," &c.; but the learner does not know this. His knowledge is limited to what sight tells him. It proceeds no further; but he might have known by his personal experience, known of his own knowledge, all that the teacher tells him—might in fact, have fed himself; but the teacher chooses to feed, that is, cram him, and by so doing cramps his powers, and hinders mental digestion, and he goes off moreover with only a morsel or two of food, instead of a whole meal. No complete idea has been formed; he has simply apprehended, he has not been permitted to comprehend. The teacher has not seen that it is the learner's own self-activity, that constitutes his education; and that, to hand over to him results which he has not earned, is to neutralise and enfeeble his powers—and, in short, to abet him in appropriating other people's gains. (1)

Let us take another instance. A child is crammed with the multiplication table. He glibly repeats, Six times five are thirty, six times seven are forty-two, &c. He perhaps does not know what *times* means. He often does not know that six times seven is the same as seven time six. He knows six and seven, because he had experience of six nuts or seven marbles, but he does not know what forty-two means, because it probably transcends his experience. He has no idea in his mind corresponding to the word. It is a case of unlawful appropriation. If he had been required to make six heaps of seven nuts or peas, and when mingled the heaps, and counted the result out, he would have obtained this idea; and then he would have known forty-two, whereas it is now a mere sound, nothing but cram.

And so with other tables. Getting them up to repeat merely by rote, without an intelligent perception of their meaning as interpreted by facts, is of the nature of cramming—it is unlawful appropriation. A child masters the sing-song of twelve inches make one foot, three feet one yard, &c., having no ideas in his mind

corresponding to the words; it is rammed or crammed down. But suppose he had put into his hands a yard measure, graduated with feet and inches and counted the large divisions, and then afterwards the small ones, this would be feeding on fact-food, which would give him ideas, not on mere word-feed which he could not turn into ideas. He would be gaining knowledge for himself. And then, with the yard measure in his hand, he could find the length of the desks, forms, or the floor of the room, which would be practically applying his knowledge. And further still, having gained the idea of a foot, he might by his eye, guess at the length of different sticks and rods, and then by actual measurement verify the judgments he had formed. All, then, would be natural feeding.

In the same way, by handling whole and divided cubes, he could learn by himself, and without cramming, that a three-inch cube contains twenty-seven inch cubes. In all these cases the same principle holds good. The child gains knowledge by observing for himself; and illustrates in his practice the laws of psychological action without telling or cramming.

But whenever the teacher, in defiance or distrust of the natural capacity of the child to observe and acquire knowledge for himself, to use his senses, and to tell in his own way what information they give him, to compare and form judgment, to draw conclusions from accumulated instances, to classify and generalize, to discover and invent—by performing these operations for him, hinders him from performing them himself, and thus nullifies or neutralizes the advantage he would gain by doing his own work; the teacher is, I once more repeat, aiding and abetting the learner in the unlawful appropriation of the results of other people's labours, and is therefore, whether he knows it or not, cramming and interfering with natural feeding.

But further, and more generally still. Whenever the teacher, in defiance not only of the child's nature but of the nature of things, neglects the true order of mental development, involves his pupil's mind in the misty and obscure remote, which is beyond the range of his personal experience, instead of exercising him in the clearly-defined area of the near, which is within the range of his personal experience; whenever the teacher hurries on the child with long strides, instead of allowing him to proceed by his own sure method of step by step, advancing only as he can advance; whenever the teacher, instead of guiding the learner from the known to the unknown, from the particular to the general, from the concrete to the abstract, from the centre to the circumference, inverts this procedure (as when he gives definitions and rules in advance of the facts and principles on which they are founded), he sins against the nature of things, and against the laws of mental development, and is essentially a crammer. The laws of the child's nature, the laws of mental development, are the true, the only bases of solid education. It is only when the teacher is acting in obedience to these laws that he is in any sense educating his pupils. All action which ignores them is of the essence of cramming, and for the reason that I have already expounded—that he does for him what he ought to do for himself, and by this action prevents natural feeding, and aids and abets him in unlawfully appropriating the results of other people's labours. The teacher who would avoid this interference with Nature's laws must study—1st, The nature of children, in order to ascertain what food is, and what is not, adapted to that nature; and 2ndly, The laws of intellectual action, in order to learn how the mind gains knowledge, and therefore to guide the child's mind in accordance with them. Equipped with the results of

(1) I have often quoted Dr. Temple's remarks on this subject, but I quote them once more as opposite to my purpose. "All the best cultivation," he says, "of a child's mind is obtained by the child's own exertions, and the master's success may be measured by the degree in which he can bring his scholar to make such exertions, absolutely without aid." It is clear that the teacher, who, even with the best intentions, supersedes these exertions, violate a prime canon of teaching, and is so far a crammer.

this twofold-study, teachers would cease to be, what so many of them are, artisans in education, mere adepts in routine and rule-of-thumb; and become, in the true sense of the term, artists—men acting by scientific law, and ready to give a reason founded on the nature of things for every process they employ—no longer cram-mers, but promoters of natural feeding.

I can hardly doubt that you are now prepared to join me in heartily condemning the mean and ignoble art of cramming, as one that strikes at the very root of all true education. I call it ignoble, because it aims only at ignoble ends. It degrades both learner and teacher—the former, by treating him as a mere animal to be stuffed with words; the latter, by giving him a task to perform which requires neither knowledge nor intellect. On the same grounds, it levels all distinctions between teachers. The highest and the lowest in rank may equally become adepts in cramming.

Then there is the moral aspect of the question. Cramming is a system of shams and delusions, which pretends to be what it is not, and is what it pretends not to be. It pretends to be advancing the cause of knowledge and truth; it actually screens ignorance and error; it gives mere words the place which is due to ideas founded on realities, and which alone constitute sound knowledge; and therefore creates the habit of being contented with the semblance instead of the substance—a habit which slowly but surely perverts the moral nature.

It can never be too often repeated that cramming and education are in direct antagonism; the success of the one is the defeat of the other. Education aims at developing all the learner's active powers, and making the best of their spontaneous and independent exercise. Cramming crushes development; emasculates and enervates the active powers; makes the best only of word-memory, and checks spontaneity and independence. Education trains the child in the art of gaining knowledge for himself, teaches him how to learn, gives him the power of self-direction, and makes him a man. Cramming trains him in the art of purloining other people's property and exhibiting it as his own; gives him only the power of going as far as he is driven, and makes him a machine. Lastly, education trains the moral character, by leading the child to be what he appears, to know really what he professes to know, to keep to truth and fact. Cramming perverts the moral character, by forcing him to appear what he is not, by giving him the semblance instead of the substance of knowledge, by substituting the illusions of words for the reality of things, and making him indifferent to fact and truth.

In closing my subject, I must briefly refer to cramming as a means of preparing boys or girls "in a limited time for passing an examination by the stuffing in of intellectual food." The present rage for examination has given an impetus to this practice, which is acting very injuriously on the interests of education, considered as development and training. It is, in fact, rendering true education increasingly impossible, by checking development and discarding the very notion of training. The most hopeful candidates for examinations of this kind are those who have the best memory for words crammed up for the purpose; questions that appeal to the understanding are rarely put, and therefore rarely prepared for. He who knows a subject, because he has thought it out, and whose memory retains it, because it has been elaborated by the competing with him who has got it up by cramming. The rational memory has little chance against the rote-memory. It is characteristic, however, of the results of the rote-memory, that they vanish from the mind almost as soon as the object of the process is

gained; while those of the rational memory, being converted in *sanguinem et succum*, remain as part of the system for ever, so that reason gains the mastery in the end.

But I must bring this lecture to a close. I have only a few words to add in conclusion. I have expressed myself strongly on the cramming common among teachers, because I feel strongly; but I earnestly deprecate the imputation of being wantonly an accuser of the brethren. I have been, and still am, one of yourselves. Though I have long quitted the field of professional exertion, the interest in education, kindled in my earliest years, still remains undiminished. I shall then never deny, but as long as my life may last, take a pride in, the title of teacher. I must confess that I too have been, in my day, to some extent a crammer. With my present convictions, however, I could never become a crammer again. I see too plainly the fatal error of the practice; and it is because I wish to impress you with my own convictions, that I have spent this evening in cramming you with arguments against cramming.—(*The Educational Times*.)

Address on the Elements of Education,

Given at the E cœnia, King's College, Windsor, June 24, by
Professor How.

Last August witnessed gatherings in England and America in commemoration of an event of the highest importance to mankind, though it is most directly interesting to the chemist, for he turns naturally towards assemblages of fellow-workers who met to celebrate what may be termed the birth day of chemistry. It was on the first day of August, 1774, that Priestley discovered oxygen, and it is not too much to say that though there was some chemical art before this date, there could have been no science of chemistry, so that the name Centennial of Chemistry was appropriate to the celebrations held last year. When the most rapid glance is cast over the interval of 100 years, it cannot fail to be seen that topics of the deepest interest presented themselves to the working chemists of both sexes and of many lands, among whom I was glad to see mentioned at the American meeting one of my old students. It is not, however, on the chemical subjects then discussed that I intend to discourse grievefully on this occasion. Priestley was much besides a chemist; he was not even a chemist first; it was not chemistry that drove him from England to die in Pennsylvania, but his theological and political views, which, though he was a most truly moral and religious man, were abnoxious to a mob and some prejudiced parties in those intolerant and excited times, and I am led to refer to him, because among his other writings he had an essay on Education, which was mentioned at the Centennial as one which might be used by a modern educational reformer, who, without discarding the old training, asks a hearing and a place for the new. "It seems to me," he says, "a defect in our present system of public education that a proper course of studies is not provided for gentlemen who are designed to fill the principal stations of active life distinct from those which are adapted to the learned professions." He evidently thought with Milton that it was better

"Not to know at large of things remote
From me, obscure and subtle, but to know
That which before us lies in daily life."

"So remote," he adds, "is the general course of study at places of the most liberal education among us, from

the business of civil life, that many gentlemen, who have the most liberal education their country can afford, have looked upon the real advantages of such an education as very problematical, and have dispensed with it in their own children." The comment on this was that "published 110 years ago, it displays such a distant forecast, that it needs only a little modification to be of practical utility to-day."

Presently dawned the Revolutionary Age, and in the din of war the voice of educational reform could not be heard. The struggle for independence and the rise of the Republic beside us; the outburst of the French Revolution; the fate of Louis XVI; the Reign of Terror; the career of Napoleon, filled the minds of men. It was not till the blood of millions had dried up, and the war had ceased to be the occupation of the greater part of the peoples called civilized, that any thought could be given to such a trifle as improvement in teaching anything except the all important art of killing. Not that education was forgotten, in England at least, for on this day it must be mentioned, in commemoration according to Statute, that George III, founded this University in 1788, when the political sky had cleared for a time.

But the methods pursued were still the time-honoured and restricted systems which excluded all science but mathematics, and about the middle of this century only began that movement which has resulted in what we see now in the educational world when natural and experimental science are indispensable elements in every good scheme of education. Those who have not looked into the question would be surprised to find how short a time ago the strictest of old views prevailed at the public schools and universities, especially in England. Oxford indeed has achieved for itself a reputation of the most conservative character. It was Macaulay, (the historian, not our respected chief, who, I think, would hardly speak so unkindly of our prototype), who said of it, in reference to a period of great reaction in favour of Charles II, divine right, and so on, "It is scarcely necessary to say that, in this hot competition of bigots and slaves, the University of Oxford had the unquestioned pre-eminence. The glory of being farther behind the age than any other portion of the British people is one which that learned body acquired early and has never lost."

Some 350 years ago the introduction of Greek and Mathematics, the "New Learning" of the period, was vehemently opposed. The king himself had to summon one of its fiercest opponents and enforce silence on his pulpit tirades, and when the preacher alleged that he was carried away by the Spirit—"Yes, retorted the king, "by the spirit, not of wisdom, but of folly." Speaking of to day, perhaps the brilliant satirist would have given a somewhat different statement, for great changes have been effected even there, the New Learning of our time has forced an entry, and the teaching of Oxford is now more broad and university like than it was; more in unison with that of other great seats of learning; more adapted, in fact, to the wants of the people for whose benefit it originated 1000 years ago.

It was doubtless the expressed feeling of dissatisfaction with prevailing systems of education that led the British government about twelve years ago to appoint a commission "to inquire into the revenues and management of certain colleges and schools, and the studies and instructions given therein." A very brief notice of some of the details gone into may not be without interest and value. There were series of questions addressed to the several authorities of the great public schools—Eton, Westminster, and the rest of them—and of those connected with my present subject, was one asking whether physical science was considered in determining the rank of a boy in school;

and another as to the provision for the teaching and study of it. In the whole 97 pages of evidence from Eton I could not find the words Physical Science. The same is true as regards Winchester, St. Paul's, Merchant Tailors' and Shrewsbury. At Charter House, chemistry was taught, at option, to a considerable number of boys. At Harrow no branch of physical science formed part of the regular course, but every quarter a voluntary examination, open to the whole school, was held in some one branch, and efficiency rewarded. At Rugby, natural philosophy was taught four hours a week; a laboratory was open every day but Monday, for six hours at least. The foregoing are the old public schools, called colleges, at which science is more freely brought forward. At Marlborough, chemistry is taught, and the head master, in reference to the question—"How far is it possible to give a really good public school education on any other basis than that of instruction in the dead languages?" said, "I do not believe that we are at present in a position to answer the question finally and decidedly, for the experiment has not been fairly tried, but I may state briefly my own opinion. While I should deliberately prefer, as the best education, where attainable, that mixture of careful study of the language and substance of the great writers of antiquity, with modern reading and mathematics, which I attempt to combine in my own teaching, yet I believe that a thoroughly sound education may be given, and at the same time the advantages of public school life enjoyed by boys with whom, for various reasons, a different plan is pursued by having a large space devoted to mathematics and science, and a thorough study of French and German substituted classics." At Wellington, classics form the main body or trunk of the education, on which all other parts (though not provided or considered as extra, but as integral parts of the work) have been engrafted. This has grown more important in experience; not less so. This seems not to suffer from the variety of interest, which, within careful limits, and while, as a rule, success in classics is attended with success in other subjects, there are not wanting instances in which the first success and encouragement which have "brought a boy out" and improved his classical work itself, have occurred in some other branch. Chemistry is taught as a lesson and practically, and duly examined upon. At Cheltenham "natural science has fair scope in the Modern Department, and is efficiently worked. To it we look for the cultivation of the observing and inductive faculties," and the Principal who, however, does not conduct the Modern Department the whole course of which comprises mathematics, Latin, English, History, Geography, French, German, Hindustani, English language, and literature; physical science, drawing, fortification, and surveying, said further, while having more confidence in the older classical system—"but I still think that the existence of our Modern Department gives far greater perfection to the system of education, and far better scope for the various ability and knowledge of our boys than could be possible, if only the classical system prevailed. I feel sure that it gives a true education, and not mere instruction in various subjects." As the great majority of the students at Oxford and Cambridge were sent from the schools just noticed, it was natural the commission should ask the opinion of the teachers there what were the results of their observation as to what proportion of young men had acquired any knowledge of natural science, or spent time profitably upon it, and how far the great prominence given to classics and mathematics at the Universities affected the teaching at the schools, and also whether the earnest prosecution at the schools of what are termed modern subjects would tend to give a higher value at the

Universities to honours taken in those subjects. Of course there was great difference of opinion when the questions were answered at all, and in several instances they were not, some were altogether opposed to interfering with the old system, others had doubts, but some on the other hand were most decided in their expression of opinions favourable to teaching science and other modern subjects in schools, and giving them proper rank in the Universities. An Oxford man said boys should be, "when of somewhat mature age, put through one or two courses of physical lectures, on the principles of mechanical and chemical science. Their minds could not fail to be enlarged by work quite new to them, and by facts which would connect their work with the world around them." As for the University, he said, "the average work done at Oxford was scarcely worth the name, and we would act wisely, both for the University and the men, were we to give a freer scope, and allow some part of the work done here to bear practically on each man's special line of life." One Cambridge man was much more critical in his remarks, and thought "it is what is usually called Physics or Experimental Science which is best suited for school work. Mechanics and hydrostatics treated experimentally, in sciences relating to heat and electricity, and chemistry." These appeared to afford an exercise of the greatest possible variety of mental powers.

Having gone first to the heads of the chief educational establishments from whom it was only natural to expect a decided opinion in favour of the old classical system, the commissioners desired to hear from men who had distinguished themselves as teachers of science, what they thought on the matter, and so they called upon a few men eminent in various sciences of observation, classification, and experiment. The first of these was Dr. Carpenter, a well known writer on Physiology, and Registrar of the London University. He dwelt upon the fact that the matriculation examination at this place included as much classics as the middle class examination of Oxford and Cambridge; but he maintained that the training of the faculties by the study of classics and mathematics alone or combined was very imperfect, and that there ought to be a change of a plan according, not only to objects in life, but to mental particularities; and he strongly advocated beginning with some science of observation very early in life, because any right system of education will take up faculties in the order of their development, and the observing faculties of the young are keen and very readily trained age makes up badly for neglect of the exercise of the faculty of observation. He had been acquainted with several gentlemen who had passed with distinction through a course of public school and university training, and who confessed to him with regret their inaptitude to understand any scientific subject whatever—their want not only of the knowledge, but of the mental aptitude, which arose from not having studied any science when young. He told a curious anecdote about teaching absolutely nothing but classics, as was formerly done at Eton. A young man had gone through the complete course there, and it was found accidentally that while he was intelligent in other respects, he had not only never learned his multiplication table but he did not know there was such a thing as a multiplication table. He was buying several pairs of silk stockings in a shop, and to find out how much he had to pay, he was adding the price of one pair to the second pair, and that to the third pair, and so on. When he found how much easier it would be to work by the multiplication table, he applied himself to master it, and learnt it off in the course of a few days with the keenest pleasure.

Sir Charles Lyell, the geologist, said that since all branches of natural science are so closely connected, if

the elements of any one are to a certain degree mastered, it will train the mind in the same way and be the same exercise as any other, and afford a very useful training which to a certain extent the study of the classics will not supply. He thought the great reason why there was no attempt to furnish science at the public schools was because it was slighted at the universities as inferior to classics. A merely elementary knowledge of chemistry and natural philosophy should be included in every matriculation examination, because it is of immense importance that these subjects should be recognized, as if there is not some idea, he would almost say some respect for these things, implanted at an early period, there is a great disadvantage in after life, and this is a reason why so few persons of rank and influence are enlightened patrons of these branches. He mentioned the false idea among those who have never been grounded in them, that they are comparatively trifling, and do not require the same searching mind and the same severe study as the classics; and he thought too that the reasoning power and the judgment are more cultivated by these subjects than by the exclusive study of the classics. He dwelt particularly on the fact that scientifically instructed men, such as surveyors and mining engineers, had to be sought in Scotland and Germany, in which last country you would find at a gymnasium or second rate school, a teacher exclusively of science. He showed that the middle classes of England (educated, not at public, but at private schools) had greater knowledge of science than the upper, and that there was a dangerous want of sympathy between the better informed working classes of manufacturing districts and the church clergymen, educated at the University, on this account.

Michael Faraday, the chemist, did not speak as an educated man, in common language, but he found it strange that the natural language accumulating for fifty years should be left untouched, and that no sufficient attempt should be made to convey it to the young mind growing up and obtaining its first views of these things. He dwelt most upon the state of mind he found in various classes—want of judgment especially—which he set down to the total absence of scientific training. Going to a stratum of life not touched by former witnesses, as officer of the Trinity House, he found it very difficult to get men of ordinary intelligence, prepared by instruction, to do any thing at all out of the way. Thus men could hardly be found fit to look after a common light-house lamp, still less an electric light; while in France, were men of less wages, able to give a reason, or supply a correction, or act for themselves, who were selected from a class that had instruction. The want of judgment in natural things he found in those learned in literature as well as the unlearned; indeed, it was the highly-educated men he found going to him again and again and asking the most simple questions in chemistry or mathematics; and when we spoke of such things as conservation of force, permanence of matter, or on the unchangability of the laws of nature, they could not comprehend them. Many of those instructed persons were as far from having the power of judgment of such thing as if their minds had never been trained. He found them greatly deficient, not in their own studies, but when taken into the natural sciences; they had no peculiar aptitude for grasping a new subject; he found the same grown-up mind going back to him with the same questions over and over again; he had told the same person a dozen years in succession that water was composed of oxygen and hydrogen. Such minds are not prepared to receive or embody these notions, and that is where you want education; to teach them the A B C of these

things. He thought that exclusive attention to one set of studies during early life so far gives the growing mind a certain habit—a certain desire and willingness to accept general ideas of a literary kind, and to say all the rest is nonsense and belongs to the artisan—and by that habit the mind is really injured for the reception of other knowledge. It takes up the impression that a certain knowledge—he called it the real knowledge—the knowledge of things, is of no importance. The first thing to be done to obviate such a state of things was to give scientific teaching an assured and honoured place in education; and he thought one-fifth, certainly, of time given to study should be devoted to the attainment of natural knowledge.

Then came a botanist, Dr. Hooker. He thoroughly advocated the teaching of botany in schools as the readiest, simplest, and most practical means of training the observing and reasoning faculties. He thought it very undesirable that a boy at school having faculties of a particular kind should have them wholly neglected. Taking the case of one who had a taste for natural science he thought nothing could be more destructive to his whole education than the neglect of his peculiar faculties. If he had no turn for languages, his place in a classical school would be very low down, and it would be morally injurious to him, and tend to impair his self respect to be regarded as stupid because he had no taste for languages. The school-time of a great chemist affords a case in point. Towards the beginning of this century, at a German School of the old type, where pupils were gauged solely according to their proficiency in classics, there was a boy who was the acknowledged dunce of the school; sneered at by his companions, and denounced by his master as little better than an idiot, his declaration that he intended to become a chemist was received by a general outburst of contemptuous laughter. But the boy knew his own speciality. His success in chemistry was yet more decided than his failure in classics; and when he passed away from our midst, he left the name of Justus Von Liebig, second to none in the annals of science.

The next to give evidence was Professor Owen, the anatomist. He thought science should be taught in schools; he advocated some branch of natural history, because its value would be in improving the powers of observation, and enabling the mind to grapple better with all the ordinary business of life, so far as the faculties of arrangement, classification, and order are concerned. On these grounds he preferred it to chemistry; this would educe powers of a different character, though perhaps of a higher order, as the appreciation of cause and effect. He thought the same teacher should not teach both chemistry and natural history.

The astronomer Royal followed with evidence chiefly directed to mathematics. He was from Cambridge, and was severe upon the examiners there, who rather perverted those who may have been well instructed. He read parts of a letter from some eminent Austrian, who said he had admired much in England, but there was one black spot, "the school-rooms at Eaton," defined to be the teaching there. He thought classics should certainly form the basis of education, but the elements of mathematics and a considerable knowledge of physical science should be added, at public schools, and that at universities, sound demonstrative mathematics, with a strong tendency to applied science, should constitute a large part of the education.

Then came the full and most interesting evidence of Dr. Acland, Professor of Medicine at Oxford. They were living in a period of transition with regard to education; he and others had succeeded in making great changes at Oxford, by promoting a wider sphere of education, and

introducing scientific subjects, and providing that these should lead to scholarships and other emoluments. He thought that physics chemistry and physiology (used in a very general sense) should be fundamental scientific subject for pass men at the universities, and the two former for schools. Physical sciences exercise the memory in a higher degree than any thing else, according to his view and knowledge. No one had been turned out of Oxford with scientific attainments for the last twenty years without being thoroughly grounded in classics. They had even then at Oxford, he thought, almost everything that could produce the desirable education in physical science, excepting the good will of some of their classical friends, which he still desired. When he was asked if it was not the case that many clergymen, however learned, had not the influence over farmers and others which they would otherwise have if they were intelligent in those subjects in which the farmers are intelligent, he said he supposed in human nature it must be so, and begged leave to add that one reason why Oxford had gone to the labour and expense of increasing its means of scientific study, was from the sense entertained there of the importance to the clergy and upper classes of England of more extended knowledge, in order to retain their proper relations to the lower and middle classes who have this knowledge.

"Now have I toiled through all," and laborious as the work has been to me, and tedious no doubt the details to you, I trust my effort is not without use as bearing on the system pursued here. If people will patiently and fairly examine our late Calendars, I think it will be allowed that our system is in accord with the average of the views which I have set before you, and that it is entitled to the confidence of those who wish for a sound education to be imparted to the youth of the Province. Let it be remembered too that our numbers of teachers and taught do not bear such a disproportion as prevails in some institutions of great pretensions, where, by the way, it is not one of the things boasted of, and where also the time of teaching in the year is much shorter than with us. It is true we have not

"The murmuring of innumerable bees,"

but we do not fear any comparison in the industry of our workers, the soundness of our instructions, and the real value of our results.

I crave one moment more to touch upon a feature in our system of much importance—it is the work done with the hands—the things of which our students may say "*ea nostra voco quæ facimus ipsi*," our drawing, surveying, and practical chemistry. The propriety of adding manual work to book work in institutions of learning is daily becoming more openly acknowledged; Agricultural Colleges, Technical Schools, the Cornell University to wit, and so Priestly's idea is being carried out to an increasing extent.

Why should not Nova Scotia have its Agricultural College, and why should not this University, acting on the suggestion of one of our liberal benefactors, Dr. Cogswell, add an agricultural branch to its system of education? The governors of colleges have a solemn trust, and it behoves them to consider the form of education in every light, and to make provision for every element necessary to produce a real system of instruction for a people. At the Centennial in Philadelphia last year, much stress was naturally laid upon this point, and a president of an agricultural college said, referring to the well-known fact that it is not sufficient to have spent a certain number of years in a college or university in order to secure a respectable education, "an English

friend, himself a university graduate, once remarked to me that he could point to artisans in workshops in England with better trained minds, as evinced by greater power of following up any connected train of thought, than could be found with many persons who had spent years at the timehonoured universities of Oxford or Cambridge."

Here is material for thought and for action. The single and double-headed educational idols have been demolished, and this part of the nineteenth century has seen too much to respect any system as complete which does not consider the whole man in its culture. It is a noble ambition to devise a real scheme of education adapted to the many-sided wants of our time, a privilege to aid in carrying it out. The removal of mountains of prejudice is slow work, one must be content with partial success, and, to borrow once more the Laureate—

"Still achieving, still pursuing,
Learn to labour and to wait."

NOTE.—A University Sermon had been preached by Rvd. G. W. Hodgson, M. A., a Governor of the College, upon the religious spirit in which the work of education should be carried on. The Rev. President had delivered an Oration in the Hall, shewing how, in the light of Christianity, admirable lessons may be read in the Pagan Classics. The Rev. the Vice President had discoursed most pertinently on the necessity of including religious instruction in university training as in our system.—(*Nova Scotia Journal of Education*)

Boys at Home.

Education has always supplied reformers with a fruitful theme for discussion. It has been so since the days of Hophni and Phineas. It will be so until the millennium renders education obsolete. On no other subject, except perhaps that of religion, do sensible people disagree so widely. On few do rival doctors differ more completely both as to diagnosis and treatment. One physician asserts that hard intellectual labor is injurious to growing girls, whilst a lady M. D. of much experience writes an able paper to prove that mental work strengthens their constitutions. A gentleman proclaims the merits of the present system of pauper education, because he is acquainted with an estimable clergyman educated in a pauper school, and because the said clergyman has recently been presented to a living worth a thousand a year. On the other hand, a lady denounces the same and favors boarding-out for young paupers, because the accounts she receives of the subsequent career of the girls is not edifying. Old-fashioned people often insist that servants have steadily deteriorated ever since they learnt to read and write fluently. Mrs. Crawshay, on the contrary, seeks to demonstrate that a knowledge of music makes the housemaid dust the rooms better, and that an acquaintance with modern languages, particularly French will assist her maid to make becoming bonnets out of apparently useless materials. One mother will begin the education of her baby by whipping it as soon as it has cut its teeth, whilst another mother will spare the rod, and allow her children to run wild until they have changed their milk teeth for a more permanent set. One father will teach his boy to fire off a gun before he can carry it, whilst another will not allow his boy to cut a stick. Some people approve of competition as an incentive to learning, and others think such an element highly immoral. There is, however, one point upon which almost every one seems to be agreed. It is that a knowledge of the three Rs is necessary to those who are obliged to earn their own livelihood, but who wish to do so in other ways than by manual labour. Curious to say,

it is in a real knowledge of reading, writing and arithmetic that our young men are often found most deficient. Ask an average boy of sixteen who has been at a good school to read aloud a leader in the *Times*, and the chances are you have to stop your ears. Ask him to write a simple note of inquiry, and he looks aghast, although perhaps he has carried off a prize for Latin composition. Give him a house account book to add up, and request him to make an abstract of the weekly bills of the grocer for a month, and he is absolutely helpless, and yet he may have reached the Sixth Book of Euclid. Send him to do some shopping, and he can scarcely calculate what he has spent, and what change he ought to bring back. No wonder so many lads get into debt when they are obliged to cater for themselves, and have never learnt the price of anything beyond lollipops and lemonade.

It is from the time when a child need no longer remain in the nursery until he is ready to go to school that a wise mother will claim him as her pupil, and will teach him those lessons which are only to be learnt at home, and which are a considerable importance to him in after-life. It is very nice that a boy should know his Latin grammar well before he goes to school, and even some Greek; but, after all, the dead languages will be pounded into him somehow, and there are other things which he ought to learn while he has the opportunity. The child who can read aloud, modulate his voice, attend to the stops, and enunciate his words distinctly, may be a dunce in other things, but he will find the accomplishment so easily acquired of lifelong advantage to him. Much may be done to simplify the process of learning to write by encouraging children to send play letters to each other, or to absent members of the family. Governesses have hitherto steadily set their faces against their pupils learning to write in any but the orthodox way of copying a foolish sentence, with long words, in a ruled book. They persist in saying that allowing them to scribble in their own way on stray pieces of paper or on a slate "cramps" their hands, and prevents them from ever learning to spell correctly. This is a pernicious and widespread delusion. Even if the notion had any truth in it, all objections might be got over by encouraging the children to copy printed letters—an excellent plan by the way to form a legible hand. There is nothing that cultivates a boy so rapidly and in so satisfactory a direction as being able to put into writing anything he wants to say. The inscription so oddly composed, so phonetically spelled, which adorns the fly-leaf of the Tennyson presented last birth-day to his mother, the first lisping numbers in which mine rhymes to Valentine, the magniloquent prose epitaph on a dog or canary bird loved and lost—all such things may be utterly ridiculous, and may bring a blush in after years to the downy cheek, but the time devoted to their composition was not thrown away. It is very desirable that when a boy goes to school writing home should present no difficulties. A few lines in pencil to tell how he has gained a place in his class, or had a splendid paper-hunt, the power of easily replying to a little sister's letter, will keep up the close ties of home which ought not to be undervalued. We have known educated gentlemen who would rather walk a mile to answer a letter than write half-a-dozen lines. The strange compositions that may often be seen in the newspapers, with respectable names appended to them, show how very useful a little early education and practice in letter-writing would be to public men. A little practical knowledge of arithmetic also is very easily acquired. The first three rules can be taught by a few pieces of paper torn up and made into sums, so as to give the pupil something more than an abstract idea of what

figures mean. Many young men get into debt because they have never been accustomed to manage an allowance; everything has been paid for them. The number of pence in a shilling, of shillings in a pound, is not to be acquired by learning tables, but by spending money and keeping an account of it. The boy who is accustomed to provide himself with certain articles out of a fixed sum will, by the time he is grown up, have an idea of what things cost. A regular allowance can scarcely be begun too soon. Parents might perhaps confide to their elder children the actual state of their finances more frequently than they do. They would often be rewarded for their confidence by sense of chivalry amongst the boys preventing them from spending at college more than was necessary. The lads would be ashamed to encroach, as they often do, on the slender portions laid by for their sisters. In families not engaged in business there is no possible reason why the children should not know a good deal about income and expenditure. A profound mystery is generally made of the subject. The consequence is that the young people think their father is a sponge full of gold dust, out of whom as much money as possible is to be squeezed. They are often greatly surprised when upon his death they find how little remains to be divided amongst them.

To be shut up in a small town house during wet weather with half a dozen youths home for the holidays is not always heaven upon earth. The principal use they make of their fingers is to produce disagreeable and unearthly noises. Their feet are employed in wearing out the carpets and shuffling on and off their slippers. They cannot even strum a popular tune on the piano to amuse themselves, nor join together in a simple glee. Writing letters they find such hard work that they would prefer to spend a day on the treadmill rather than compose one. Reading is a bore after the story books have been exhausted. To get up a charade would be too much trouble, and in order to kill time they are reduced to counting the raindrops on the window and beggar my neighbour, or to teasing their sisters and playing practical jokes upon the servants. It is not to schools that we ought to look for the practical and primary education which is imperatively necessary for boys who are to make their own way in the world in this country or in the colonies. It ought to be given at home, principally before they go to school, but partly during the long vacations which are now the rule. No doubt the boys will grumble at having to work in the holidays which are all too short for the amount of listless lounging, the busy idleness, which must be crammed into them. Still the wise parent will not let them pass away unimproved. A few walks and talks will draw out and satisfy the "honest curiosity" always to be encouraged in young people. No boy will object to learn how to distinguish a faint from a fit, how to tie up a wound or recover a person from drowning, how to put out a fire or sew on a button, knock in a nail, or make a salad. In short, the exigencies of a picnic or a journey may provide him with resources to be developed afterwards beside a bush fire at the antipodes, in a shipwreck, under the guns of an enemy, or at a competitive examination. It can do him no harm to have a clear idea as to the relative positions of the Prime Minister and the leader of the Opposition, and to know the difference between a bluebell and a buttercup, a crocodile and an alligator, a barrister and a solicitor. It is also desirable that he should be able to come into a room without slouching, and to hand a lady a chair with politeness. He will find that the power to sing a simple tune at sight and join in a rational conversation will not take much from the pleasures of life, nor prevent his being able to catch a ball or a salmon. A few weeks will often suffice

to teach a mere infant the notes of music and their places on the piano. It is amusing to watch the rays of delight which beam from the faces of the children at the Kindergartens when they are asked to sing something. Then, too, the use of a needle and thread is as easily learnt by a boy as a girl; he does not instinctively feel that there is anything ridiculous in the employment of sewing, and the accomplishment is sure to come in usefully in many ways. Every sailor knows something about it, and does not think himself a Miss Molly in consequence.

One of the best things a young man can be indulged in is a taste. It will save him from the *ennui* which might drive him to gambling or undesirable company. Few boys with a real love for some science or art ever come to much harm. The intelligence developed in a child who collects specimens of stone or birds nests, learns to cultivate a garden, or to carve a piece of wood, will make him a better man of business, or help him in a profession, as the case may be. A few hyacinth bulbs to nurse, a fern case to water, some flowers to arrange, will give a feeling of home even to a dingy London lodging; but the love of flowers like many other things, must be learnt in childhood. Tastes are not, as a rule, exorbitantly expensive; they are certainly very much cheaper than vices. A very moderate percentage of an income judiciously laid out will soon secure an excellent library. It is surprising how small a sum will suffice for the purchase of every standard work worth having. The most famous private libraries cost their owners nothing in comparison with the price of a few race horses. Pictures judiciously selected are not an extravagance to those who can afford them. Any collection made with knowledge and love of the subject is almost sure to be worth at least what it cost. The time occupied in collecting is in many instances rescued from being employed in idleness or frivolity.—*Saturday Review*.

Success in Teaching.

BY J. A. COOPER.

Every teacher desires success. It can be had. Will you try to deserve it? If so, decide in your own mind what success, is then how to seek it, and lastly work for it. Success is obtaining the right results. In teaching it consists in making the pupils know—in leading them to love study, in training them to right methods of study, in forming right habits, in cultivating their tastes and talents judiciously.

To obtain success one needs knowledge and skill. He needs to know the right methods of work and have skill in the same.

Avoid all common errors, make a list of such errors as you know other teachers have, make a list of your own, and avoid them all. Seek perfection. The requisites of a good school are, a good school house, a good teacher, and good scholars.

You can keep your house neat, quiet and well ventilated. The house has an influence on the school, keep the air pure and the rooms neat.

You can be a good teacher. Success depends not upon one great effort but upon regular, patient and faithful work. Keep at it—"with time and patience the mulberry leaf becomes satin."

Go to school in season. Call school at the right time. Have the pupils come in promptly and quietly. Write out your order of exercises. Arrange your programme as well you can. Carry it out to the minute. Consider it as necessary for you to follow it as for the children to follow it. Provide enough work for every pupil. Suppress

whispering. Secure the co-operation of your pupils. Lead them to see that it is for their interest to have good order and a good school. Require hard study from the pupils. Lead them to love study. Give short lessons. Assign them so plainly that none may mistake their lessons. Have the lessons well studied. Require clearness, promptness, and accuracy in recitation. A little well known is of a great value. Let not "how much but how well," be your motto. Do not assist the pupils much at recitation. Cultivate their self reliance.

Laughing Children.

Give me the boy or girl who smiles as soon as the first rays of the morning sun glance in through the window, gay happy; and kind. Such a boy will be fit to "make up" into a man—at least when contrasted with the sullen, morose, crabbed fellow, who snaps and snarls like a surly cur, or growls and grunts like an untamed hyena from the moment he opens his angry eyes till he is confronted" by his breakfast. Such a girl, other things being favorable, will be good material to aid in gladdening some comfortable home, or to refine civilize, tame and humanize a rude brother, making him gentle, affectionate and loveable. It is a feast to even look at such a joy-inspiring girl, and see the smiles flowing, so to speak, from the parted lips, displaying a set of clean, well brushed teeth, looking almost the personification of beauty and goodness, singing, and as merry as the birds, and wide-awake birds, that commenced their morning concert long before the lazy boy dreamed that the sun was approaching, and about to pour a whole flood of light and warmth upon the earth. Such a girl is like a gentle shower to the parching earth, bestowing kind words, sweet smiles, and acts of mercy to all around her—the joy and light of the household.

A Day in the Kindergarten of Fräulein Held, at Nashua, N. H.

It was my lot a week or two ago to pass a day in Nashua, N. H., on a visit to a friend, and while there, I improved the time by visiting a real Fröbel Kindergarten, a thing which I had long desired to do.

The foremost educators of the country have given their sanction to Fröbel's method for the education of very little children; and although the Kindergarten is well known by name, it is still quite seldom that one has the opportunity in this country to see the ideas of the great German educational reformer exemplified by a well-trained and thoroughly competent Kindergartener. Many schools have adopted the name without any knowledge of the system, and their teachers, who have neither natural capacity, acquired culture, nor proper training, are liable to do more harm than good, and bring into disrepute the name which Fröbel chose, as most expressive of his idea—Child's Garden—a garden where little children are the plants to be trained and nourished under the care of a faithful gardener.

We found Miss Held in a spacious room, sunny and cheerful, the floor neatly carpeted, the walls adorned with plants and vines and pleasant pictures of happy children, and located in the central portion of the city. She was surrounded by eighteen or twenty little children between the ages of three and seven, sitting at low tables, the tops of which are marked off into square inches.—In their midst sat Miss Held, thoroughly mistress of the

situation, and the impersonation of good sense and good humor combined. Kind, helpful, earnest, patient, and devoted to her work, she quickly wins the love and confidence of the children, even the most shy, and they all seemed to know that in her they had a very dear friend.

When we entered, the children were each engaged in forming a pretty star shaped figure upon the tables in front of them, with colored plane tables cut into squares and variously shaped triangles. In this work they were guided by Miss Held, who told them where to place each piece. Each produced the same figure differing in color. Each was then told to produce such a figure as they might choose, using all the pieces, and the result was truly wonderful in the beauty and variety of the different combinations. This is the method with all the occupations: first, the little ones are led, then they are allowed to go alone. Then came some very simple and easy exercises in drawing upon slates, marked off in squares like the blackboard, from which they copied their work. Then each made such picture as pleased them best. In all their work, they had the sympathy and encouragement of Miss Held, praising when it was done well, and helping on those who needed assistance.

After this occupation was concluded, folding doors were opened into a room still larger, also sunny and bright, and the children marched in to the music of a pretty song, in which all joined. There for half an hour a series of games were played, uniting singing, simple gymnastics, and sport, to the intense delight of the participants, and the by no means slight enjoyment of the lookers on. These games all have a meaning and an object, and are arranged with a view to the harmonious and healthy growth of the child's mental, moral, and physical nature.

After a short lunch the occupations were resumed. When they first gathered around the tables, it seemed not unlike the assembling together of quite a number of ladies at a tea party, the conversation was so brisk and sociable, but in three or four minutes each child was intently engaged sewing in and out with colored worsteds. It was not like a school, there was no repression, no enforced silence, no fears of the raw hide or the teacher's frown, no books, no punishments; it was rather like a cheerful workshop where each was absorbed in his work, not as a disagreeable task, but rather as a delightful occupation. Strict silence was by no means enjoined, and if after a few minutes of employment a happy thought occurred to any little worker, he was encouraged to speak it out, and when any one was pleased, he was allowed to laugh. While the rest were at work, it occurred to one bright-eyed little fellow that he would like to recite a verse; leave was granted and we undoubtedly got the benefit of his last exercise at the Sunday school. A little girl followed with a verse that was evidently original, and none the less interesting for that; and then one volunteered a song. The charming innocence and unconscious simplicity displayed in their little interludes, were fascinating. There was apparently no thought of showing off, nothing got up beforehand for the occasion, but they were spontaneous outbursts of their happy childish natures, mingled with an evident desire to do something that should meet with the approval of their friend, Miss Held. Still the work went on and the beginning of very pretty designs was wrought out. The children seemed happy but not boisterous, attentive to their play-work, but not stunned into stupid apathy. It was order, and such order as seemed the outgrowth of the individual will of each child. And yet they had only been together two or three months at the longest, and most of them a much less time. How such order

could be brought out of the chaos that must have existed on the first day, is a mystery which one could hope to solve only after frequent and prolonged visits.

The occupations are varied every day, and we only regret that our stay was too short to permit us to see the "Building", "Weaving", "Folding", "Peas Work", "Modelling in Clay", and other works which they do.

We visited the garden, where each little one had his separate bed in which he could hoe and watch the growth of his products to his heart's content. The spot was embowered in vines and several varieties of flowers, yet remained unharmed by the early frosts. One little fellow raised quite a supply of squashes and beets, and still another had obtained a wonderful growth of tomatoes. A real garden is considered quite essential to this system of education, and no Kindergarten is considered complete without one.

Fröbel thought education should begin at the first moment of conscious intelligence in the mother's arms; he established schools for the training of nurses, and invented the Kindergarten as a bridge between the nursery and the school. It is not intended to supplant the primary school, but rather to prepare the child for it, and it is the unanimous testimony of the most accomplished instructors, that those who have had the longest training in the Kindergarten, make the most rapid and satisfactory progress in the school.

This Kindergarten, the first established in New Hampshire, owes its origin to the active exertions of Henry B. Atherton, Esq., who has interested the people in the matter, collected the pupils, and assumed the entire pecuniary responsibility of its management. This he has done, in the first instance that his own children might have the advantage of such instruction, and again, from his study of Fröbel's educational ideas, becoming convinced that this is the only rational plan of primary education, he thinks the surest and speediest way to secure its general adoption is to demonstrate its usefulness and necessity by the actual working of a well conducted Kindergarten. The practical illustration of the "new education" thus afforded, is better than volumes of mere theoretical discussion. He has been peculiarly fortunate in securing the co-operation of Fräulein Anna Held who is an accomplished Kindergartener. A native of Berlin, she graduated at the best young ladies' school in that city, and having become interested in Fröbel's method of education, she went through a course of instruction in the seminary for nurses, established at Berlin upon Fröbel's plan by Lina Morgenstern. Subsequently she attended the Kindergarten Normal school in the same city, where she passed the examination and received her diploma after a year's course of study.—Miss Held has travelled extensively in Great Britain and on the continent, and speaks with ease both Italian and French, as well as English. She is earnestly devoted to her profession and heartily fond of little children. Being an accomplished musician, she is able to give valuable instruction in music to the little ones. We noticed that they sang several simple German songs with as much readiness and apparent enjoyment as they did those in their mother tongue.

The Kindergarten develops a capacity for quick and clear perception of form, size, color, and sound; it trains all the senses, gives skill to the fingers, health to the body, cheerfulness to the mind, trains the moral faculties, and is a primary school for design, where the artistic tendencies of the child are cherished and cultivated, so as materially to increase the means for his future usefulness and happiness. None of his faculties are allowed to die out through disuse.

I believe this day's visit to a Kindergarten in the heart

of New England, has given me a clue to the secret of the progress and power of that great European nation, which by the skillful training and thorough education of its soldiers, its men, and its mothers, has been enabled to set a watch upon the Rhine, to foil the power of ignorance, and to take a foremost stand among the powers of Christendom.

G. L. A.

POETRY.

Growing Up.

(From *All The Year Round*.)

Oh to keep them still around us, baby darlings fresh and pure !
"Mother's" smile their pleasures crowning, "mothers" kiss their
[sorrow's cure;

Oh to keep the waxen touches, sunny curls, and radiant eyes,
Pattering feet, and eager prattle—all young life's lost Paradise !

One bright head above the other, tiny hands that clung and clasped,
Little forms, that close enfolding, all of Love's best gifts were grasped,
Sporting in the Summer sunshine, glancing round the Winter hearth,
Bidding all the bright world echo with their fearless, careless mirth.

Oh to keep them; how they gladdened all the paths from day to day,
What gay dreams we fashioned of them, as in rosy sleep they lay;
How each broken word was welcomed, how each struggling thought
[was hailed,

As each barque went floating seaward, lovebedecked and fancy-sailed !

Gliding from our jealous watching, gliding from our clinging hold,
Lo! the brave leaves bloom and burgeon; lo! the shy, sweet buds
[unfold;

Fast to lip, and cheek, and tresses steals the maiden's bashful joy;
Fast the frank, bold man's assertion tones the accents of the boy.

Neither love nor longing keeps them; soon in other shape than ours
Those young hands will seize the weapons, build their castles, plant
[their flowers;

Soon a fresher hope will brighten the dear eyes we trained to see;
Soon a closer love than ours in these wakening hearts will be.

So it is, and well it is so; fast the river nears the main,
Backward yearnings are but idle; dawning never glows again;
Slow and sure the distance deepens, slow and sure the links are rent;
Let us pluck our Autumn roses, with their sober bloom content.

OFFICIAL NOTICES.



Ministry of Public Instruction.

APPOINTMENTS.

SCHOOL COMMISSIONERS.

His Excellency the Lieutenant-Governor has been pleased, by order in council, of the 29th July last, and in virtue of the powers conferred on him by the 136th clause of chapter 15 of the Consolidated Statutes of Lower Canada, to make the following appointments of school commissioners, to wit:

City of Quebec, (catholic) François Léon Gauvreau, Esq., continued in office.

City of Quebec (protestant) the revd. Charles Hamilton, continued in office, in virtue of the powers conferred in the Lieutenant-Governor by the 17th clause of chapter 16, 32 Victoria.

County of Yamaska, Saint-François—Louis Marie Blondin, *vice* Etienne Boucher, Esquire, deceased, inasmuch as no election has taken place within the time fixed by law, in virtue of the power conferred upon the Lieutenant-Governor by the 48th clause of chapter 15 of the Consolidated Statutes of Lower Canada.

County of Ottawa, Hull, for the catholics—Messrs. Moïse Daigneau, Moïse Trudelle and Emeri Perrin.

For the protestants—Messrs. Reuben Perkins, Christopher Wright and William Powley, in virtue of the power conferred upon the Lieutenant-Governor by the 38th Victoria, clause 82, chapter 79, and 32 Victoria, clause 17 and 16.

County of Pontiac, Village of Shawville—Messrs. Arthur Lyon, James Hodgins, Edward Hodgins, Donald McRea and J. H. Shaw, new municipality.

County of Pontiac, Village of Guyon—Messrs. Walton Smith, Joseph Amms, William Logue, James Kerivan and Henri Porteous, new municipality.

By order in council, dated the Thirtieth July last.

County of Richelieu and St. Hyacinthe, Saint-Louis—Messrs. Antoine St. Martin, Jean Godin, Octave Beaudreau, Diogène Laplante and Joseph Lagassé, new municipality.

County of Two-Mountains, Saint-Hermas—M. Benjamin Beauchamp, *vice* Mr. Ferdinand Pagé, whose term of office is expired, in as much as no election has taken place within the time fixed by law.

County of Arthabaska, Chester-East—Messrs. François Dupuis dit Gilbert and Phidime Noël, continued in office, in as much as no election has taken place within the time fixed by law.

County of Hochelaga, Village Delisle—The Revd. François-Louis-Tancrède Adam, and Messrs. Joseph Hilaire Doré, Edmond Brown, Silfrid Delisle and Michel Vallée, new municipality.

County of Ottawa, Ripon—1o. Ferdinand Deguire, *vice* Apollinaire Vallée, gone out of office; 2o. M. Octave Chartrand, continued in office; 3o, and in virtue of the 48th clause of chapter 15, M. François Brazeau, *vice* Maxime Sabourin, absent from the municipality, in as much as no election has taken place within the time fixed by law.

His Excellency the Lieutenant-Governor has been pleased, by order in council, of the 26th August last, and in virtue of the powers conferred on him by the 136th clause of chapter 15 of the Consolidated Statutes of Lower Canada, to make the following appointments of school commissioners, and trustees to wit:

County of Richelieu, Sorel, parish—M. Pierre Salvail, *vice* M. Jean-Baptiste Salvail.

County of Laprairie, Laprairie, (village)—M. Hyacinthe Sylvestre *vice* M. Médard Bisailon.

County of Montmorency, Saint-Féréol—MM. Etienne Giguère and Jean Huot, of river des Roches range, *vice* Messrs. Onésime Bilodeau and Thomas Bolduc.

SCHOOL TRUSTEES.

County of Ottawa, Saint-Etienne do Chelsea, Gardner Church, Esq., *vice* John Hudon, gone out of office, inasmuch as no election as taken place within the time fixed by law.

County of Shefford, Roxton township—M. Samuel Davidson, *vice* M. C. C. Vosantford.

The Lieutenant-Governor has been pleased, by order in council, dated the 9th instant, and in virtue of the powers conferred on him by the 48th clause of chapter 15 of the consolidated statutes of Lower Canada, to make the following appointment of school trustees, to wit:

County of Hochelaga, Côte des Neiges—Mr. John Cullen, continued in office.

ERECTION OF SCHOOL MUNICIPALITIES.

His Excellency the Lieutenant-Governor has been pleased, by order in council of the 30th of July last, and in virtue of the powers conferred on him by the 30th clause of chapter fifteen of the consolidated statutes of Lower-Canada:

1o. To erect into a distinct school municipality the new parish of Saint-Louis, situate partly in the county of Saint-Hyacinthe, with the same limits as those assigned to it by a proclamation dated the twentieth day of April last, for other civil purposes.

2o. By another order in council dated the 29th of July last, to erect into a distinct school municipality, the village of Guyon, in the county of Pontiac, with the same limits as those assigned to it as a rural municipality.

THE JOURNAL OF EDUCATION

QUEBEC, SEPT. & OCT., 1875.

Report of the Minister of Public Instruction of the Province of Quebec for the Year 1872-73 and in part for the Year 1874.

Quebec, 20th August, 1874.

To His Excellency the Honorable René Edouard Caron, Lieutenant-Governor of the Province of Quebec.

I have the honor to submit to your Excellency my Report upon the state of Public Instruction in this Province, for the year 1872-73 and part of the year 1874.

As proved by the statistical tables and the report of the school inspectors, the progress made has been satisfactory enough. The number of schools and the attendance of children have increased, at least in the same ratio as the population.

The schools also assume each year, a character of more general efficiency. The reports of the Inspectors, establish that in nearly all the municipalities, the majority of the educational institutions yield very satisfactory results, and that only in a few cases does there remain anything to be desired.

The number of model schools and academies for boys and for girls is augmenting considerably every year. I made it my duty to examine very carefully all the reports of such institutions, and in the majority of instances, found them very satisfactory. Several of them however are not what they ought to be, and bear a name unwarranted by the education they impart. Under such circumstances I deemed it necessary to strike them off the list of grants, voted in favor of superior education, and to warn others, that they would have to conform to the required standard in this respect. At its last meeting, moreover, the Council of Public Instruction had under its consideration this important question and adopted a resolution recommending the Lieutenant-Governor in Council to name a certain number of special visitors charged with the duty of carefully inspecting such schools and in fact all the superior educational institutions, and to return to the department a detailed report upon the results of their inspection, so that in future the allotment of the grant, might be made, upon a more equitable basis.

The branches which appear to me to be neglected are, book-keeping, geography and the history of Canada. To attach our children to their native soil, it is requisite to teach them its history, to let them know that though still young and sparsely settled, Canada possesses a past record which might do honor to the oldest and most populous nation. It is also desirable to give them an idea of the various phases through which the work of our organization has successfully passed, and of the constitution under which we actually live. In a constitutional country, where the people show so largely in the administration of public affairs, it is essential that each individual should know somewhat of the operations of the government which rules over them; and it is at school that he must at the outset, acquire these elementary notions which later on, will imbue him with the desire to further initiate himself into the knowledge of his rights and duties as a citizen.

Another and not less serious defect which I have noticed in the majority of our schools, is the complete absence of all agricultural instruction. I can readily understand that a school master or mistress cannot give

a regular course of instruction upon agriculture in his or her school; but I believe they could impart some notions on the subject with advantage. If in this connection we could only succeed in impressing children with the fact, that agriculture far from being a routine operation, is an art, a real science, and that it is through their ignorance of this science that our farmers have been obliged to witness the spectacle of their once fertile lands, languishing year after year under their eyes and rapidly becoming unproductive, we should already secure handsome results, as we should awaken thereby in the minds of our children, the desire to do better in this particular than their predecessors.

I therefore deemed it my duty to make the use obligatory in all schools of Dr. Larue's "Petit Manuel d'agriculture" and in consequence addressed the following circular to all school commissioners.

Ministry of Public Instruction, }
Quebec, this 12th. Dec. 1873. }

GENTLEMEN,—Considering that it is of the highest importance that some notions of agriculture should be imparted in our schools, I desire that you should introduce into them Dr. Larue's "Petit Manuel d'agriculture" and that all the pupils should be provided with this abridgment the moment they are able to read it. The master or mistress should not content themselves with its perusal, but should comment upon it, as much as possible, and see that all the children become well acquainted with its contents.

If you send to the department for the number of copies you require, I will see that the same are forwarded.

I have the honor to be,
Gentlemen,
Your obt. servt.
GÉDÉON OUMET.

I also issued instructions to the school inspectors, to conclusively assure themselves on the occasions of their visits, whether the recommendations of this circular were conformed to, and also very specially to examine, the children on this head in order to ascertain if they well understood the "Petit Manuel."

EDUCATIONAL ESTABLISHMENTS FOR YOUNG GIRLS.

Many persons who take an interest in the cause of education, have often remarked to me that the system of teaching in our institutions for girls, is open to objection, and does not respond to our state of society. I therefore made it my duty to examine the report sent in by such establishments. I have only to pay tribute to the zeal and ability which are to be met with, in institutions managed by nuns; but I think that their system of study is susceptible of improvement, and as I am persuaded that the teaching staff of such institutions are only actuated by the desire to produce the greatest good possible, I deem it my duty to address to them, the following observations.

The instruction imparted in such communities is not sufficiently practical. Too much stress is laid upon the teaching of things which are purely of an ornamental nature to the injury of useful knowledge. Young girls acquire thereby, tastes and habits ordinarily above their social status, which they are not afterwards in a position to satisfy. Hence two deplorable results, a disenchantment in the first place which affects their moral system, and engenders in the next place a disproportion between revenue and expenditure, growing each day more apparent, and which begins by straitening their means and invariably ends by opening the door to that domestic sore which we call hardship.

Book-keeping is seldom or never taught, how then can you expect that a girl, when married, can ever keep an account of her household affairs and have order or economy in the management of the house. All the pupils when sufficiently advanced in arithmetic should be taught book-keeping, in as simple a form as possible, so that they may hereafter be in a position to keep a correct account of the expenses of the house.

I also observe that domestic economy is not taught in these institutions, which, I look upon as one of the important points in the education of a woman, no matter what position she may occupy hereafter. The wife is the cause of either the happiness or misery of the house. If she is economical and orderly, her home will certainly be happy, but on the other hand if she cannot limit her expenses within her means, she will destroy the comforts of her house some day or other. It is therefore important to impress these truths upon the mind of the young pupil, and at the same time lay down rules which will hereafter assist and guide her in the management of her house. It is not enough to know how to keep a drawing room, but she must also know how to conduct the whole household. While learning to sew, she should be also taught to cut out clothing, such instruction would later aid her family affairs, and the practice of it would render them more complete and efficient. I make those remarks because I believe them to be of vital importance to society, especially in our present manner of living. The necessaries of life have become so expensive that in the future women must rely upon themselves for the making of many things which were formerly done by strangers.

Woman throughout all time has played an important role in society, by the influence she exercises on the family circle. It is therefore essential that the chief teacher of the family should herself cultivate a life of order and economy, indispensable in every thing of whatever nature.

COLLEGES.

I now come to the subject of colleges in reference to which I also wish to make some remarks.

I am of opinion in the first place, that the expense of boarding is far below what it should be considering the increase in the cost of things most necessary. The price of boarding should be raised: the public and the colleges will equally benefit thereby. This will not prevent in any way the reception at reduced rates, of less fortunate students whose superior talents give promise of their becoming later, useful men to their country; for it is not a benefit to society, especially in a young country like ours, to facilitate too much the entry into institutions of superior education. A large number of young men are thus placed in a position for which they were never intended, and who after a course of classical studies, if their qualifications or circumstances do not permit them to adopt a liberal profession, find themselves unfitted for any career; those only who have had such an experience can know all the disappointments and troubles which await a young man thus placed in a false position upon his entry into the real troubles of life. The knowledge which he has acquired, only makes him feel the more bitterly, that he has made a wrong choice. If he wishes to gain his livelihood, he must again begin to study at an age when those who have been more practically taught have already secured independence.

Often before have I thus thought, but since I have undertaken the control of the department of public instruction in this Province, these thoughts have assumed greater importance. The question, therefore, is whether it be possible, to introduce into our system of collegiate

studies, certain urgent modifications, rendered necessary by the new state of affairs since confederation. Our present needs are not as heretofore, and require different administration. France, England and several other countries of Europe are occupied with this question and have already introduced changes into the old system, rendered necessary by the altered state of society and by the discoveries and inventions of the times, in science, arts and manufactures. We want more practical instruction, we cannot repeat this too often.

What is particularly needed, in our Province is, I think, a necessary reform, whereby a great service would be rendered to society: that is to compel all collegiate students to follow a commercial or academic course, whatever name it may be called, before commencing the classical course. This course should comprise instruction in the English and French languages, so that the students may be able to read and write the two languages, with ease and correctness; arithmetic in all its branches, book-keeping; the elements of general history, by oral lessons with remarks, following somewhat a similar plan to the *discours sur l'histoire universelle* by Bossuet, and in addition, giving an idea of each nation of each empire, which have succeeded each other, with their influence on the progress of civilization; the elements of geometry, lineal drawing; agriculture and instruction in political and domestic economy:

This course should occupy three years, supposing that the students entered with knowledge obtained in a good primary school.

Afterwards would commence the long course which would be completed in seven or eight years, the ordinary time. The student would benefit more thereby, inasmuch as his judgment could be better formed and he would in a measure be more inclined to study.

At first it would be difficult to procure competent professors, but I think with good-will and perseverance, this difficulty would soon be overcome.

After following such a course, every young man could adopt with advantage any career whatever, and even if he had followed only a commercial course, he would be in a better position to earn his livelihood than those who make a complete course of classic studies as is now done, and who may not be in a position to study a liberal profession. He might be four or five years younger, and consequently could without inconvenience become an apprentice to any science, art, or industry whatever, an apprenticeship which age would render difficult, if not impossible, after a classical course of seven or eight years.

I could enlarge upon these advantages, but the preceding remarks will suffice to show that there is great need of reform; and as all our colleges are under direction of those who make it a work of charity, devotion and sacrifice, I do not doubt that these men will give all their energy to modifications, recognized as useful, as soon as they see the greater of amount good that will accrue therefrom.

SCHOOLS OF APPLIED SCIENCE.

I am happy to be able to say, that I have at last, established a school of applied science in arts, or rather a regular polytechnic school, as may be seen by the programme of instruction received by the students. The academy which the catholic school commissioners of Montreal have removed into the magnificent building, known as the Plateau school had, already done a great deal in the interest of youth; its promoters have crowned their work by offering the use of their new building and the assistance of their Professors.

I accordingly entered into communication with the school commissioners and concluded with them an arrangement, which was notified by the following order in council, dated 26th November 1873.

"No 397. The Honorable Minister of Public Instruction in his report dated the 24th November instant (1873), sets forth that he has entered into communication with the catholic school commissioners of the city of Montreal, on the subject of establishing classes of applied science in arts, in their commercial academy at the Plateau.

"That these gentlemen mentioned the conditions under which they would be disposed to open this class, also a programme of the different branches of instruction which would be taught there.

"The honorable minister submits with his report, a copy of the propositions made by the commissioners and a programme of the studies they wish to follow, to insure to the new course all desirable efficiency.

"These propositions, as to the financial question, contain a demand for a grant of three thousand dollars (\$3000) to be applied to the payment of professors and for apparatus, instruments, etc.

"The Honorable Minister remarks that the funds disposable for this object, at present in deposit in the National Bank, amounts to thirteen thousand three hundred and ninety three dollars and thirty one cents (\$13,393.31.)

"The Honorable Minister therefore, recommends that a sum of three thousand dollars (\$3000) be taken from this fund and expended in the purchase of the necessary material, and that the sum required for the salaries of professors, to wit the sum of two thousand five hundred dollars (\$2500) be taken from the fund for superior education, and as to the five hundred dollars (500) required for the keeping in repair of instruments and for the chemical laboratory, he proposes that it be taken from the sum annually carried over the balance of deposit.

"The honorable minister, has examined the programme of studies, which appears to him to meet all the requirements necessary to render the academy at Plateau an eminently useful institution, and so much the more to be prized as no such institution exists, among the French Canadian population.

"The Honorable Minister adds, that the want of a scholastic institution of this nature is felt, and that now more than ever it is necessary to train men, whose practical education would render them capable of undertaking the direction and management of mines and many manufactures of the present day, and of acting as engineers, or directors of our many lines of railway.

"The Honorable Minister favorably recommends, the above proposed plan, and hopes that the council will approve of it, and place the necessary funds at his disposal."

"The Lieutenant Governor in council on the same day approved the foregoing report."

I consider the establishment of this school as a great step towards progress. We can now, with the aid of this institution educate engineers, mineralogists, and in fact, fit men for all kinds of industries.

There is a new opening for our youth in the field of action hitherto so restricted. What gives it the highest importance, are the extensive railways now in operation, those being built and those in projection, the richness of our mineral lauds, the exploring of which is being conducted on an immense scale, in fact the new industries which rise up on all sides and which cannot fail of being increased when we have competent men to bring out their value and to direct them.

I cannot make this school better known, than to give the programme of the courses laid out, and which are those of a regular polytechnic school.

Project of a scientific and industrial course to be introduced at the catholic commercial academy at Montreal, presented to the school commissioners of that city.

GENERAL PLAN OF THE SCIENTIFIC AND INDUSTRIAL COURSE.

The studies of this course have in view, to give to the young, a solid education, substantially and essentially practical in all branches. It will open to them the various professions or branches of the professions herein after enumerated and, will give to the country, practical men necessary for the promoting and carrying on of manufactories.

These studies, we repeat, will not be merely theoretical but above all, practical, the chief end will be, not to produce *learned* men, properly speaking, but special men having a perfect knowledge of special branches. When one takes into consideration the vast colonial enterprises, roads, canals and railways now building, or in working order, and the number of young people employed or to be employed in these great companies; when one thinks that the greater part of the first are recruited from strangers, one becomes convinced that in opening such a school, one opens to them a means of advancement.

The scientific and industrial course will comprise the following branches under the title of

CIVIL ENGINEERING.

1st. branch.

Will form : Geometricians, surveyors, architects, railway engineers, canal engineers, engineers of roads, causeways, contractors and builders in masonry, carpenter and joiner work, etc. Assistant Geometricians, Draughtsmen in cadastre offices, of railways, of public works, etc. Employees on railways, roads and bridges and large undertakings, etc.

Draughting plans, levelling, laying out roads, valuations, excavation and embankments, tunnelling, placing rails, stations, road metalling, general considerations, examining materials, calculation of resistance, duration of rails, bridges, locomotives, rolling stock, etc., calculations on the direction of roads, exploring staff, studied on American and European roads.

Public works, works of art, constructions of factories, mills, large workshops, suspension and tubular bridges; hydraulics, aqueducts, marine works, dams, piles and culverts in bridging, mortar, harbor deepening, torpedoes, sub-marine cables.

Cadastre, geographical and meteorological explorations, defensive works, range of artillery, marine construction, coasting.

House building, wood and stone cutting, carpenter work, scarfing, exterior and interior decorations.

Designing, specification and building calculation on the resistant force of materials used, columns of stone, metal and wood, foundations, metal framing, roofing, &c.

Geometrical and topographical drawing, architectural and ornamental drawing.

MINES AND METALLURGY.

2nd. branch.

Will form : Mineralogists, geologists, mining engineers, foundry and workshop overseers, chemists, analysers of ores, mechanics, working mines and quarries. Employees

in large workshop, ironworks, in factories of Bessemer steel, laminated iron, rails, &c.

Chemical analysis, of stones, minerals, ores assay of ores, analysis, metallurgical products.

Mining, working of mines and quarries, machinery employed therein : windlasses, exhausting pumps, ventilation, consolidation, of arches, mines, ores, quarries, wells, artesian wells, drilling.

Marbles, building stone, lime and limestone, sandstone and granite, plaster, coal, peat, brown coal, charcoal, rock-salt (extraction and preparation of these materials.)

Extraction of iron, its ores, iron works, tapping the cast, foundries, moulding, melting, tapping, refining and puddling, shingling and laminating, common cemented, cast and puddled, Bessemer, laminated steel, sheet iron, iron wire, rails, tin, galvanized or zincd iron.

Study of ores and extraction of copper, lead, tin, zinc, gold, silver, mercury, and aluminium.

Manufactures of brass, tapping melted brass, leaden pipes, zinc in leaves, plating, zinging, coppellation, various alloys.

To say when the working of a mine, &c., would be advantageous or not, to establish the proximity of coal mines to navigable waters, foreign competition, workmanship, establishment of iron works and foundries.

MACHINERY AND WORKING OF METALS.

3rd. branch.

Will form : Machinists, mechanical engineers, work, shop and studio overseers, machine builders, instruments of precision, telegraph instruments, bronzes,—locomotives, steamboat engineers, draughtsmen in machine and locomotive shops, and in store department of railways, employees in large workshops, foundries, gas works, water-works, &c.

Mechanical drawing, divers machinery : levers, inclined planes, pulleys, windlasses, derricks, capstans, wheels, cog wheels, gear catching, bevelled wheels, excentrics, transmission and changing machinery, clocks.

Motive power, hydraulic rams, paddle wheels, turbine wheels, force pumps, steam pumps, rotatory and centrifugal force pumps, drainage pumps, water and wind mills, hot air machines.

Steam engines, details thereof, boilers, tubular boilers, safety valves, cylinders, pistons, slides, high and low pressure with and without condensation, fly wheels, regulators, fixed engines, fixed cylinder, moveable cylinder, moveable engines, locomotives, different systems, screens, complete study of machinery, calculation, of parts.

Steam horse, duration of machinery, resisting power results.

Preparatory industries, working in metals, steel, different tempers, temper of brass, machine building, flat and round parts, turning lathes, planing machines, boring machines, filers vice, etc., straight, circular and ribbon saws, brazier ware, iron and brass, boilers, iron mongery, nail, files saws, etc., locks, cultery, swords and side arms, cannons, mortars, guns, cannon and bell casting, drilling, implements of husbandry.

Iron frame work, suspension bridges, water pipes, coining. Musical instruments, astronomical instruments, scientific apparatus, bronzes of art and furniture, zincs of art, art castings.

Saw-mills, spinning factories, flour mills, sewing machines, agricultural implements.

Calculation on the cost and duration of same, specifications and designs.

VARIOUS TRADES, PRODUCTS.

4th. branch.

Will form : agriculturists, chemists and druggists,

tradesmen, traders and merchants, foremen of workshops, and overseers of cotton, paper, soap, candle, and dyeing factories, of glass blowing and sugar works. Distillers, draughtsmen, engravers and lithographers, sculptors. Employees in those various occupations. Youths intending to study medicine, naturalists, etc.

Botany, mineralogy, agriculture, analysis of soils and lands, manures, guano. Inorganic chemistry. Chemical analysis.

Preparatory trades. Chemical products. Disinfectants. *Materia medica*. Sulphur, powder, sulphuric, nitric and chloridric acids. Farinaceous compounds, starch, soda, potash, oils and soaps, lightning, candles, stearine candles, gas, gas works, matches, vegetable and mineral oils, electric light, combustibles, coal, wood peat, &c. Preservation of wood, dressing skins, leather, tanning, currying. Leather dressing, chamois leather, gelatine, glue, dyeing materials, india-rubber, gutta-percha, vulcanizing.

Procelaine making, delf and pottery, plain and glazed, bricks, glass and crystals, looking glasses, window frames, bottles and drinking glasses, lime, cement, mortar.

Provisions: Mill products, flour, bread paste, sugar making and refining, cane sugar, beet root sugar, maple sugar, confectionery, chocolate, tea, coffee, butter, cheese, preserved meats, salting fish, adulteration, analysis with microscope and reactives, liquors, wine, beer, cider, brandy, syrups, vinegar, distilleries.

Clothing: Silk, flax, hemp, cotton and wool spinning, fabrication of stuffs, corded, fancy and plain stuffs, velvets, calicoes, quilted stuffs, glazed calicoes, muslins, sarsanets- &c., laces, tulle, embroidery, hosiery, dyes, bleaching, printing and preparing tissues, cloth making, tailoring, hat making, shoemaking and glove making.

Manufacture of pins, needles, buttons, brushes and combs, jewellery, plated ware.

Paper, stationary, pasteboard, metallic pens, pencils.

Printing, typography: type, composing, printing, stereotype, engraving and lithography, mezzotint, book-binding.

Manufacture of colored paper, cabinet making, sculpture, photography, artistic drawing, telegraphing.

Commercial products of this source.

THE SCIENTIFIC AND MECHANICAL COURSE

will comprise three years' study. (If it is thought proper, the third year may be optional, but then the students leaving will have made only theoretic and general studies). The following list contains the subject of the course, without regard to classification.

Mathematics.—Algebra, Plane geometry. Trigonometry analytical and special geometry.

Applied Geometry.—Surveying, drawing up plans, use of chain, square, compass, graphometer, graphical operations, levelling. Topographical and hydrographic operations: Geometry applied to underground works, roads, canals, railroads tunnels.

Physical Science.—Physics, fluids and solids, hydrostatics, acoustics optics, heat, electricity, gravitation, astronomy meteorology.

Applied Chemistry.—Organic and inorganic chemistry, analysis, combustibles and light, chemical properties of building materials, of sugars, spirits, farinaceous substances, provisions and textile materials, etc. Special occupations, metallurgy, iron works, combustibles, special metallurgy.

Applied Physics and Mechanics.—Solids, friction, statics. Hydraulic machines. Motive power: by action of water, air, steam and electricity. Constructing and placing same,

drawings and specifications, special machines. Buildings: stability, architecture, draughting and plans. Mines, boring and wells, galleries, ventilation, preparation and working of ores, drainage.

Drawing.—Linear, architectural, topographical and mechanical drawing. Projection, scales, sections. Shade and penumbra, structures, perspective, cutting of stones and wood, working of metals, drilling and vices, ornamental drawing, drawing heads and landscapes. **Modelling.**

Literary.—French and English literature, philosophy, political economy, history, religious instruction.

10. The student wishing to follow the mechanical course must, before admission, pass a satisfactory examination on the subjects enumerated above. (N. B. The study of these is comprised in the programme on the 2nd year of the commercial course. At that stage the studies are divided into two courses, in one is followed commercial studies, and in the other is commenced the scientific course.)

The examination for admission will be, on the following subjects (forming programme of the 2nd year of the commercial course): English and French literature, (history social economy.) Arithmetic (J. H. Sangster) complete. Algebra (Christian Brothers) to equations of the 2nd degree. Geometry (Christian Brothers) as far as surveying. That is to say elementary notions, and sufficient data for calculations. Linear drawing, well executed. Notions on natural history and the sciences.

COURSE.

SCIENTIFIC CLASS.

Civil engineering—1st year—Algebra: All the algebraical problems (Christian Brothers Algebra). Geometry: (Legendre). 6 first books plane geometry, trigonometry, elements of surveying and levelling, problems written and in figures. Natural sciences: Botany, zoology, anatomy compared. Elements of descriptive geology, crystalligraphy, physical geography of the earth. Elements of Physics: general properties, attraction, hydrotastics, density, gas, heat. Notions on acoustics. Light, electricity, statics, meteorology. Chemistry, inorganic chemistry. Analysis. Reactives. Notions on organic chemistry. Elements of mechanics, forces and motion. Weights, balance, equilibrium. Inclined plane, pulleys, &c. Ornamental and linear drawing, architectural drawing. Projection of parts of machines in wash colouring.

Mines and metallurgy—1st year—Same subjects.

Mechanics and working of metals—1st year—Same subjects.

Divers trade products—1st year—Same subjects.

Civil Engineering—2nd year—Geometry. Two last books of Legendre, analytical and spherical geometry, section of solids, geodesy, plans, graphic operations, and operations on the ground, architecture, geometry in underground works, levelling, Natural sciences, review of subjects of preceding year, physiology, paleontology, theoretical geology, physical history of a planet, mineralogy, physics, attraction, astronomy, density, heat, optical instruments, dynamic electricity. Organic chemistry. Review on inorganic chemistry. Applied mechanics. Motive power, hydraulic, air, steam and electric. History and political economy. Linear drawing, topography, wash colouring, architectural projections according to sketch, scales, shades, cut of stones and woodwork, pen, and drawing pen drawing.

Mines and metallurgy—2nd. year—Geometry, for civil engineering, geometry for works underground, natural sciences, same course. Organic chemistry, assay of minerals. Chemistry of combustibles, same course.

Organic chemistry, assay of minerals. Chemistry of combustibles, same course. Mechanical and topographical drawing.

Mechanics and working of metals—2nd. year—Geometry, same course; solids, same course; mechanics, as for civil engineering; calculations and work on parts of machinery, profiles. Mechanical drawing from sketches and from parts of machinery, scales, wash-colouring, artistic drawing, ornaments.

Various trade products—2nd. year—Same course. Organic chemistry, assay, analyses, professional and applied chemistry, same course, linear, artistic, pen, and drawing pen drawing.

Civil engineering—3rd. year—Geodesy. Office and ground work, topographical and hydrographic operations. Division of lands. Drawing specifications, tracing roads, canals, railroads, tunnels. Evaluations, calculations. Embankments and excavations etc., chemistry of building materials and combustibles. Mechanics. Hydraulics. Water courses. Building, architecture, solidity, resistance, sinking, ventilation. Topographical drawing, coloured and hatched. Levelling. Architecture. Connection of wood and stone work. Specifications. Estimated. Reports and results. Practical problems of all sorts.

Mines and metallurgy—3rd. year—Geodesy, as in civil engineering, mineralogical and geological expeditions. Drawings, specifications, sketches as in civil engineering, particularly of wells and galleries; estimates, calculations as to excavations.

Chemistry of ores, combustibles and light; mining machines, windlasses, draining pumps, ventilators, air furnishing machines, buildings, frame work, boring wells and galleries, ventilation, preparation of ores, working ores, draining off water, metallurgy, iron works, combustibles, smelting and casting, puddling, etc., specifications, estimates and probabilities as to results, visits to foundries workshops, metals and forges.

Mechanics and working of metals—3rd. year—Drawings, specifications and sketches of machinery, special drawings, various machines, building and placing of same, draughts and specifications.

Locomotives, visits to building shops, combustibles, lights etc., metallurgy, smelting and casting, galvanizing, electricity, problems, as to the duration and resisting power of machinery.

Working of factories, working of metals forges, etc., mechanical drawings.

Different industries, production.—3rd. year.—Chemistry as to quality and quantity, Chemistry of combustibles, light. Materials for construction, Sugars. Alcohol. Farinaceous substances. Textile materials. Medical materials. Working of laboratories. Manipulation of reactivities, etc. Industries, productions, visits to manufacturing factories. Special factories. Linear drawings, artistic drawings. Pen drawings, water color paintings, chromos. Engravings, etc.

20. The pupil will undergo an examination twice a year. The examination at the end of the year if satisfactory will immediately, give him access to the next course.

30. Diplomas of capacity will be granted.

It is evident that during the first and second years the studies will be more or less the same. The same general studies are necessary to all; at the end of the first year, the pupil will choose the branch he wishes to follow specially.

It remains for me to add that the commissioners immediately procured all the necessary material, and secured the services of competent professors having already the necessary experience in this mode of teaching.

The number of pupils is not as yet very considerable; but I am convinced that it will become so, when the school is better known, and especially after it has formed a few pupils, who will better impart a knowledge of its utility, moreover, we do not so much care for the number as for the capacity of the pupils, and we are seeking more especially those whose tastes and aptitude tend to this kind of studies.

SCHOOL INSPECTORS.

Last year I recommended the nomination of two or three Inspectors general, commissioned to oversee the conduct of the school Inspectors. It is the system followed with much advantage in the principal parts of Europe, and it is hardly possible otherwise to know the manner in which the ordinary inspection has been made. The inspector will also enter in a register kept for that purpose in each school, the date of his visit, the time it lasted, the subjects on which they have examined the children, the result of the examination, &c. By this means we will have a more efficient staff of teachers and the Legislature ought not to hesitate at this slight increase of expense, destined to produce such desirable results.

It shall be the duty of school inspectors to try during their visits in the municipalities of their respective districts, to be accompanied by the commissioners. In all cases they ought to assemble them in order to communicate to them, the remarks which they may think fit to make after their visits, and to let them decide which of the teachers it would be to their advantage to reengage. It would devolve on them to exact that all school houses should be suitable; to see that the compensation is sufficient and regularly paid, and to report when they do not follow their advice.

It is finally desirable that they should oppose with all their might the continual removal without good reason of the male and female teachers. There is nothing so prejudicial to the progress of a school as the frequent changes of the master or mistress. The proceeding is besides, superlatively unjust, as regards the teacher, on whom is imposed the expense of moving, and these annoyances cannot but have the effect of discouraging them.

The Commissioners are bound to visit the schools of their municipality twice a year before transmitting their semi annual report. I strongly recommend them to be accompanied in these visits by the *Curd* or the Minister of the religious denominations to which they belong, and by all other persons capable of judging of the standing of the school, and the progress of the children. I would strongly invite such persons to be kind enough in these circumstances to lend their assistance to the school commissioners because the effects of such visits cannot fail to produce an excellent result. The scholar will better understand the importance of education when he sees the most influential men of the municipality interest themselves in intellectual advancement and success. His emulation will be stimulated and he will have the courage to prepare to answer properly on all topics, which have been taught him during the half year. The teacher himself knowing that his school will have to submit to a severe examination, will work with more energy and zeal, first because he will have an interest in properly instructing his pupils that they may answer in a satisfactory manner, next because this kind of consideration and deference on the part of the principal citizens of the locality, will give him more heart to work and he will feel himself better understood and appreciated.

(To be continued.)

Annual Convention of the Provincial Association of Protestant Teachers.

The twelfth Annual convention of the Provincial Association of Protestant Teachers was held in this city on Wednesday, Thursday and Friday of this week. Arrangements were made beforehand so that all the teachers present might be hospitably entertained by the friends of Education in this city. It was all along expected that many would avail themselves of the cheap fares on the river to be present on this occasion and the steamer *Montreal* alone conveyed over 70 teachers from Montreal to Quebec on the morning of Wednesday. On the arrival of the boat, the visitors were met and welcomed to Quebec by Professor McQuarrie, of Morrin College, and Messrs. William Hossack and Roderick McLeod. They then proceeded to billet each member of the association who had not already accepted the hospitality of a city friend, and furnished them with directions to find their entertainers. Ten o'clock was the hour appointed for the opening of the convention of the Morrin College, but before that hour, many of the teachers both male and female, having breakfasted in the city, proceeded to the college and amused themselves by inspecting the library and museum of the Literary and Historical Society. Here the teachers were again met and welcomed by Professor MacQuarrie, Doctor Marsden, Revds. M. M. Fothergill and Chas. Hamilton, D. Wilkie, Esq.; M. A. of the High School and Dr. Miles of the Educational Department, Revd. C. P. Watson of Cowansville and Principal Hicks of McGill Model School Montreal. At eleven o'clock the meeting was called to order in the Convocation Hall of the College.

The following is as nearly as we could ascertain the names of the School Masters and Mistresses present at the Convention: from Montreal—Messrs. Frank W. Hicks, Chas. McCorkell, Andrew Stewart, A. T. Mills, Calvin McCaskell, E. T. Chambers, R. Vernet, David Currie, R. O. Varner, of Lachine, and A. Weir. Misses Millon, Grey, Stephen, Baillie, Richardson, Reid, Nessot, Ritchie, Barlow, Ferguson, J. E. Fraser, W. Fraser, E. Mavor, Morrisson, Clark, Johnston, Carmichael, H. McGarry, J. McGarry, J. Mavor, Hicks, Tornber, Cunningham, S. Henry, E. Henry, A. Barlow, M. Fraser. From Sherbrooke—Mr. Hubbard, Inspector St. Francis district, and son. From Knowlton—Mr. Philip Wood. From Sutton—Mr and Mrs Walton, Miss Frary. From Waterloo—Mr and Mrs Thomas. From other Districts—J. A. McLaughlin, M. A. Inspector Bedford district, Sweetburg—Rev. C. Watson, Cowansville—Miss McCabe, Mr. Dryden and three Misses Dryden, Miss Legatt. Adamsville—Mr. Gibson and Mrs. Gibson, Mrs. Douglas. Misses Hattie Roach, Gibb, McKicken, Ruth, Naves, McKinlay, Messrs Jno McIntosh, Edwin Hays, Rev. Mr. Nighswander, of Granby. M. Butler, President Bedford Teacher' Association, and Mrs. Butler, Misses McNamara, Blakely, Carey, Hoskins, Messrs. Coslett and Crothers, of Bedford.

The following gentlemen arrived on Thursday,—Principal Hicks, of McGill Normal School, Dr. Howe, of the Montreal High School, Dr. Loverin, of Montreal and Chicago, and Mr. Emberson, of St. Johns.

About 30 of the delegates stopped at the St. Louis Hotel, and the remainder were located as guests in the private houses of citizens who have extra apartments.

In the absence of the President, Dr. Cook, Mr. Hobart Butler too the chair *pro tem*. The chairman called upon Revd. Mr. Watson, of Montreal, to open the meeting with devotional exercises. The Revd. gentleman then requested the company to unite in singing the verse commencing:

“From all that dwell below the skies,”

to the tune of the Old Hundred. Then he led in prayer, returning thanks for the safe arrival of the teachers who had travelled, and asking for a rich blessing to rest on the important labors and deliberations of the Convention.

Moved that the reading of the minutes of the former meeting held at Granby last year be dispensed with. Carried.

The names of Dr. Miles and Dr. Marsden were submitted from which to select a president.

Dr. Marsden declined the nomination and said that in the absence of Dr. Cook, the president of the society, one of the vice-presidents should take the chair. It having been shown however that Dr. Marsden being president of the Quebec association was ex-officio a vice-president, it was proposed by the Revd. C. P. Watson, seconded by the Revd. M. M.

Fothergill, That Dr. Marsden be elected president, which being put 3 the meeting was carried unanimously.

Dr. Marsden then briefly addressed the meeting, expressing his interest in all matters connected with the Education of people, and his pleasure in meeting so many engaged in this important work. Having confidence in the unity which he knew prevailed among them, he thanked them for the honor they had shown him, begging them kindly, to pardon all the short-comings they might find in him.

Dr. Marsden then proceeded to read the paper he had prepared for the occasion on “Hygiene of Schools”—a subject which, he stated, was of the highest and most vital importance. It alluded to Hygiene, both direct and indirect, in its relations to the personal, physical and mental treatment of the scholar as well as the Hygienic surroundings. The teacher is paramount,—and is, and ought to be an Autocrat,—absolute in his own dominion, but, not without appeal. He should be humane and benevolent, always tempering “judgment with mercy,” and uniting to the “fortiter in re” the “suaviter in modo.” He should be firm, yet patient and persevering, “slow to anger and of great kindness,” and should be the idol, and not the terror of the school. Love attracts, fascinates and inspires confidence, whilst fear repels, and excites the nervous sensibilities unduly; and *paralyzes the brain power*. The doctor then alluded to the state of some of our school-rooms, halls, and parliament buildings, proving how full they were of subtle poison. Happily this matter has at last begun to engage the attention of scientific men in Great Britain and the United States. See consumption like the hovering wings of the angel of death overshadowing the race, cholera and yellow fever sweeping over the face of this continent and sowing the earth thick with graves; intemperance rending body and soul asunder, typhus and typhoid fevers gathering the sheaves of the harvest of death,” consider these and a thousand more, and say if there is nothing to be done in the beneficial fields of preventive medicine. Among the many valuable suggestions made in the public medicine section of the British Medical Association at its recent meeting, was one calling for further legislation to protect the health of school children in private as well as in public schools, and to remedy defects which exist most glaringly. Dr. Marsden then pointed out to the meeting several instances of where schools were unfit to receive scholars, and trusted to see some useful legislation on the matter.

Dr. Marsden having finished his paper, discussion was invited on the subject. D. Wilkie, M. A., expressed his conviction of the great importance of the subject so ably brought forward by Dr. Marsden, and then went on to explain the plan he had put in operation for renewing and keeping pure the air of the High School room in this City, which consists of a shaft to bring in fresh air from outside to the immediate neighbourhood of the stove, and an arrangement to discharge the vitiated air by the chimney. This method was found to answer so well that through the influence of Dr. Anderson, it had been adopted by Government in the new schools at Pictou, where also it was found to work admirably. He also spoke of the mistakes sometimes made of ventilating rooms, instancing the Arthur school at Montreal, where the bad air was brought among the children instead of the pure oxygenated atmosphere.

Dr. Marsden replied, referring to the bad plans adopted in government buildings instancing the Quebec Court house, and stating that the government erected their buildings not on Scientific, but on political principles.

AFTERNOON SESSION.

Mr. Hicks stated that in schools, teachers are not supposed to be responsible for everything, morals, health, hygiene, &c. It is not very likely, he contended, that we can provide schools suitable for all children, but only to keep the school as far as possible fit for every child that is sent. We are not bound to provide for all, but only for the ordinary child. As regards position, sometimes too ample a provision was made in schools for the sake of ease. He considered that the changing from room to room tended much to keep the air pure, as the movements of the children and the frequent opening of the various doors kept the air in constant motion. In McGill Model School, the children moved from room to room about every half-hour, and they were never troubled with bad air, but he knew that few schools enjoyed their advantages, the majority being confined to one large room, though, the moving about in it between lessons would give a similar advantage.

As regarded prizes, he could not but differ, though he regretted to say so, from many teachers older and more experienced than himself. He must acknowledge that some cannot from want of memory or ability obtain prizes, but even here, we do not feel bound for exceptional children, but for the average child. In a few words, he answered the objections to prizes, holding that a child has as good a chance of gaining a prize at school as of making a fortune in the world; and that teachers have to prepare children for the active duties of life. As to punishments, experience seemed to show that the ordinary boy was not constitutionally injured by going without a meal, as was often done when pleasure was concerned. The ordinary child must be taken and treated as an ordinary child.

Dr. Marsden in reply referred to his own experience for he had been a teacher himself. During the time he was studying for his profession, he taught a night school and believed that he learnt as much as he taught. He must again remind them that the brain must grow with the rest of the body. If undue labour is put upon the brain, it will prevent the growth of the rest of the body, and nothing will ever make up the difference afterward. His motto as regards discipline would be "lead rather their drive." He also strongly objected to corporal punishment being administered to girls.

Mr. McLaughlin, after speaking very highly of the paper, went on to say that he did not see why any difference should be made between boys and girls. He thought corporal punishment sometimes better than keeping in from meals, but he did not see much injury to the health even in that. When boys go out fishing they don't think much about meals. For his part he thought it an advantage to inure them to hardihood. As to prizes he considered competition in the school room prepares them for competition in the business of life. It should also be made a sort of moral lesson to rejoice over the success of other fellows.

Prof. McQuarrie stated that he had taught school for about six years in a building which seemed to have been erected in open defiance of all sanitary laws. He endeavored to remedy some of its defects in a scientific manner. Mr. McQuarrie explained the method by which he removed some of these difficulties, so that a room of 30 feet square was well enough ventilated for the healthy accommodation of 84 pupils. Some people were so ignorant as regards these matters that the speaker asserted he had been asked plainly "What's the use of ventilation in a school?" The arrangements for the proper ventilation of a school room, would not cost more than \$7 or \$8 00.

Revd. Mr. Watson thought health of mind quite as necessary as that of body. All education must be deficient that while feeding the body and giving great attention to sundry positions &c., neglects the mind or destroys it by overwork. In this connection the speaker mentioned several facts to bear out his statements. In the city of London, Ont. he knew of lady of very nervous temperament and of excellent position who went to study at the Toronto Normal School. She was possessed of a brilliant intellect, and her teachers were delighted at the chance of getting hold of so bright a pupil, insisted on pushing her on with her studies, till when she came to leave for home, though a brilliant scholar, she possessed a wasted body and died in a few months after of overstudy. Mr. Watson also mentioned several instances in which graduates at Toronto, some of them gold medallists, were when they left college, decidedly wasted in body and many of them with lives shortened by overstudy. He would ask "Is the result of lives wound up in graduating?" Professors do not look at things in this light, or even in the light of common sense. Too often students simply work for prizes and not in a symmetrical mode, so that even gold medallists may occasionally be found ignorant of the most ordinary details of common life. One gentleman who had graduated at Toronto, once acknowledged to him that he did not know what country Luther belonged to. He had just aimed for a gold medal, and had thus made a fatal mistake. Mr. Watson asserted that he would rather see a child somewhat stupid, than worn out and devoid of all mental energy. He was rather in favor of restraining very nervous dispositions from too much study and overwork. (Applause.)

Rev. D. D. Nighswander, of Granby thought there was much social irregularity in some people's study, and believed that regular systematic study injured no one.

Mr. F. W. Mills, M. A., Principal of Sherbrooke Street School, Montreal, thought many teachers sought their own glory solely. He did not rise to defend the Toronto College which he had

attended for four years, on the contrary he endorsed much of what had been said of the overstudy carried on there and its evil and in many cases fatal results. He suggested frequent medical inspection as a means of ascertaining the strength and endurance of students for excessive study.

Mr. E. T. Chambers, Principal of Prince Albert School, Tanneries West, contended that the responsibility of the school building should rest upon school trustees and Commissioners and not upon the teachers. In England he had found that the ventilation of school rooms and even the teaching of physiology and hygiene were attended to very thoroughly and he himself with the assistance of chemical apparatus and diagrams had brought on advanced classes, beginning with such simple facts as the study of respiration in the body. He thought the government should take the matter in hand and send circulars to school corporations in order to interest trustees and others in the proper ventilation of school rooms.

Dr. Marsden stated that these remarks coincided exactly with the spirit of his paper.

Mr. Hubbard, School Inspector for the District of St. Francis, moved, and it was seconded and carried that the thanks of the association be tendered to the chairmain, (Dr. Marsden), for his valuable paper.

Rev. P. Wright, of Chalmer's Church, Quebec, read a very able paper advocating the teaching of the pupil by good books; there were books that were better on the shelves; the Bible was a book which should be used vastly more in the education of our children; he thought that the school teacher had more influence in providing for the intellectual culture of a future world; the teacher also was not fitly remunerated, and thus could not be supplied with even the bare necessities of physical life, not to speak of the books, periodicals, &c., which the refinement necessary to teachers, and which many of them possessed, craved for; he hoped the day would come when the teacher—not the lazy dron—behind the teachers' desk, but the good, brave, conscientious teachers who faced their duty—would be at least enabled to live in comfort. The paper continued dealing on the subject in an exhaustive manner and at great length, especially seeking to show how poor a piece of political economy was the narrow minded policy of saving and hoarding money for purposes less worthy than the building up of the nation's intellect. He closed by illustrating his opinion of how teachers should be dealt with.

A vote of thanks was on motion, tendered to Rev. Mr. Wright for his very useful paper.

Mr. Hicks thought the papers read were so valuable that they should all be printed in the reports. He must say that school accommodation and buildings had much improved since he took his first school in the Townships.

Mr. Hubbard drew a dismal picture of the state of some schoolhouses a few years ago in the Townships, and on one occasion when recommending some improvements, a school Commissioner turned to him and said "Whose to pay?"

Mr. McCorkell of Montreal, was pleased with the remarks of previous speakers, and thought the plan of the Montreal School Commissioners in distributing tracts on sanitary matters to the children in school a very good one, and one that might be advantageously adopted in country districts.

Rev. Mr. Watson asked that the Protestant clergymen and and other friends of education in Quebec should take a part and offer suggestions during the course of this convention.

Rev. D. D. Nighswander, of Granby, was afraid that the useful reports of the Conventions went to those principally who attended them and did not need them, and suggested that they be scattered broadcast and especially sent to school commissioners.

The Convention then adjourned

EVENING SESSION.

The meeting opened at 7.30. Dr. Marsden in the Chair.

It was moved by Professor McQuarrie, seconded by Mr. H. Butler, that Mr. H. S. Scott, be elected a member of association. Carried.

Mr. David Currie, on being called on to read his paper on "History as taught in schools" stated that owing to great pressure of business he had not been able to give that attention to his subject which he would have wished and knew that many present would be better able to do so than himself. The following is the paper:

"History taught in schools," or "Is History taught in Schools."

The dictionary says that the meaning of the word, "History" is "An account of facts particularly respecting nations or states; a narration of events in the order in which they happened, with their *causes* and *effects*; narration; verbal relation of facts or events; an account of things; or the origin, life, and actions of an individual person."

This being the meaning of history, you will readily agree with me that it should be taught in our schools. But I ask is it taught there?

I know it would be impossible for the historian to write, or the people to read all the events which occur in any country during 1000 years, therefore a judicious selection should be made of the most important.

Modern writers of history leave out the most important and state only the more prominent events.

A person would not gain much knowledge of the working of a steam engine, by being shown pictures of the walking-beam and smoke stack, nor would his practical knowledge be greatly enhanced were he shown numerous pictures of walking-beams and smoke stacks.

But is not the present mode of teaching history in schools, mere exhibitions of the walking-beams and smoke stacks of history,—War and politics?

The following extract from the *New England Journal of Education* will give an idea of the kind of history taught in the schools in the United States; and I am not aware that it is much better taught in Canada:—

1. Give an account of the French and Indian war; the results, and its close.
2. Give an account of the battle of White Plains, and Washington's retreat through New Jersey.
3. Describe the invasion of Burgoyne.
4. Give an account of the battle of Monmouth.
5. Give an account of the treachery of Arnold, and the execution of Andre. Name the most important events of the war in 1871.
6. Give an account of Greene's campaign, including important battles.
7. Give an account of the capture of forts Donaldson and Henry.
8. Give an account of the battle of Gettysburg.
9. Give an account of the investment of Petersburg.
10. Give a brief account of the prominent American officers in the Revolutionary war.

From such teaching one would infer that in the United States man's chief end was not to glorify God and enjoy him forever, but to glorify Satan and destroy men for ever.

If war was the chief occupation of man, yet it would not be wise policy to confine our knowledge entirely to the accounts of battles.

Every officer that commands an army in the field knows of how much importance is the quarter master's department, if there be serious defect here the best army soon becomes disorganized.

An old English admiral, when viewing an approaching hostile Spanish fleet, said: "What fine ships the Spaniards build."

Then in an under tone he said: "Thank God, they cannot make the men." The growing of the men is a very important element in successful warfare; and if war is to be our business, then give us some information about the way strong men are grown, as well as how they are to be killed.

But you will say that reading the accounts of battles will foster a warlike spirit among our youth, consequently they will make much better soldiers when they grow up." I answer, "that if your desire is to make officers, then, knowledge of how battles were formerly conducted, is necessary, but if it is common soldiers you want (and a vast majority of every army are soldiers) practice is much better than theory, turn the boys out into the yard and let each of them have a spell of hard boxing every day, and you will much more speedily develop the pluck of a common soldier, which endures as well as assaults, than if you kept him all his time reading of war, sieges and battles, besides by this means you will be able to discover who will make the best soldiers and they can be sent to the army, while the less warlike can be employed in procuring food and clothing for their belligerent brethren.

Since fighting is not the chief employment of any civilized people, even the most warlike, nor is political squabbling the employment of the masses except at election times, why

should history be exclusively confined to these subjects, while no reference is made to the much more important interests, of feeding, clothing, and housing the people. Or is the knowledge derived from the mistakes of others of no use in the successful prosecution of these departments?

Did time permit me I could prove to you that infinitely more waste both of life and property is caused through ignorance, or inexperience, as the best modes of growing, cooking, and eating food, making clothing, and wearing them, building houses, and ventilating them, than is caused by all wars that take place in civilized countries. Yet these important matters are scarcely referred to in history at all. Who among the rising generations of Canadians have a correct idea of the kind of house in which Cromwell's "Ironsides" spent their boyish days; or the food eaten by them, or the clothing they wore, yet how many of them can give the correct date of the battle of Naseby? They can give the date of the building of Rome but cannot tell how Romulus was fed. (Perhaps some of you will say that Romulus was suckled by a she wolf, if that was the case, then Mrs Wolf was a much better wet nurse than the majority of that class in our days). But we need not go back to ancient times or to foreign countries; do our young people know how Jacques Cartier, Champlain, or their successors dined and lodged during the heroic ages of Canada? Or have they any idea of the way their own grandmamma's ate and dressed in the early part of the present century? If any of them can tell how, they certainly did not get their knowledge in school or from Dr Miles' "History of Canada." I trust when the Doctor gets out another edition of his work, he will give us some information of the eating, as well as the fighting qualities of the first settlers of Canada.

The great end of education should be to make our children wiser, more useful and happier; and to accomplish this they should be made acquainted with the experience of others so that they may take warning and imitate their good and shun their bad actions, therefore our knowledge derived from the experience of our forefathers should not be confined to the different means by which they were killed.

The bible is the only book of history which gives all the details necessary to form a correct idea of how people lived, there being more eating and dressing in the five books of Moses, than in all the uninspired histories that I have ever read; consequently I know much better about the rearing of the army that was led over Jordan by Joshua than I do of the army led over the Boyne by William. Nor is the eating department confined to Moses, the whole bible abounds with it, which any of you can know by turning to the words "bread" and "eat" in a large concordance. The bible evidently was written for instruction and not for amusement. In these times the Bible, the only valuable book of history, has been expelled from school. When I was a boy, I used to read the bible in school, but my children do not; it is true that what is called scripture lessons are now given, but these are only pickings from the bible in which the best part is left out. St. Paul says that "All scripture is given by inspiration of God, and is profitable for doctrine, for reproof, for correction, for instruction in righteousness: That the man of God may be perfect, thoroughly furnished unto all good works," but our modern teachers appear to think that only a synopsis of some of the facts related in the scriptures are valuable.

We would have had but one Calvinist and but one Wesleyan Methodist, had John Calvin and John Wesley refrained from expounding the Bible, but this earth would soon become an Eden were all its inhabitants, constant, careful, unprejudiced readers of the Scripture.

If St. Paul's words have any authority with you; if Christ words have any authority with you; if common sense has any weight with you, then let the Bible be regularly read, but not expounded in our schools.

It is the exposition and not the reading of the Bible that creates denominationalism and division.

Permit me in conclusion briefly to refer to some of the advantages derived from a correct knowledge of history. I have often wondered why it was that all highly civilized nations became extinct in a few centuries; the preachers informed me that it was the judgment of God on them for their wickedness, without telling me that it was simply because they violated God's natural laws, thus causing them to become effeminate and they fell an easy prey to their enemies. I have often wondered at the fearful mortality in cities. In Montreal, the

death rate is about 50 in the 1000 annually; in the north half of the Township of Hull with a population of 1700 there were during the year ending April 1st, 1871, but 7 deaths, being a little over 4 in the 1000 inhabitants, or one-twelfth of the death-rate of Montreal which would be even greater were it not for the continual supply of healthy people from the country. Were it generally known that large cities have always been vampires continually preying on, and ultimately annihilating the best and most active portion of the population of the country, I say were this generally known, there would not be such great anxiety manifested by country people, to flock to the cities, until (as in some of the New England states) the cities almost absorb the whole country, the latter adopting the customs and vices of the former, the population would diminish were it not for the continual introduction of immigrants from other countries.

Did our rural population but know that the world depended on them for its inhabitants as well for its food, they would not be so anxious to do their part in bringing the world to an end, by flocking to the cities.

Before I conclude, I would like to refer to a proposition made by certain high officials in a sister Province, to eliminate from history certain facts because they are not liked by some people. You might as well eliminate from a chain a number of the links here and there, which do not look so attractive as the rest; you gain beauty but you entirely destroy its practical worth.

The paper finished, the discussion on corporal punishment was opened by a lady asking the opinion of members on the subject of keeping children in after school hours as a punishment.

Mr. Hubbard hoped he had not been misunderstood in what he had said in the afternoon. He thought that corporal punishment should be used by teachers as it should be by parents not to satisfy a bad temper but as a means to prevent the repetition of the offence. He thinks there are modes of punishment more objectionable than corporal punishment. He referred first to the infliction of tasks. Ten or Fifteen lines of a beautiful poem imposed for idleness or carelessness, is simply barbarous. What can it do but make a child disgusted with poetry altogether. Worse still is the imposition of verses of Scripture. He could see no objection to a child being kept in for idleness or neglecting to prepare his lesson before school being kept in to do a duty he ought to have done before.

Rev. Nighswander thought that a great deal of what had been said about punishment should be left to the judgment of each individual teacher; that he must suit his punishment to the temperament of his pupils. Each teacher will find that his scholars differ and will treat them accordingly. Some teachers have a peculiar gift of gaining the sympathies of their scholars, some have the power of doing this, others have not. He must say again that each individual teacher must study the individual tempers and capabilities of his scholars.

Mr. Mills always held that personal influence is the great power in obtaining and preserving discipline in a school. To say that this or that method is best is simple nonsense. He had said that he would undertake to get in order as many pupils as he could personally teach; if he had a good playground. As regards the Sherbrooke Street School in Montreal, he must acknowledge it has peculiar advantages, convenient building, and a large playground. When he finds the children have not prepared their lessons he does not resort to corporal punishment, they are kept in. But he was sorry to see that the teachers had to stay in as well. After all the held that much of the fault lay in the carelessness of the parents. He therefore proposed that teachers might write notes to the parents informing them of the fact and requesting them to see to it. He also recommended teachers to visit the parents, found those who did so the most successful. He then explained the rules of the Commissioners of Protestant Education of Montreal as regard corporal punishment, claiming that they were so well framed that if any praise is due to the Sherbrooke St. School it is due not to the teachers, but to Professor Robins the Inspector and Superintendent of Schools in Montreal. He has found that threatening children with suspension has effect upon parents. He proposes to keep an honor list comprising the names of all children who during the month have not been reported for bad conduct, have been regular and punctual in attendance and never fail in a single lesson.

Mr. McLaughlin, thought the suggestion to teachers to visit parents excellent, but in some cases parents will not see the same as teachers. Then as to suspension, he thought it a very serious affair especially to very young children as it turned them into the streets to complete their ruin. He could not but think corporal punishment wise if only judiciously administered. A teacher thoroughly acquainted with his pupils knew whether the neglect was through wilfulness, or inability.

Mr. Mills spoke against corporal punishment in some respects. He alluded to the qualities of a young lad who attended his school, showing how he neglected it, and the difficulties that attended the whole work of his scholarship.

Mr. Patterson, (of Richmond) said that he was not a teacher but a pupil, and recollected being placed twice in the centre of the school for not knowing his lessons, and it had a beneficial effect upon him. After such a punishment, he resolved not to be caught again and he was not either. Another source of corporal punishment which he saw adopted in another school that he attended and which had a wholesome effect was that of placing a scholar in a large wooden box situated at the head of the school room, so that everyone could see him, with his back to the wall. In this quiet exposed position the scholar had been left long enough to reflect over his conduct and in this way too the desired effect was attained. This closed the debate on corporal punishment.

Mr. J. M. Walton read a paper on "The disadvantages under which a country teacher labors, and how they may be lessened." He urged that though the paper might be out of place in Quebec, still there might be many who, like the writer, labor under the disadvantages of endeavoring to impart a sound education to those placed under his care without the adequate means of doing so. He had an experience of over eight years as a high school teacher, and had never yet been inside a school room properly furnished with apparatus. A man might teach geography without a map, globe or book, but the must be a clever man indeed who could convey a thorough knowledge of it this manner, and yet he might be on a par with the teacher who inscribed as a copy head "Quebec is the capital of Montreal." In mathematics a great deal could be done with a blackboard and piece of chalk. The cause of the trouble is the want of apparatus and the irresponsibility of trustees. The writer had necessarily followed the various occupations of plasterer, paper-hanger, glazier, painter and locksmith in connection with his school. Common school matters were worse than this; a schoolhouse is built and the committee hire a teacher and then consider that their duties are at an end. The teacher is told that the room will need sweeping, as the plasterers have just left it. She goes and finding no broom is told on asking for one, to borrow one somewhere; the day is cold and the teacher is told that she can pick up pieces of wood lying about the building and make a fire; even when the farmers have not brought in firewood to make it with. The room was often not found fitted with seats and desks, and a chair for the teacher had often to be borrowed; a subscription is often taken up for a water pail to be brought and a tin cup procured. Should the building be an old one, matters are still worse. Hard work keeping warm, rain coming dropping through the roof are the drawbacks. Want of accommodation for the pupils is also felt. A case was instanced of a whole class of children having been sent into the porch of a school for lack of accommodation. Yet these are a few of the proofs of the indifference they meet with and which hinder teachers in in a prosecution of their work. The remedies proposed in the paper are: A reduction in the number of high schools; an increase of Government aid; that the necessary fittings and paraphernalia of a school be placed in it as soon as built; and finally an increase of interest on the part of the public generally, that would bring out an outlay of money. The paper concluded by the opinion that if the cause of labor is not progressing it must be declining, for, if we are standing still we are gradually but surely falling behind the requirements of the constantly increasing population of our country.

Mr. Hubbard thought a great deal of the paper just read. As he said in the afternoon there was some trouble experienced over school accommodation in rural districts. He certainly believed there were grievances but he thought the greatest one was in reference to the apparatus adopted in these rural district schools and not with reference to school buildings and their accommodation.

Dr. Marsden suggested the appointment of a sub-committee on this subject.

Mr. Stinton blamed the commissioners for not seeing to the evils in such matters. In country districts, schools were badly located and he hoped and was full sure if the matter was remedied a better state of things would be the consequence.

Mr. McLaughlin spoke of the sort of schools in his own district. The commissioners of some well-to-do municipalities, have good school buildings, in other parts they are not as well off and the schools are not as fine. In these latter places wood is scarce and that is one of the causes. Now with reference to the black boards, it is more the fault of teachers than commissioners. He saw no need of legislation, but believed that if the proper authorities received due notice, the necessary apparatus required would be obtained.

Mr. Walton wished to say that with reference to the paper he had just read that it referred to other schools; as well as those in the country. In the High School of which he was a teacher, he could say that the water ran through the roof, and there were other defects apparent about the building which he could well complain of.

Mr. McIntosh complained of the last speaker's remarks as being too sweeping. In his neighborhood the schools were supplied with furniture and if any thing was needed, there was no trouble what ever to have it done.

Mr. Walton believed that the gentleman who had just sat down misunderstood him. He alluded to High Schools.

Mr. Hubbard said semi-official schools, could not be classed with those controlled by Commissioners.

Mr. Hicks said there was a theoretical point on which he had intended to write in the Ontario papers, it was the social status of the teachers. At one time he recollected that schools were directed by clergymen but now it is by the people, and surely they were responsible for the grievances.

A. Teacher.—Mr. Chairman, do any church schools receive government aid at the present moment.

Chairman.—Yes, a good many.

Revd. D. D. Nighswander opposed such a practice, and asked for Government legislation to intervene.

Mr. Thomas, of Waterloo, thought that the Trustees ought to carry out the law as it stands. He agreed with Mr. McLaughlin that the Trustees and teachers are to blame. If the people appreciated a school and its teachings, surely there could be no trouble to have the school building put in proper repair. He alluded to some grievances of his own, chief among which was that of the school door which required repairs. His repeated appeals to the trustees had no effect, it was only when the door fell down and he dismissed the school, telling the scholars that he would not continue it any longer till the door was repaired that he received redress. The next day it was repaired. Now he believed that if teachers would stand up for their rights, their would not be the complaints of which he heard so much to night.

H. S. Cott, of Quebec, said he believed the Government should furnish standard maps to our schools. He knew that the Board wished to do everything in their power to aid school education. With regard to school furniture he thought a law should be passed compelling schools more especially those in the country, to have a complete set of furniture and apparatus on hand, in violation of which the grant should be forfeited.

A Teacher thought that the law was to that effect at present, when Dr. Giard said that the schools in the country districts were now improving materially towards that end.

It being ten o'clock, the meeting adjourned, but with an understanding that the subject would be taken up as the first order of the day to morrow.

SECOND DAY.—THURSDAY.

MORNING SESSION.

The Convention was opened at 10.15 a. m., with prayer by the Revd. D. D. Nighswander.

The Chairman read a letter from Rev. T. Hamel, Rector of Laval University, to Dr. Miles, inviting the teachers to visit the University. Dr. Miles mentioned that the institution possessing a fine museum, was well worthy of a visit and that the authorities of the Normal school had also sent the teachers an invitation.

Moved by Revd. Mr. Watson, seconded by Mr. McIntosh that the invitation of the authorities of the University be

cordially accepted and that the thanks of the association be tendered to them for the same. Carried. It was also agreed that the convention adjourn this morning at 11.45. Some one suggested that the teachers also visit the Beauport Asylum.

The Secretary then read the minutes of Wednesday's session which were declared confirmed.

Mr. Gibsone of Adamsville in introducing his "infinite calendar," stated that this invention of his was really a perpetual calendar. On the outside of this calendar which is a circular sheet, are the names of the months, also the days of the week, and several ranges of figures. It contains wheels within wheels and taking the Gregorian style of reckoning time for his guide, the gentleman in an ingenious manner, explained how he could ascertain on what day of the week, any date, even at millions of years from the present time, would fall. On being asked by the chairman, Mr. Gibsone illustrated the use of his calendar by ascertaining from it that the 18th June, 1815 fell on a Sun day.

Revd. Mr. Watson asked on what day May 9th, 1824, fell, and was rightly told, Monday.

Some of the ladies now commenced to giggle, as it became evident that parties were asking the date of their birthdays. On Davie Currie, of the *Witness*, being told that August 11th, 1834, fell on Monday, and asked if he knew it to be correct, replied. "Yes, it was my birthday." This caused roars of laughter, but none of the ladies asked for the day of the week of any particular mentioned date afterwards! Mr. Gibsone mentioned some of the uses to which the perpetual calendar might be devoted. The dating of old documents for instance could be examined, and it could be ascertained whether they had been executed on lawful days. He knew a friend who had forgotten how far back to date interest on a sum due him. He remembered that it was one of two years, 1860 or 61, on which a friend died on Sunday, the 15th April. Mr. Gibsone was able to inform him that the year in question was decidedly 1860. Mr. Gibsone caused much amusement by quoting passages from Ezekiel, which he thought might point to just such an invention as the one exhibited by him. He had thought to call it "the wheel of time," but being told that would be too much like the wheel of fortune, he had decided to call it the perpetual calendar.

Revd. Mr. Watson thought the invention a most ingenious one, though when listening to Mr. Gibsone's illustration of Scripture, he was forcibly reminded of a gentleman who endeavored to enlarge on the subject of gross darkness. "A gross," he said, "is twelve dozen, and as we know what one intense darkness is, what must be the intensity of twelve dozen darknesses."

On motion of Mr. Hicks, a vote of thanks was tendered to Mr. Gibsone for the care he had taken in making his explanation of the contrivance to the convention.

Mr. Hobart Butler then proceeded to read a paper on "The decline in our High Schools and Academies—the study of the classics in them remedies. This paper was undoubtedly, one of the most important submitted to the Association, reviewing as it did the entire field of education, and the bearing of our school laws for good or evil, and very properly met with considerable applause.

Dr. Miles said there was none who could not admire the ability of the paper just read by Mr. Butler. Personally he was and always had been in favor of the abolition of Boards of Examiners and the regulations pertaining thereto, believing that they were unsuitable. He did not know himself of any instances of Academies being taught by elementary female teachers.

Revd. M. M. Fothergill, and Mr. H. Butler knew of the existence of such cases.

The chairman thought Protestants did not wish to accept inferior assistance to that extended to Catholics.

Dr. Miles did not think the convention was capable of entering into this matter or that it was advisable to do so. Though the Protestant minority was increasing and improving very much in ability and intelligence, yet it was considerably smaller than the Roman Catholic majority in numbers.

As to the division of the grant, the law of 1871 settled that some \$10,000 or \$11,000 should be apportioned to Protestants, and about \$70,000 to Catholics.

Moved by Revd. M. M. Fothergill and carried, that a vote of thanks be tendered to Mr. Butler for his valuable paper. Mr. Fothergill hoped to see it printed in pamphlet form.

The Convention then adjourned at 12.05.

AFTERNOON SESSION.

The chair was taken at 2.45. Beside the members of the convention, there were present as spectators, Hon. Mr. DeBoucherville, Premier of the Province and Minister of Education, (who was invited to a seat on the platform, Hon. J. Robertson, Provincial Treasurer and Dr. Giard Secretary of the Ministry of Public Instruction. The chairman stated that he had been asked to announce that the Laval University would be open to visitors from the Convention during its session in Quebec from ten to four each day. (Applause.) At this stage of the proceedings, the Lord Bishop of Quebec came in and took a seat upon the platform.

Principal Hicks of McGill Normal School, who stated that he himself was a trainer of teachers, and was anxious to see teachers offered such terms and such advantages as would induce them to remain in their profession. He eulogized the able paper of Mr. Butler, and stated that that gentlemen always gave good papers. He thought however that things were improving in this direction, and teachers' salaries he thought were improving also in every district. He had many letters and could not but notice how small were the salaries offered for Academy teachers. Still he had never seen so small a sum as \$20 offered for a teacher.

Mr. Inspector McLaughlin said we all ought to feel thankful to Mr. Butler for his able paper. He too believed that Academies were not training so many young people for college as they did a few years ago, though he did not wish to be understood as saying that they were not doing quite as useful a work. He spoke very highly of the Academies at Granby and Waterloo, which he said were doing as good work as they ever did. He knew some Academies however which only do model school work, while some of the model schools in his district do the work of Academies. He did not believe it could be said that Academies were not doing as good a work as formerly. In his district some difficulty was experienced in obtaining teachers from McGill for district schools, and they had to use teachers trained in the district.

Mr. Inspector Hubbard endorsed what had been said by his confrere of Bedford district and instanced the fair salaries paid to some Academy teachers in his district (Sherbrooke.) He suggested that instead of asking our legislative fathers to increase the grant for superior education, power be given to our local municipalities to levy sufficient to support high as well as common schools. He agreed with Mr. McLaughlin that small as the superior education fund grants were, they ought not to be removed. Regarding the provision in the regulation which provides that female candidates for Academy diplomas should not undergo examination in the classics, he stated that in some instances female teachers were not required to have a classical education since they were often engaged as assistants to the principals of Academies.

Revd. D. D. Nighswander asked for information relating to some private schools, which obtained government grants. The information was given by Mr. Hubbard.

Dr. Howe, of the High School, Montreal, thought much of the decline in the study of classics was due to the insufficient salaries paid to teachers, and also to the parents giving way to their children's desires. He instanced one boy of ten years who would not learn Latin at school, and the teacher was told by the parent that the child had chosen for himself a commercial education!

Principal Hicks knew that a good teacher could make a good school, but to do that it was necessary to pay a good salary.

Mr. Emberson said that as a rough rule you get the class of men proportionate to the salaries paid. It was at one time thought that in order to prevent men entering the church from monetary considerations, it would be well to reduce their salaries, but this was proved to be absurd. One of our teacher's chief difficulties lay in the opposition of the family, the ladies especially, to Latin and Greek. Euclid and Algebra escape the same virulent abuse, why, he did not know. He spoke of the Latin and Greek languages as the foundation of all our knowledge and believed that the study of them elevates the mind. He thought much of the opposition to the study of classics would be overcome, if this branch of a boy's education was deferred till his twelfth or thirteenth year. He knew that several boys educated in Montreal had learnt more in six months at that age than he had during six years, that is to say from the age of six to twelve.

Dr. Howe begged to differ from the views just expressed.

Revd. D. D. Nighswander thought the subject was perhaps discussed too much from a teacher's standpoint, and perhaps with teachers' prejudice, parents not being represented. He thought a boy's education depended much in the position a child was to take in the world. If they were to be commercially employed, they did not want to be crammed with the classics. We could not give children all the classics nor all the mathematics, but had to discriminate between what they should be taught. The speaker thought the number of Academies should be diminished. He also believed that the professions which required the study of classics were already over crowded, and believed the same in connection with the supply of teachers.

Mr. Walton thought the late discussion bore very much on his paper read last night. He modified his assertions of last evening somewhat.

Mr. Duval contended that neither ladies nor members of the clergy should be allowed to teach in Academies without passing the necessary examinations. He was in favor of children commencing their study of Latin at an early age for was not Latin the base of the English and French languages. He insisted that the same justice should be done Protestants as Catholics in this matter of compulsory examination.

Revd. Mr. Watson wished to put in a word for the ministers and the ladies. He felt that there was no disgrace in being coupled with the lady teachers. As regards ministers, in the large district of Bedford, there was but one clergyman teaching, and he was doing it because the High School had been closed for many years and he felt that for the sake of his own children he must do double work, and is now like a slave. If clergymen do work in schools for monetary matters the sooner they are starved out the better. If ladies could however teach a school better than a male teacher for less salary, he would be in favor of appointing them. So he could not but come to the conclusion that all the fuss about ministers and ladies teaching was a bugbear, and he hoped in future, that speakers would confine themselves to other matters.

Revd. D. D. Nighswander explained that there could be no objection to Ministers teaching, only on the principal that they should teach because they were clergymen.

Dr. Howe asked if Mr. Duval stated that French scholars from religious schools were not as well educated as Protestant children.

M. Duval repeated what he had said before.

Dr. Howe paid a high tribute of respect to the education of boys whom he had examined, trained in French religious schools.

Mr. Mills of Montreal, was of opinion that more could be gained from a few facts than by a large amount of theorizing. An attempt had been made to show that Government was not responsible for the state of education, but he would direct their attention to what Government had done in Ontario. The present bill was drawn up by Dr. Ryerson, and after discussion in the house was made law. Grants were paid to schools in that Province, according to the results, and he would like to see some such plan adopted here.

The Lord Bishop of Quebec said it might not be advisable for him to plunge into the discussion, not having had the advantage of hearing what he had been told was such an excellent paper. He believed that Academies or High Schools should be within the reach of all, and that the government grant should be distributed on the principle of payment by results as in England. His Lordship then referred to the enquiries going on as to the condition of superior schools—what he considers needful is a consolidation of academies,—that those doing the work if giving a superior education be liberally supported as academies—that those doing the work of elementary education be classed as elementary schools and receive grants as such. One very important matter, the inspection of schools had been mentioned. He held that no good would come till Educational was severed from political matter. Let them choose a superintendent of council. Choose a good man, give him the powers he requires—let Inspectors be well paid—and schools depend on his reports for their grants—surprised that grants in this province do not depend on the referred to system of grants in England, where government payments depend entirely on reports. He advocated such payments in this province.

Dr. Mar-den having expressed his idea that sufficient time had been spent in the discussion and had been pretty well considered, called up Mr. N. Duval to read his paper on "The French and English Languages".

After the reading of this able paper which was principally a comparison between the two languages, a vote of thanks was moved and carried and tendered to the reader.

Mr. J. Ringland read a fine paper on "Religious instruction in schools," which was much to the point and elicited some little discussion. Mr. Ringland received a vote of thanks, and the convention adjourned.

THE ADJOURNMENT TO THE MUSIC HALL.

The entertainment.—What took place and who spoke.

In order that the teachers, together with their friends, should spend an agreeable hour or two, listening to speeches, readings and singing, Professor McQuarrie, who by the way has taken a most commendable part in furthering the business of the Convention by seeing to the comforts of its members and visitors, organized a vocal, instrumental and elocutionary entertainment, which came off at the Music Hall, at eight o'clock Thursday evening. The hall was comfortably filled with the members of the Association, who mustered in full force, but besides these there was a very large accession to the strength of the attendance on the part of our own citizens, both Protestant and Catholic, who take a deep and commendable interest in the advancement of education in this country. On the platform, on each side of the Chairmain, Dr. Marsden, were the Lord Bishop of Quebec, Hon. Mr. DeBoucherville, Rev. M. McQuarrie, Principal Andrews, of McGill College, Rev. Dr. Nighswander, Professor and Mr. Hicks, Wm. Hossack, Rev. Houseman and Mr. Butler. Among those in the body of the Hall, we noticed Hon. Messrs. Mailhot and Robertson, Dr. Giard, Rev. Mr. Fothergill, Hon. Jas. Skead, Mr. Poupore, ex-M. P. P., John Hearn, M. P. P., Rev. Mr. Rawson, H. S. Scott, James Dinning, Rev. Chas. Hamilton, and others. The proceedings were opened by the chairman, who said that his remarks would be very brief. So far the Teachers' Convention in Quebec had been quite a success and to-night they were assembled to hear something regarding their labours, as well as to listen to vocal and instrumental music and several elocutionary readings. He then presented Professor Hicks, of the McGill Normal School, to the audience, who stepped forward and said he would be obliged to apologize because he was not prepared to speak on that evening, and merely came to Quebec to associate himself, with his colleagues in discussing educational matters. He was glad to see so large an attendance at the Convention and hoped some good result would follow their deliberations. Many came a long distance to attend the Convention, some of whom he knew to come from districts 40 miles above Montreal. He went on to say that the Legislature might make educational enactments, but it remained to the teachers to carry them out, and the success of the education movement mainly depended upon the latter. He adverted to the great improvements for the better which had taken place in our school progress since his arrival in the country some twenty or thirty years since, observing that they were in reality extraordinary both in town and country, although he was free to admit that a great deal remained yet to be done. What we particularly wanted here was a better mode of selecting teachers. At present we had to depend upon haphazard or what chance sent to the Normal Schools, and he contended it would be a great blessing in Canada if we had some thorough system of training teachers such as they had in England. Another obvious drawback, and one that militated seriously against us was the want of a sufficient retiring allowance for superannuated teachers—something to keep the old teacher comfortable in his old age—and he urged that no individual in society had a greater claim upon the public in this connection than the aged school-master, who had led a long and useful life (Applause). He also advocated small local meetings of members of the Association in different parts of the country to excite more general interest in the cause of education. He said he was glad to see that considerable interest was taken in the matter in Quebec, and expressed the opinion that the Convention was above all interesting to parents, as, upon the understanding and help of the latter, depended very largely indeed the successful and proper direction of the efforts of the teachers. He urged the advantages that would accrue from the establishment of a depository for books and schools apparatus. In some respects concerning the mode of securing teachers and fitting them for schools, he knew he would disagree with the idea of some of the Conventionists, but perhaps this is due to the fact that his advanced years caused him to think lightly of ideas introduced by younger teachers. He concluded by urging upon the Province the adoption of some of his suggestions and took his seat amid warm applause. The Chairmain then introduced Mrs. Caldwell, who sung most charmingly, and with great effect and firmness, the songs some of which is entitled "If he asks me to marry him what shall I say," with accompaniment on the piano by Mr. Bishop, and violin by Mr. George Wyse. She is possessed of a sweet, powerful voice, of no ordinary kind, and sings with so much

ease and correctness, as to hope that we shall hear her again this winter. Mr. Bishop played a "solo," in a masterly style. The great feature of the evening was the elocution of Prof. Andrews, of McGill College. As an elocutionist of a high order, Prof. Andrews had already an established reputation, but it was left to last evening for him to charm and astonish a Quebec audience not only with his correctness of taste, but his masterly rendition of his pieces and extraordinary versatility. He read at different intervals during the entertainment. Rev. Mr. Nighswander also introduced and delivered a brief, but able address. He favored theoretically a Dominion, instead of a Provincial system of education, with a central bureau of examiners at Ottawa to qualify teachers, and compulsory attendance of children at school. Practically, he considered that the Quebec system sadly needed simplification. Miss Amy Henry, of about twelve years of age, daughter of J. W. Henry, Esq., played on the piano with a great deal of taste several most difficult pieces of music, and elicited as she well deserved from the audience for her brilliant accomplishments, a great deal of applause, in fact so much so that she had to be brought out a second time. The entertainment was brought to a close with the National Anthem at 10.30 p. m.

THIRD DAY.—FRIDAY.

The morning session opened at 10.15, Dr. Marsden in the chair.

Rev. M. M. Fothergill opened the meeting with prayer.

The chairmain enlarged on the importance of the work yet before the convention, the election of officers. It was finally agreed that this should be attended to at noon. The minute of yesterday's sessions were read by the Secretary M. Hicks and confirmed. Last night's meeting was reported on and declared to have been most satisfactory. Mr. Duval moved, and it was carried that a motion of thanks be tendered to the ladies and gentlemen who assisted at the entertainment last evening.

Rev. Mr. Watson moved seconded by Mr. Hicks, and it was carried with great enthusiasm "That the members of this convention hereby gladly express their most cordial thanks for the kind hospitality that has been extended to those who came from a distance to attend the convention, also for the kind attentions and satisfactory arrangements of the Local Committee. The members of this convention will also cherish a lively and grateful remembrance of their visit to the ancient, interesting and hospitable city of Quebec."

Professor McGregor, of Montreal, being unavoidably absent, his paper "On Vacation Schools," was read by Mr. Hicks, Secretary, warmly applauded, and accorded a motion of thanks. This paper urged the establishment of schools in vacation, which children might attend, who were in the way at home. The writer suggested that high fees be charged for those who attended these vacation schools, that the studies be made simple and pleasant, and voluntary teachers paid liberally for their time, conduct them.

Dr. Miles gave lucid explanation of Baron Zaba's method of teaching history. The basis of this method is a diagram in the shape of a square, containing 100 squares in ten rows of ten each, each square representing one year and the whole square consequently a century. Different colored squares laid on different subdivisions of the diagram squares, indicated the dates of great events.

Dr. Loverin followed introducing as a modification of the Zabian System, the Centograph, which is an upright frame resembling the Zabian diagram, but possessing pigeon-holes for the reception of a cubes, instead of flat squares.

Mr. Emberson thought these squares might easily get lost in large schools and therefore proposed that scholars should be taught to rule their own diagrams. Mr. Emberson illustrated his remarks.

Dr. Marsden expressed his opinion that it was a sort of Memoria Technica.

Dr. Loverin could not allow that idea to go abroad as it was not such; but simply an appeal to the memory through the eye, and much more easily remembered than the difficult unmeaning words in Gray's Memoria Technica. It being past twelve the Chairmain stopped the discussion till the officers for the next year were elected and the place of meeting decided on.

Montreal and Sherbrooke were proposed and Montreal finally decided upon.

The following names were suggested for the office of President:

Dr. Jenkins, Dr. Duy, Principal Hicks, and Dr. Howe.

The two latter gentlemen having requested the withdrawal of their names, Dr. Jenkins was unanimously chosen President.

Mr. Francis Hicks was re-elected secretary and Professor MacGregor treasurer.

The election finished, Professor Hicks excused himself for not giving the Zabian Method a trial in the McGill Normal School which was not from any want of interest in the matter, but from want of time. He would not object to any of those under him giving it a far trial. He contended however that it taught Chronology and not what he would call history.

The Bishop of Quebec agreed entirely with Principal Hicks as to the mischief of substituting the dates for events, the knowledge of the facts for History which included much more than these. It might be impossible in Elementary Schools to go into the Philosophy of History, but we may so teach children as to create a desire for more knowledge on the subjects. He thought there was nothing like placing history before a child as a tale well told the teacher clothing the bare facts from his own knowledge and ideas.

Dr. Howe preferred this system to any other for teaching Chronology. It was suggested that as the system had not been tried by any of our teachers, one of the questions next year should be "What teachers have tried the Zabian Method and with what success?"

It was then proposed by Mr. Mills, seconded by Mr. Chambers, that Mr. Goldwin Smith be elected an Honorary member of the Association. Carried.

The following resolutions were also passed:—

That Mr. Goldwin Smith be cordially invited to address the members at the next convention.

That the annual report together with the papers read at this meeting be printed and sold at a price of 10 cents.

That the attention of the Executive Committee be called to the necessity of issuing a programme for the next convention at least a month before.

To send two delegates to be nominated by the Executive Committee to the meeting of the Ontario Public School teachers Association.

A vote of thanks was then passed to the Chairman, and after singing the doxology the convention was brought to a close.

Obituary.

THE LATE MISS MURRAY, PRECEPTRESS OF THE MCGILL MODEL SCHOOL.

Miss Amy Frances Murray was appointed chief Mistress of the Girls' Department of the McGill Model School in November 1868. Prior to her promotion to that important post, she had been for some time assistant to Miss Coady, her predecessor as Lady Principal, and when Miss Coady resigned, Miss Murray was unanimously recommended by the Vice-Chancellor and Corporation of McGill University as being in every way fitted to become her successor. During the space of eight years from the date of her appointment Miss Murray continued to discharge the duties of her office with admirable zeal and complete success—beloved by her pupils, respected by her coadjutors and highly appreciated both by the parents of the Scholars and the authorities of the Institution. All who knew her, and were capable of estimating her worth, recognized in her a model for imitation by the teachers of youth. Single-hearted, dignified in her demeanour, and thoroughly assiduous in the discharge of her duties, the prosperity of the department over which she presided seemed to be assured for at least a long period of years, seeing that she was only twenty two or twenty three years of age at the time of her decease.

But, in the midst of her career of usefulness, the fiat of an all-wise Providence went forth and she was removed from amongst us. Humanly speaking the circumstances attendant upon her death were lamentable and distressing. These circumstances are thus briefly recorded in the columns of the *Montreal Gazette* of the 11th of August last:

"DISTRESSING ACCIDENT.—On Monday evening a most distressing accident occurred at Oka, resulting in the death by drowning of Miss Murray, daughter of the late Donald Murray, Esq., of this city, and Master Wilson. Miss Murray was on a visit to Mr. Gibbs at Como, and in the evening, in company with Mr. Duncan Gibbs, and another gentleman, went out with Master Wilson to have a row on the river. They were about crossing over to Como when they saw the Princess coming up, and the lad expressed a wish to cross over in the steamer. They returned to Oka, Miss Murray landing with him and the gentlemen starting to return in their boat. They got to the wharf, and noticing that the steamer was preparing to move off, they ran towards the gangway, which had unfortunately been removed. The impetus of the run carried them too far, the little fellow falling into the water, and Miss Murray followed, as some supposed in the effort to catch him. They both sank, to rise no more. There were a number of men on the wharf, but to their disgrace not one had the courage to attempt a rescue. The body of young Wilson was found about an hour afterwards, and that of Miss Murray after about two hours search. The accident has cast a gloom over the neighbourhood of Como, and has plunged two families into the deepest grief. Miss Murray was the Lady Principal of the McGill Normal School, and was greatly beloved by the pupils and indeed by all classes who knew her."

EDUCATIONAL.

Education in Ireland.—In the course of a speech in support of a vote of \$454,368 for National Education in Ireland, Sir Michael Hicks Beach made some interesting statements in reference to the present condition and past progress of education in that island. It seems that the number of National Schools is now 7,357, an increase of 97 during the year. The names of the children on the rolls at any time of the scholastic year amounted to 1,006,511—an increase of 31,815; while the average attendance during 1874 had been 395,390, an increase of 22,019. This shows great irregularity in attendance, but not so disproportionately great when compared with other countries as might be supposed. The number of absolute illiterates is very great in Ireland, but it is said to be steadily decreasing, notwithstanding that in general the best educated emigrate, and the most illiterate, Sir Michael says, remain at home. In 1841 the percentage of illiterates was 52.7 per cent.; in 1857, 46.8 per cent.; in 1861, 38.7; and in 1871, 33.4 per cent.

The incomes of teachers are noticeably in contrast with those in Ontario, though the latter are not at all what they ought to be. In Ireland, male teachers of the first class, first division, have about \$580 of income; first class, second division, \$415; second-class, \$310, and third-class, \$215. The corresponding salaries of female teachers were last year, 1st class, 1st division, \$465; 1st class, 2nd division, \$345; 2nd class, \$240; and 3rd class, \$185. The contributions from local sources are very small, not above 14.2 per cent. of the whole. While Sir Michael spoke very hopefully of the prospects of the National School system, others were not so sanguine, but declared the overwhelming majority of the Irish were in favour of the denominational plan. It is, at any rate, very evident that when a million of children are found on the rolls of certain schools in the course of a year, it cannot be said that such a system of schools is dying out. This, we believe, is not said. What is urged is that the arrangements are of the most unsatisfactory description, and that after a lengthened trial the system has turned out an absolute and expensive failure. Only 43 per cent. of the population, it is urged, can read and write, and even that but imperfectly. That may be, but it is much easier to point out imperfections than to indicate an effectual remedy. One thing is strongly contended for, namely, that more money should be raised by local taxation, and that the ratepayers should have more local control of the schools.

The Object of the Higher Education.—The first thing to be determined is, the true object of higher education. It is, as some will seem to oppose, purely ornamental, a thing valuable only as far as it gives a man extra polish and elegance of mind a mere luxury, with no practical bearings upon the every day duties of common busy life? Such an idea is preposterous. Of course ornamental culture is something to be desired; its acquirement confers honor upon the acquirer; facilities should be furnished for its attainment. But true education, including all this goes far deeper. Its purpose is to develop the mind; to strengthen the thinking faculties in every possible direction; to render the acquisition of new knowledge easier and surer; to increase the student's resources; and to render him fitted for dealing with the useful affairs of the world. Such an education is never compelled; it grows throughout a lifetime; it is self-propagating; its most valuable features are acquired outside of schools and colleges. All that a college can do is to help lay its foundations, by training the mental power for subsequent use. Which course of studies best carries out this purpose?—Prof Clarke, in *Popular Science Monthly* for August.

Female Education in Egypt.—In the schools of Egypt there are now 90,000 children, and the Khedive, in an attempt to combat the prejudice regarding female education, has established a large school for girls at Cairo, where besides an elementary education, sewing, washing and dressmaking are taught.

School-punishments.—It is interesting to find our Teachers after thirty eventful centuries of Development and Reaction, come back to the conclusion that Solomon was wise. All our best schools may be said to "use the rod." But the rod plucked

so unsparingly from Olivet, has developed into the taw or raw-hide switch. The cane puts too seductive a temptation into the master's hand to let out any anger, malice or revenge that may inhere in his natural heart. Even a mild application of it, moreover, leaves on certain cuticles (and most provokingly sometimes on those of the worst boys in the school) such black wheals and marks as sometimes afford a serious handle against a blameless master.

But if occasions to use the birch will occur in the best regulated schools, in the very best they occur the least often. It should be reserved, says Goldwin Smith, speaking as President of the Ontario Teachers' Association, for wilful idleness or disobedience. In one fine Township Academy of 200 pupils, the cane has only been used 4 times in 4 years; in others, once in two years and so on. And there are no surer signs (as a rule) of a disorganised school than the incessant RUSTLING OF THE BIRCH.

Of course boarders must expect and inherit many times more punishment than day boys. In many of our smaller High and Model Schools, to give good marks, or good conduct cards, for good conduct and perfect lessons, publishing the results every month, or even an occasional talking to, is found sufficient. Some call up an unruly big boy and say quietly, "You seem fidgetty. Perhaps you want a holiday. Would you like to go home?" They often pay for their schooling and do not like to lose it and a mere hint will help them to check the hot condition of their blood.

In some places the scholars themselves give in the number of times they have transgressed the ordinary school rules of silence &c. This is supposed to breed "honour." But it is known to FOSTER LYING. The worst girls come out with the fewest demerits. One honest girl, too lazy to keep track of her crimes, gave in regularly twenty bad marks a week.

Statistics show that taws, ruler, or cane is used in about 70 per cent of our Provincial High and Model Schools. More or less keeping in is nearly universal. In one school noise, chattering &c., is stopped as lucky people, say the Italians, have their meals, "at the ringing of a bell. A solitary school or two uses suspension, sending home, reporting to trustees or parents, standing out, or lines.

"Lines," spoil the hand-writing and often keep a boy in longer still, who broke rules at mere restlessness from being kept in too long already. But they are a mighty convenience both to the overworked and the indolent master. If any "lines" should be used, they should be round text-copies.

For rank disobedience a boy should either kiss the rod or leave the school. For lying, thieving or cruelty, we prescribe a severe thrashing or change of air and school-surroundings.

THE IDEAL PUNISHMENT is not yet found, not even in the pages of Wilhelm Meister. The Germans suggest "a form of muscular work not agreeable." "Drill," would be excellent but involves a good drilling master. When will the Scholastic Milenium come when delinquent school boys trot off repentantly to saw cord-wood?

Schoolrooms.—Mr. W. Jolly, one of Her Majesty's Inspectors of Schools in Scotland, in his general report this year pleads for schoolrooms which shall themselves be good teachers. There is, he observes, a passive education of taste carried on by the surroundings of the child in school—by the schoolroom, the furniture, the arrangements, the decorations, the teacher, and the insensible effects of the whole teaching and work, all which influences permeate the child's life and elevate or depress his nature. Hence the importance of making our schoolrooms sweet and tasteful places, educators of the higher part of the children's nature, and the privilege and duty of using this influence to raise the general taste of the nation. Mr. Jolly states that beautiful and artistic examples of works of high art can be obtained at very small prices for the adornment of school rooms through the aid offered by the Science and Art Department, and he expresses his hope that, as new buildings are erected, School Boards will make the schoolrooms in this way centres of bright and high influence. He maintains that the most effective field of æsthetic culture and refinement at our command lies in the common schools; and that no national improvement in manner, bearing habit, and taste will be possible except through the common school.—*Times*

School Hygiene.—The question of greatest importance connected with the management of our schools at the present time, is that which relates to the physical health of the children, and it is a matter of no

small significance that the attention of the medical authorities is turned to the hygienic condition of schools, and the methods of correcting the evils which abound so largely in every community, and to a greater or less degree in every school in the land. The American Social Science Association has taken the most active measures in making inquiries into the various influences which are working injury to the health of pupils in our schools, and it would be a matter of public gratulation could their investigations and recommendations be made effectual by legal enactments to prevent the evils which are so generally acknowledged to exist. The trouble is, that though the judgment of the great body of our people may be convinced of the nature of the evils which exists, the stupidity and negligence of officials, or the false economy of the people may lead to the neglect of the means for removing the cause of present suffering and for preventing others in the future.

The article by Dr. H. G. Davis, on heating and ventilating, school houses, will be read with interest, since he suggests a plan not in common use, and which has in it as it seems to us, great merits. It seems to us that our law-makers, during the coming sessions of State legislatures, can spend their time no more profitably to the State than in the examination of the sanitary condition of our schools, and in the making of such laws as will protect the health of the children. We have laws protecting birds, dumb animals, and even wild fowl. Who has thought of a law regulating the construction of school-houses, embodying the most approved principles of sanitary law?

Among the numerous wise suggestions made in the Public Medicine section of the British Medical Association at its recent meeting, was one calling for further legislation to protect the health of school children, in private as well as in public schools, and to remedy defects which exist more glaringly there than abroad. Pointing out the manifest deficiency of sanitary arrangements, especially in the majority of private schools—the unfitness of the buildings themselves, the lack of cubic space and ventilation, the absence of the play-grounds, or other means of physical training, &c., it is proposed that all persons acting as teachers be required to obtain from an educational examining board a certificate of their competence, including some knowledge of the laws of health; that no premises be allowed to be used as schools unless certified by a surveyor and medical officer of health as in every respect adapted to educational purposes; that the maximum number of the children to be admitted to each school be fixed, and that the medical officer of health have access for inspection at all reasonable hours. That a similar reform is still more urgently needed in this country, most of our readers know. Even our public schools, held in buildings constructed for their especial use, and supposed to be under the watchful and enlightened care of the public authorities, are, as we have often shown, generally models of all that schools ought not to be. Overcrowded and unventilated; poisoned, not only with pent-up exhalations from the inmates, but frequently with adventitious sewer-gases. And very many private schools, wholly exempt from any semblance of official supervision, are in worse case. One or two rooms in an ordinary dwelling-house, barely suited for the sanitary needs of a small family, are hired by some speculative pedagogue, who knows no limit except that imposed by the dimensions of benches and desks to the numbers of pupils whom he is anxious to pack therein. Ventilation in warm weather depends on inadequate windows, and in winter these are shut, and the scholars wedged still closer together to make room for an air-tight stove; and in such pens in every town of the Union hundreds of children stifle half the day and sap the foundations of their health. More particularly does this apply to the younger class of pupils, who, at the most susceptible age, too frequently fall into the hands of persons with just sufficient knowledge to teach the lowest rudiments of learning, but altogether too ignorant of the simplest and essential rules of hygiene. The *New York World* well says: "In a matter concerning our national welfare it is time that some action were taken, and we might treat our school-children with at least as much consideration as we show our convicts, by requiring certain specified sanitary conditions in the places of their confinement, and fixing the minimum allotment of cubic space for each."—(*New-England Journal of Education*.)

MISCELLANY.

A Boarding School in 1570.—I invite you, boys and girls, to cross the wide Atlantic, and find amusement in visiting a boarding-school, or academy, of the olden time.

In the days of good Queen Bess, schools were few and far between, as angels' visit are said to be, but in the town of Norwich, England, there existed a celebrated "training school" for the youth of both sexes.

An old abbey furnished the requisite room, for high-born maidens slept in the cell where nuns had once repeated their *Ave Marias*, and were gathered by day in a school room which had formerly been used as a refectory or dining-hall. Separated from this building by a crumbling stone wall of great height was the ancient monastery, which was now transformed into an academy for the boys of Albion. Both building were well-nigh covered with beautiful clambering ivy.

The children of that day, in dress and appearance, were exact miniature copies of grown up people.

Queen Elizabeth numbered three thousand robes in her wardrobe, and the daughters of noblemen carried with them to school from thirty or three hundred dresses, according to the wealth and station of their parents.

Young misses of six and ten years wore trains on important occasions, and, all times, appeared in long, pointed waists, with deep ruffles around the neck. Silk robes were embroidered with serpents and birds, and ostriches, in bright colors. Handkerchiefs were trimmed with gold lace and sometimes ornamented with a dozen solid gold or silvers buttons, which must have been particularly nice for young noses. Sleeves were worn separate from the dresses, and often of different material. Ladies' and children's boots were made with heels two inches high, which were called pantodes, and boots and slippers were frequently trimmed with artificial flowers.

Young lads also, wore sleeves of gay colors. Wigs had not, in 1570 becomes fashionable for children, but their hair was often dyed. Garters were worn conspicuously by men and boys, and were a test of rank and fashion. It is on record that these articles, for state occasions, sometimes cost "four score pound a pair," equal to some three hundred and fifty dollars of our money.

The tops of boots were of embroidered linen, and shirts were often embroidered in gold thread. In such apparel as this the school-boys of that day played leap-frog and hunt the slipper, and other ancient games.

The beds were the only furniture known, and were frequently of such size as to accommodate from twelve to twenty persons. Thus a teacher could sleep with all his pupils around him. How would you like that, boys? One specimen of these beadsteads, the great bed of Ware—of which Shakespeare makes mention—is still preserved in England as a curiosity, and was, at one time, the property of the late Charles Dickens.

Hashes and stews formed the principal food set before the school children whose mode of life we are depicting, and, as forks were not brought from Italy till 1580 and did not come into general use for fifty years, they ate their stews and hashes with the aid of pewter spoons and—their fingers.

Table linen was unknown, but on feast days narrow strips of Turkey carpeting extended the length of the dining-table, this being the only purpose for which carpeting was used when brought to England. Rushes were scattered upon the floor and the remnant of each meal were thrown down to the dogs upon these rushes, which were renewed, as history tells us, *three or four times a year*.

And now, perhaps you will inquire what were the studies pursued by the pupils of Norwich Academy in the year 1570?

Education was esteemed of much less importance than dress and amusements, and, therefore we mention this topic last of all in our account of the "good old times."

The boys were taught "Latin, Greek and figures," but we are told that the young ladies could scarcely read. Embroidery and working tapestry were the principal occupations of the fair sex, and the school girls were taught "to prepare physic and make pastry; to dry herbs and bind up wounds; to make banners and scarfs, and to be obedient to their fathers, brothers, and lords.

Early marriages were frequent and many of these Norwich school girls were wedded wives, were taken home to keep the keys and cut the bread, and rule a retinue of servants—duties which would be required of them in the castle of their husbands.

Knitting became customary and on the occasion of the visit of Queen Elizabeth to Norwich, in 1570, eight young girls walked in the procession that welcomed her, knitting yarn hose, which were then a great curiosity.

Having thus ransacked the annals of the past to bring before you this picture of the olden times, we humbly submit to your consideration, young readers, the question whether our Canadian boys and girls are not more highly favored, more sensibly dressed, and better educated in every respect in our

schools to day, than were the children of English nobles, with all their wealth, power and prestige three hundred years ago.

Care of the Eyes.—In the August number of the *Sanitarian* we find a list of rules for the care of the eyes which is worth preserving.

When writing, reading, drawing sewing, etc. always take care that—

1. The room is comfortably cool, and the feet warm.
2. There is nothing tight about the neck.
3. There is plenty of light without dazzling they eyes.
4. The sun does not shine directly on the object we are at work upon
5. The light does not come in front; it is best when it comes over the left shoulder.
6. The head is not very much bent over the work.
7. The page is nearly perpendicular to the line of sight; that is, that the eye is nearly opposite the middle of the page for an object held slanting is not seen so clearly.
8. That the page, or other object, is not less than fifteen inches from the eye.

Near sightedness is apt to increase rapidly when a person wears, in reading, the glasses intended to enable him to see distant objects

In any case when the eyes have any defect, avoid fine needle work, drawing of fine maps, and all such work, except for very short tasks, not exceeding half an hour each, and in the morning.

Never study or write before breakfast by candle light.

Do not lie down when reading.

If your eyes are aching from fire light, from looking at the snow, from over-work, or other causes, a pair of colored glasses may be advised, to be used for a while. Light blue or grayish is the best shade, but these glasses are likely to be abused, and, usually are not to be worn except under medical advice. Almost all those persons who continue to wear colored glasses, having perhaps first received advice to wear them from medical men, would be better without them. Travelling vendors of spectacles are not to be trusted; their wares are apt to be recommended as ignorantly and indiscriminately as in the times of the "Vicar of Wakefield.

If you have to hold the pages of *Harper's Magazine* nearer than fifteen inches in order to read it easily, it is possible that your are quite near sighted. If you have to hold it two or three feet away before you can see easily, you are probably far-sighted. In either case, it is very desirable to consult a physician before getting a pair of glasses, for a *misfit* may permanently injure your eyes.

Never play tricks with the eyes squinting or rolling them.

The eyes are often troublesome when the stomach is out of order.

Avoid reading or sewing by twilight or when debilitated by recent illness, especially fever.

Every seamstress ought to have a cutting out table, to place her work on such a plane with reference to the line of vision as to make it possible to exercise a close scrutiny without bending the head or the figure much forward.

Usually except for aged persons or chronic invalids, the winter temperature in work-rooms ought not to exceed 60° or 65°. To sit with impunity in a room at a lower temperature some added clothing will be necessary. The feet of a student or seamstress should be kept comfortably warm while tasks are being done. Slippers are bad. In winter the temperature of the lower part of the room is apt to be 10° to 15° lower than than the upper part.

It is indispensable in all forms of labour requiring the exercise of vision of minute objects, that the worker should rise from his task now and then, take a few deep inspiration with closed mouth, stretch the frame out into the most direct posture, throw the arms backward, and if possible, step to a window or into the open air, if only for a moment. Two desks or tables in a room are valuable for a student one to stand at, the other to sit at.

Laughter.—No man who has once heartily and wholly laughed can be altogether irreclaimably bad. The man who cannot laugh is only fit for treasons, stratagems, and spoils; and his whole life is already a treason and a stratagem. The remark of De Maistre that "the wicked man is never comic," is truly wise, as also is the converse, "that a truly witty man is never wicked." A laugh, therefore, to be genuine

must flow from a joyous heart and a clear and unfettered conscience. Archdeacon Hare observes that "some of those who have been richest in wit and humour have been among the simplest and kindest hearted of men; and he instances Fuller, Bishop, Earle, Lafontaine, Claudius, and Charles Lamb. This life would be but a dull and monotonous existence were not the ordinary and everyday intercourse of society enlivened by sallies of wit and good humour, and there is probably no enjoyment so innocent out of which we derive the same amount of gratification and pleasure as a good hearty laugh. There is wisdom, then, in a laugh. Philosophers and wise men may exercise their risible muscles without fear of being accounted fools. Laughter and smiles have been favourite themes of the poets, who invariably use this metaphor when describing nature in her most beautiful and varied aspects. Beauty is never so lovely as when adorned with a smile, and conversation never sits easier upon us than when we now and then discharge ourselves in a symphony of laughter. It is difficult at first to feel "at home" with a comparative stranger, however brilliant and learned his conversation may be, until we strike some mutually sympathetic chord. We then know him to be human; he possesses one vulnerable point through which to reach his heart; and if he be capable of appreciating wit we may not unreasonably conclude that he is also sensitive to other and better influences.

There are probably more varieties of laughter than of any other human operation. The most notable is the roaring laugh, round, hearty, and boisterous. There are also simpers, sniffs, titters, giggles, and guffaws. Steele arranges the several kinds of laughter under the following heads:—"The Dimplers, the Smilers, the Laughers, the Grinners, and the Horse-laughers. The Dimple is practised to give grace to the features, and is frequently made a bait to entangle a gazing lover. This was called by the Ancients the Chain laugh. The smile is for the most part confined to the far sex and their male retinue. It expresses our satisfaction in a silent sort of approbation, and doth not too much disorder the features, and is practised by lovers of the most delicate address. This tender motion of physiognomy the Ancients called the Ionic laugh. The Laugh among us is the common *risus* of the Ancients. The Grin by writers of antiquity is called the Syncrusian; and was then, as it is at this time, made use of to display a beautiful set of teeth. The horse-laugh, or the sardonic, is made use of with great success in all kinds of disputations. The proficient in this kind, by a well-timed laugh, will baffle the most solid argument. This upon all occasions supplies the want of reason, is always received with great applause in coffee-house disputes; and that side the laugh joins with is generally observed to gain the better of his antagonist." Some men laugh in a marvelously comical manner, whilst the sight alone of another man's face is the signal for general uproar. A third will set his whole face and body in motion as though doubled up with pain, and then bellow forth a huge volume of sound. A fourth jerks his head backwards and forwards like a Chinese toy, or sways his body to and fro like a pendulum, inwardly convulsed until his face is blue with emotion, when he suddenly bursts forth like a roaring lion, continuing to keep up a series of spasmodic roars at intervals; or he thrusts his hands into his breeches pockets, shuts his eyes, wriggles about, throws himself into a chair, kicks out his legs, and finally collapses quite exhausted with a face running like a wet blanket. The laugh of Teufelsdröck, as described by Carlyle, is an instance of this kind of immoderate laughter. "Paul, in his serious way, was giving one of those inimitable 'Extraharanges,' and, as it chanced, on the proposal for a cast-metal king; gradually a light kindled in our Professor's eyes and face, a beaming, mantling, loveliest light; through those murky features, a radiant, ever young Apollo, looked; and he burst forth like the neighing of all Tattershall's—tears streaming down his cheeks, pipe held aloof, foot clutched in the air—loud, long continuing, uncontrollable; a laugh, not of the face and diaphragm only, but of the whole man from head to heel." It is a well known fact that laughter conduces to health, by accelerating circulation and forcing the venous blood through the lungs. Celsus, one of the oldest writers on medicine, recommended comic representations to his patients as a cure for their various ailments. The physicians of our own day are well aware of the beneficial results that follow when an invalid indulges in a good *bona fide* laugh. Sterne remarks upon this point: "I live in constant endeavour to fence against the infirmities of ill-health and other evils of life, by mirth, being firmly persuaded that every time a man smiles—but much more

so when he laughs—it adds something to this fragment of life." Laughter is also conducive to longevity; and in this respect is similar to singing, reading, and speaking aloud, which strengthen and invigorate the lungs.—(*Social Review*).

The Art of Swimming.—The board of health very justly remark that the occurrence of fourteen deaths from drowning within the space of one week is a matter that calls for more than a passing attention. Although that is the number reported, it does not follow that it represents all the deaths that may have taken place from the same cause. The deficiency of public baths is so much felt in this city that large numbers of people, many of them quite young children, seek places on the banks of the North and East rivers where they can get into the water; quite regardless of the fact that there are no adequate means of rendering them assistance in case of need, or of rescuing them from drowning. It is too likely that many of the boys who resort to this method of having a bath would never be missed. It is, therefore, all probable that deaths take place which never reach official ears, and that the true state of things, bad though it be, is much worse than it seems.

We have before noticed the number of young children who have this summer met their deaths in the water. Some of these accidents might have been prevented if the commonest precautions had been taken, either by the parents of the children, or by persons who have local authority. But it seems that there is a steady annual increase going on, and in that case it becomes a question whether some measures of a more general character ought not to be taken. The board of health admit that their appliances for saving life in the East and North rivers are not always as readily valuable as they ought to be. This defect can easily be remedied at a comparatively small expense. But in the absence of better arrangements in the shape of public baths, it might be advisable to have certain places appointed where within specified hours and then only bathers would be allowed to enter the water. If that were done, efficient supervision by properly-appointed officers could easily be given and assistance rendered if necessary. It would also prevent the scenes which are now to be witnessed at all hours of the day, to the annoyance of many persons passing on the ferries.

Until the art of swimming becomes more generally practised, deaths by drowning will be numerous. We do not think it is any exaggeration to say that the majority of the people cannot swim. Yet, as an aid to health as well as safety in the water it is very essential, and there is no reason why it should not become popular. In London an effort has recently been begun to have it taught in connection with the public school; and the scheme is worthy of notice, for if successful, as it promises to be, every attendant upon those schools, boys and girls alike, will soon have acquired the art. When the movement was begun, it was at once seen that nothing of the kind could be made a charge upon the school funds. The difficulty was met, therefore, by the formation of a club, under the lead of a few well-known merchants, to which only boys and girls in the elementary public schools should be admitted. The scheme was put forward experimentally, with many misgivings as to its ultimate success. But in a few weeks in one district only, and that the poorest of London, more than two thousand young children were enrolled as members, and the number is now said to exceed five thousand. The girls are provided for in the many swimming baths of the metropolis, and the boys go under suitable guidance to various public places at stated times, especially to the waters in Victoria park, which have been granted to them exclusively for two hours daily by the commissioners of works.

The plan is simple and quite as well adapted to the wants of New York as of London, but the most encouraging feature is the success which immediately attended it. The principal that swimming should be made a part of education of public school children is a sound one, and it is a useful and practical extension of the system. But the readiness with which the children voluntarily acquiesced in it shows how great an opportunity has hitherto been lost in neglecting it. If a smaller offer were made to the boys and girls in our schools, we believe it would be quite as eagerly accepted. They would be only too glad to have the chance of enjoying the luxuries of a bath under official sanction and with proper instruction, which now a few only can get, as it were, surreptitiously, and with the risk of being drowned. It seems to us that it would also be the easiest way of providing a remedy in future years against a recurrence of the many accidents which now have to be recorded.—*N. Y. Times*.

Teachers Wanted.

Wanted by the School Commissioners of the Township of Allumette Island Three School Teachers. One male holding a first class Elementary Certificate and two Females, second class, for particulars apply to Daniel Caughlin, Chairman or

TETENCE SMITH,
Secretary Treasurer.
School Corporation.

Allumette Island, }
Oct. 12th. 1875. }

THE JOURNAL OF EDUCATION.

(FOR THE PROVINCE OF QUEBEC.)

The Journal of Education,—published under the direction of the Hon. the Minister of Public Instruction, and Edited by H. H. MILES, Esq., LL. D., D. C. L., and G. W. COLFER, Esq.,—offers an advantageous medium for advertising on matters appertaining exclusively to Education or the Arts and Sciences.

TERMS:—Subscription per annum \$1.00; Public School Teachers half price; School-Boards &c., free.

Advertising.—One insertion, 8 lines or less \$1.00, over 8 lines, 10 cents per line; Standing advertisements at reduced charges, according to circumstances, but not less than \$10 per annum.

Public School Teachers advertising for situations, free. School Boards &c., free.

All communications relating to the Journal to be addressed to the editors.

ABSTRACT FOR THE MONTH OF JULY, 1875.

OF TRI-HOURLY METEOROLOGICAL OBSERVATIONS TAKEN AT MCGILL COLLEGE OBSERVATORY. HEIGHT ABOVE SEA LEVEL 187 FT.

Day.	THERMOMETER.				BAROMETER.				Mean Pressure of Vapour.	Mean Relative Humidity.	WIND.		SKY CLOUDED IN TENTHS.			Rain and Snow Melted.	Day.
	Mean.	Max.	Min.	Range.	Mean.	Max.	Min.	Range.			General direction.	Mean Velocity in m. p. hours.	Mean.	Max.	Min.		
1	64.44	69.0	57.6	11.4	29.9752	30.073	29.897	.176	.4006	66.4	w.	12.5	3.2	6	0	Inappreciable	1
2	67.22	73.6	58.1	15.5	30.0614	30.140	30.005	.135	.4256	64.2	s. w.	10.7	1.6	5	0		2
3	67.94	77.4	59.1	18.3	30.0211	30.069	29.960	.109	.4581	67.1	s. w.	9.4	2.5	6	0		3
Sunday 4		68.8	61.1	7.7							s. w.	11.1				0.29	4 Sunday
5	69.67	75.0	66.6	8.4	30.0282	30.076	29.911	.165	.5885	81.4	n. e.	7.2	6.5	10	2		5
6	64.99	68.8	63.0	5.8	30.0312	30.074	29.998	.076	.5395	87.5	n. e.	3.5	9.2	10	8	0.14	6
7	70.36	77.9	61.9	16.0	30.1224	30.192	30.023	.169	.5059	69.0	s. w.	4.4	2.6	5	0		7
8	71.31	78.8	63.6	15.2	30.2229	30.277	30.169	.108	.4980	64.9	s. w.	4.8	3.2	10	0		8
9	71.31	78.8	63.6	15.2	30.2229	30.277	30.169	.108	.4980	64.9	s. w.	4.8	3.2	10	0		9
10	70.12	78.0	63.6	14.4	30.0289	30.138	29.893	.245	.5555	76.0	s. w.	9.4	5.6	10	0	0.07	10
Sunday 11	70.81	79.1	64.1	15.0	29.7269	29.851	29.618	.233	.5552	74.4	w.	12.3	5.4	10	2	Inappreciable	11 Sunday
12		68.8	60.1	8.7							n. w.	8.8				0.02	12
13	66.36	74.1	57.2	16.9	29.8262	29.875	29.780	.095	.4537	70.8	w.	12.2	1.7	7	0		13
14	63.61	68.8	59.1	9.7	29.7104	29.771	29.648	.123	.4744	80.7	s. w.	10.3	6.2	10	0	0.11	14
15	66.76	74.8	58.3	16.5	29.7332	29.759	29.681	.078	.5276	80.5	w.	8.9	3.0	8	0		15
16	70.41	79.0	61.4	17.6	29.7460	29.820	29.700	.120	.5284	71.6	s. w.	11.3	1.2	2	0		16
17	69.21	78.9	65.1	13.8	29.6754	29.698	29.648	.051	.6100	85.6	w.	10.5	6.9	10	1	1.62	17
Sunday 18	66.66	73.2	60.4	12.8	29.7900	29.852	29.667	.185	.4236	65.6	n. e.	9.6	2.5	10	0		18 Sunday
19		64.5	50.0	14.5							n. e.	7.0				0.52	19
20	61.80	70.1	49.8	20.3	30.0721	30.104	30.025	.079	.3612	66.1	w.	11.1	1.4	5	0		20
21	66.79	75.8	55.6	20.2	29.8874	30.025	29.724	.301	.4010	68.6	s. w.	13.1	5.1	9	2	Inappreciable	21
22	66.77	72.8	62.0	10.8	29.7206	29.851	29.676	.175	.4804	73.1	n. w.	13.0	4.9	10	1	0.23	22
23	67.40	76.2	57.3	18.9	29.8571	29.915	29.783	.132	.5041	75.4	s.	8.9	7.2	10	0		23
24	69.51	76.9	64.1	12.8	29.7855	29.813	29.757	.056	.6214	86.4	s. w.	11.1	7.6	10	3	0.60	24
Sunday 25	67.77	74.0	62.1	11.9	29.9409	30.025	29.828	.197	.4752	70.7	w.	10.1	3.2	10	0		25 Sunday
26		78.2	60.1	18.1							s. w.	11.2					26
27	70.05	77.7	64.4	13.3	29.9547	30.018	29.890	.128	.6407	87.1	s. w.	10.2	6.7	10	0		27
28	69.02	75.5	64.0	11.5	29.9146	29.964	29.870	.094	.5875	84.7	w.	4.6	6.6	10	2	0.03	28
29	72.26	80.0	65.1	14.9	29.8603	29.873	29.832	.041	.6236	79.1	w.	9.6	3.1	10	0	0.01	29
30	70.79	80.2	61.5	18.7	29.8323	29.882	29.781	.101	.5940	78.8	s. w.	11.2	2.2	8	0		30
31	67.03	75.5	58.5	17.0	29.8267	29.980	29.758	.222	.5811	87.2	w.	13.8	5.1	9	0		31
Means	64.585	74.52	60.33	14.19	29.9034			.1383	.5123	75.49		11.2	4.32				

* Barometer readings reduced to Sea level and temperature of 32° Fah. † Pressure of Vapor in inches of Mercury. ‡ Humidity, relative, saturation. 100.

Mean temperature of month, 67.83. Mean of maxima and minima temperature, 67.42. Maximum temperature on the 29th was 80.2, Minimum temperature on the 19th, 49.8, giving a range of temperature for the month of 30.4 degrees. Greatest range in one day was 20.3, on the 19th; least range was 5.8 on the 6th. Mean height of the barometer was 29.9064. Highest reading was 30.277, on the 9th; lowest, 29.613, was on the 10th, giving a range of .659 inches. Mean elastic force of vapor was equal to .5123 of an inch of mercury. Mean relative humidity, 75.49. Maximum relative humidity was 99 on the 26th, during clear weather. Minimum was 51 on the 1st, during fair weather. Mean velocity of wind for month, 11.2 miles per hour. Maximum velocity, 22 miles per hour was on the 15; prevailing wind from on the south-west. Mean of sky clouded in tenths, 4.32. Rain fell on 14 days. Total precipitation in inches of water, 3.64 inches. Number of auroras, 4.

ABSTRACT FOR THE MONTH OF AUGUST, 1875.

OF TRI-HOURLY METEOROLOGICAL OBSERVATIONS TAKEN AT MCGILL COLLEGE OBSERVATORY. HEIGHT ABOVE SEA LEVEL, 187 FEET.

Day.	THERMOMETER.				BAROMETER.				† Mean Pressure of Vapor.	‡ Mean Relative Humidity.	WIND.		SKY CLOUDED IN TENTHS			° Rain and Snow Melted.	Day.
	Mean.	Max.	Min.	Range.	Mean.	‡ Max.	‡ Min.	Range.			General direction	Mean Velocity in m. p. hour.	Mean.	Max.	Min.		
Sunday 1		70.0	54.0	16.0							N.	5.0					1 Sunday
2	64.04	70.9	53.0	17.9	30.2549	30.291	30.213	.078	.3670	62.75	E.	2.6	0.9	2	0		2
3	57.67	66.2	54.0	12.2	30.1900	30.249	30.093	.156	.4281	87.25	E.	5.5	7.2	10	0	0.15	3
4	61.15	65.7	55.7	10.0	30.0111	30.053	29.980	.073	.5136	94.87	calm.	0.1	9.9	10	9	0.25	4
5	67.39	73.7	62.4	11.3	29.9240	29.976	29.879	.097	.5610	84.25	S. W.	2.1	7.9	10	0	Inapp.	5
6	70.04	79.3	59.5	19.8	29.8481	29.921	29.758	.163	.5799	79.75	S. E.	6.6	4.6	9	0	Inapp.	6
7	71.96	72.5	66.9	5.6	29.7517	29.820	29.718	.102	.6100	78.10	W.	6.4	7.0	9	5	0.28	7
Sunday 8		74.0	63.6	10.4							W.	5.6				0.09	8 Sunday
9	63.29	77.5	59.9	17.6	29.8647	29.914	29.819	.095	.4912	71.75	S. W.	6.5	3.5	8	0		9
10	70.66	80.3	63.0	17.3	29.8495	29.893	29.812	.081	.5106	68.90	S. W.	5.9	5.0	10	0		10
11	72.26	81.7	64.6	17.1	29.9359	29.963	29.886	.077	.5857	74.00	S.	3.5	5.1	10	0		11
12	71.01	78.1	67.9	10.2	29.9279	29.949	29.911	.038	.6895	90.90	S.	2.1	9.6	10	9	0.50	12
13	72.96	76.8	70.0	6.8	29.8602	29.883	29.831	.052	.7524	92.60	S. W.	4.6	9.2	10	8	0.36	13
14	72.64	81.1	66.4	14.7	29.8542	29.881	29.818	.063	.3924	74.60	S. W.	11.2	2.7	8	0		14
Sunday 15		84.1	65.4	18.7							W.	7.1					15 Sunday
16	70.32	70.9	67.5	13.4	29.8157	29.856	29.765	.091	.6307	84.70	N.	7.5	4.7	8	1	0.01	16
17	70.14	77.6	64.4	13.2	29.8306	29.851	29.794	.067	.6517	88.40	S.	11.4	5.1	8	1	0.10	17
18	67.70	71.6	64.0	7.6	29.8024	29.845	29.721	.124	.6520	96.00	N. E.	6.3	8.2	10	1	0.83	18
19	70.47	79.9	65.1	14.8	29.7650	29.807	29.728	.079	.6275	85.00	N. W.	5.5	8.1	10	3	Inapp.	19
20	69.77	78.0	64.8	13.2	29.8767	29.942	29.821	.121	.5767	80.00	W.	10.5	4.1	8	1	Inapp.	20
21	69.77	78.8	63.2	15.6	29.9960	29.033	29.941	.092	.5406	75.40	W.	11.2	4.9	10	1	0.02	21
Sunday 22		68.3	53.4	14.9							W.	9.5					22 Sunday
23	58.24	66.6	51.0	15.6	30.3510	30.381	30.319	.062	.3226	66.70	S. W.	2.9	1.7	3	0		23
24	61.92	71.8	51.1	20.7	30.3569	30.394	30.330	.064	.3952	72.12	E.	1.8	2.1	5	0		24
25	65.91	75.0	57.1	17.9	30.3202	30.380	30.257	.123	.4389	59.50	E.	2.5	0.5	1	0		25
26	68.22	78.6	57.1	21.5	29.2504	30.310	30.200	.110	.4622	66.75	S.	3.8	2.4	6	0		26
27	69.82	81.7	58.1	23.6	39.2112	30.267	30.166	.101	.5042	70.00	W.	5.0	3.6	10	0		27
28	74.40	83.0	63.4	19.6	30.1244	30.217	30.048	.169	.6884	58.50	W.	5.0	1.5	6	0		28
Sunday 29		87.0	65.1	21.9							W.	6.0					29 Sunday
30	76.04	86.2	60.8	25.4	29.9216	29.980	29.867	.113	.5659	63.62	W.	5.9	3.9	9	0		30
31	72.66	81.6	63.8	17.8	30.0287	30.083	29.947	.136	.5297	65.50	N. E.	4.1	1.6	6	0		31
Means	68.67	76.72	61.17		29.9967				.5411	76.99		5.6	4.8				

* Barometer readings reduced to sea-level and temperature of 32° Fahr. † Pressure of vapor in inches of mercury. ‡ Humidity relative saturation, 100.

Mean temperature of month, 68.67. Mean of maxima and minima temperature, 68.91. Maximum temperature on the 29th was 87.0, Minimum temperature on the 23rd, 51.0, giving a range of temperature for the month of 35.9 degrees. Greatest range in one day was 25.4, on the 30th; least range was 5.6 on the 7th. Mean height of the barometer was 29.9967. Highest reading was 30.394, on the 24th; lowest, 29.718, was on the 6th giving a range of .676 inches. Mean elastic force of vapor was equal to .5411 of an inch of mercury. Mean relative humidity, 76.99. Maximum relative humidity was 100 on the 12th, during heavy rain. Minimum was 43 on the 2nd, during clear weather. Mean velocity of wind for month, 5.6 miles per hour. Maximum velocity, 24 miles per hour was on the 14th; prevailing wind from the west. Mean of sky clouded, in tenths, 4.8. Rain fell on 1 days. Total precipitation in inches of water, 2.50 inches. Number of Auroras, 1.