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JOURNAL OF EDUCATION

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AGRICULTURAL EDUCATION IN UPPER CANADA.

To the Editor of the *Journal of Education*.

SIR,—The Hon. Adam Fergusson has lately addressed a letter to the Editor of the *Canadian Agriculturist*, on Agricultural Education. The letter of the honourable gentleman has already received extensive publicity.

The impression seems to be uniform and general that Canadian Farmers require a knowledge of the principles of Husbandry. Different opinions may, however, be supposed to exist, respecting the amount of practical benefit likely to be derived from the mode suggested by the honourable gentlemen to secure to Farmers the advantages of an Agricultural Education.

In reviewing some of the more prominent reasons why Farmers require at present, more than at any other previous time, a knowledge of the principles of their art, we obtain an indication of the real nature and extent of the information they should possess, and the machinery best adapted to diffuse it amongst them.

During a course of lectures on Agriculture, lately delivered in the city of Albany by Professor Johnston, we learn that "the farming interests in the State of New York are in process of deterioration; that the average of all crops is certainly diminishing" (See published lectures also speech of Mr. Baldwin). A statement which applies also to many of the older settled districts in Canada. When we compare these positive results, as exhibited by tables of produce, with the opinions we might be inclined to deduce from the extensive displays of stock, of vegetable productions and of farming implements at the great agricultural fairs held in the neighbourhoods of Buffalo, Syracuse, Cobourg and Kingston, during the past two years, we are compelled to adopt the conclusion, that agricultural exhibitions, however magnificent and useful in themselves, do not necessarily afford an illustration of the general progress of Husbandry. If the average amount of crops raised each year on the same extent of surface is, *ceteris paribus*, diminishing, we cannot congratulate ourselves on that universal progress upon which the prosperity of an agricultural country is evidently so dependant. This yearly diminution is no new thing in the agricultural history of exporting countries. The present and past conditions of Virginia and other Southern States furnish illustrations on the continent of America. Experience and science both indicate that deterioration in the soil is universal wherever farming operations are conducted without a regard for the future, without an acquaintance with farming principles. We already discover its approach near and around us. Thousands are complaining of constantly diminishing scales of produce. (See editorial, *Canadian Agriculturist*, April No.)

In this constructive and enterprising age, communications by means of rivers, lakes, canals, railroads, plankroads, &c., are in their rapid development, bringing the more distant parts of this Province and the prairies of the west, within reach of those great centres where their produce may be turned into money. We must not shut our eyes to the fact that millions of bushels of wheat, raised without skill and harvested almost without a care, by glutting the home, must cheapen the foreign market, and that the occupant of a crop-worn farm, will most certainly ere long be brought into direct (now partially indirect) competition with the careless yet successful cultivator of a virgin soil.

Our markets in a great measure lie beyond the seas. Beyond

the seas themselves what active energies now begin to develop themselves. Simultaneously with political revolutions are springing social and commercial revolutions. In every direction means of communication are opening up fertile farming provinces; railroads, joining all great centres, and passing through agricultural districts, where labour is most abundant and cheap, and where the staple commodity wheat, has frequently hitherto throughout extensive provinces rotted in the sheds of the landowner, owing to some trifling obstruction to transportation. These increased facilities for throwing into market centres the supply to be derived from distant and hitherto stagnant provinces, are multiplying in a ratio which outvalues the yearly progressing demand, and resolve the probability, that the price of wheat, will in a few years, average much lower than at present, almost into a certainty. In order that the farmers of Canada may sustain their position and brave the competition which is yearly augmenting, not only must the average amount raised from the same extent of surface be increased throughout the country, but their attention turned to the growth of those vegetables which serve to improve the rotation and their stock, as well as for manufacturing and other purposes. Such progress implies at the same time the elevation of the people at large, in intelligent and virtuous industry, and a real advancement in the most material interests of the country.

Among the various suggestions of Mr. Fergusson for meeting the requirements of Farmers in Canada, none seems so favourable to the object in view as the establishment of a Board of Agriculture. "There can be no doubt that a Board, if properly constituted, is calculated to do great good." Farmers would place confidence in whatever emanated from a body of well-known and personally uninterested individuals; their suggestions would be responded to, and as Mr. Fergusson remarks, one palpable and most valuable result would be the annual collection and publication of the Agricultural statistics of Canada in an authentic and extended form.—Another valuable attainment would probably be in the preparation and distribution of a proper geological description of Canada for agricultural purposes. Nothing is more required; the geology of the soil and subsoil of Canada offers peculiar facilities; it is in general uniform and elementary; it does not exhibit those anomalies which characterise the geology of England. A good report expressed in plain and familiar language, with the objects and advantages briefly stated, would, if issued under the authority of a Board of Agriculture, be of the greatest use to farmers and emigrants, indicating in a measure the mode of culture to be adopted, the species of vegetables to be used in rotation, and the general adaptation of the soil for special purposes, which cannot possibly suggest themselves to the unscientific husbandman.

Mr. Fergusson alludes to the establishment of a Chair of Agriculture in the Provincial University. If such a professorship could be conveniently associated with a Board of Agriculture in various scientific capacities, the utility of both might be enhanced. I think it is very questionable, however, if the ordinary mode of communicating instruction by means of lectures would be of any avail for many years to come. An experimental farm appears to me to present a far more favourable field for speculation. A farm of 500 or 600 acres, embracing the two varieties of soil we meet with in this neighbourhood, would offer many advantages for experimental purposes under suitable regulations and management. The results, if published annually, under the authority of a Board of Agriculture

and either gratuitously, or at a nominal price distributed by the Board, would create among farmers a general and increasing interest. In order, however, that that interest might become a source of individual benefit to farmers, not merely in gratifying curiosity, but in giving impulse to action, they ought to be prepared for the reception and true significance of the facts laid before them; they should themselves acquire a knowledge of the elementary principles of Husbandry upon which the suggestions they might receive would be based. For it is to a vast multitude of independent farmers scattered through the Province, each with one or two hundred acres of land, that such hints would be given. The only mode which has hitherto been adopted and which indeed seems capable of meeting the case, is by appealing to farmers through the teachers of Common Schools. The Board of Education for Upper Canada has adopted this method of diffusing elementary Agricultural Instruction through the country. His Excellency the Governor General has expressed in words, and, if possible, more impressively in action, the consideration and importance he attaches to the course adopted by the Board of Education. His Excellency has been further pleased to distinguish in a manner eagerly to be sought after, those individuals, who, in the Normal School, exhibit an endeavour to qualify themselves for communicating the elementary principles of Husbandry in their capacity of School Teachers. The Board of Education has determined that the period of attendance at the Normal School shall be increased from five to nine months. It may be reasonably expected that with this additional advantage, many will be able at the expiration of the session, to communicate a knowledge of the principles of Husbandry, not only in the School house, but also by means of lectures in their own immediate neighbourhoods. If the Teachers-in-training at the Normal School could have the advantage of witnessing a course of experiments during a period of nine months, upon a Model Farm, under the control of a Board of Agriculture, much good could not fail to result, and a most influential means of disseminating experimental, theoretical and practical knowledge at once attained. Farmers in their occasional capacity of School trustees, would soon be induced to interest themselves in educational matters, especially those which refer to their own peculiar labors of life. A Board of Agriculture would immediately acquire a new interest in the eyes of Farmers, from the circumstance of those engaged in educating their children or themselves, having been taught by its experience and benefited by its liberality.

I am Sir,
Your Obedient Servant,
H. Y. HIND.

Toronto, April 22nd, 1850.

Miscellaneous.

BLACK BOARDS FOR SCHOOLS.

The New-York *District School Journal* gives the following instructions relative to the preparation and use of the plaster black wall, which in every school should take the place of the inconvenient black board.

In the first place, the *scratch coat*, made with coarse sand, is spread upon the laths as usual, and the *brown coat* follows, being left a little rough under the "float." When the brown coat is perfectly dry, the *black coat* is laid on.

This is prepared of mason's "putty," and ground plaster and beach sand, mixed in the usual proportions for *hard finish*. The coloring matter is lampblack, wet with alcohol or whiskey, forming a mixture of the consistency of paste. This is mixed with the other ingredients just as they are about to be spread upon the wall. The quantity of coloring to be used must be *sufficient* to make a black surface; the sufficiency being determined by experiment, no rule can be given.*

* Mr. Peter Le Page, Albany, has furnished the following recipe for black wall:

For 10 square yards of black finish, take 1½ pecks of Mason's Putty; 1½ pecks of Beach Sand; 1½ pecks of Ground Plaster; 1½ pounds of Lampblack wet up with 1½ gallons of Whiskey.

An intelligent mason can very soon try experiments so as to insure success. It is to be remembered that the black surface requires much more *working* with the smoothing trowel, than ordinary white finish. It should be finished by being softly smoothed with a wet brush. When perfectly dry, it is nearly as hard as slate, and almost as durable, if carefully used. Great care should be taken not to put in *too much* lampblack. The advantages of this kind of black surface over the ordinary black board, are, 1. The chalk easily takes effect upon it. 2. The chalk is much more easily wiped off. 3. There is but little noise made in writing upon it. 4. There is no reflection of light upon it. 5. It is cheaper, it costs but a trifle more than ordinary *hard finish*.

Additional Suggestions.—In building a new school house it would be well to have a belt of this black surface pass entirely around the room, at the proper height. In a common school, when small children are to use it, its lower edge should be about two feet from the floor, extending thence upward from 3 to 3½ feet. At the lower edge there should be a "chalk trough" extending the whole length, made by nailing a thin strip of board to the plank which bounds the black board, leaving a *trough* two inches in width and depth, in which to place the chalk, brushes, pointers, &c; this would also catch the dust which is wiped from the board. The upper edge should be bounded by a simple moulding.

The Brushes.—The best thing for removing the chalk from the board is a brush, made of the size of a shoe brush, with a wooden handle on the back side, the face being covered with a sheep skin with the wool on. This removes the chalk at a single sweep, without wearing the surface, and without soiling the hand of the operator. This is a great improvement over a dust-cloth or a sponge.

In all cases let the board be kept dry; never allow a pupil to wet the wiper when removing the chalk.

Renovation.—By long use, especially if the surface is ever cleaned with a *wet wiper*, this kind of black-board becomes too smooth and glossy upon the surface; the chalk passes over it without taking effect, and the light is reflected by it. A very simple wash applied with a white brush, will immediately restore it; this wash is made by dissolving one part of glue to two parts of alum, in water, so as to make a very *thin* solution. It is well to have this wash slightly colored with lampblack. Care must be taken that this wash do not have too much "*body*."

The above directions, if carefully observed, it is believed, will be found sufficient to enable any section to procure, at a cheap rate, an adequate amount of blackboard, ready for use at all times. If these suggestions shall tend to promote the welfare of the schools, by improving the means of instruction in the schools, the writer will have a sufficient reward.

QUESTION FOR EACH YOUNG MAN TO DECIDE.

I ask of the young man, then, who is just forming his habits of life, or just beginning to indulge those habitual trains of thought out of which habits grow, to look around him, and mark the examples whose fortune he would covet, or whose fate he would abhor. Even as we walk the streets, we meet with exhibitions of each extreme. Here, behold a patriarch, whose stock of vigor three-score years and ten seem hardly to have impaired. His erect form, his firm step, his elastic limbs, and undimmed senses, are so many certificates of good conduct; or, rather, so many jewels and orders of nobility with which nature has honored him for his fidelity to her laws. His fair complexion shows that his blood has never been corrupted; his pure breath, that he has never yielded his digestive apparatus for a vintner's cess-pool; his exact language and keen apprehension, that his brain has never been drugged or stupefied by the poisons of distiller or tobaccoist. Enjoying his appetites to the highest, he has preserved the power of enjoying them. Despite the moral of the school-boy's story, he has eaten his cake and still kept it. As he drains the cup of life, there are no lees at the bottom. His organs will reach the goal of existence together. Painlessly as a candle burns down in its socket, so will he expire; and a little imagination would convert him into another Enoch, translated from earth to a better world without the sting of death.

But look at an opposite extreme, where an opposite history is

recorded. What wreck so shocking to behold as the wreck of a dissolute man ;—the vigor of life exhausted, and yet the first steps in an honorable career not taken ; in himself a lazar-house of diseases ; dead, but, by a heathenish custom of society, not buried ! Rogues have had the initial letter of their title burnt into the palms of their hands ; even for murder, Cain was only branded on the forehead ; but over the whole person of the debauchee or the inebriate, the signatures of infamy are written. How nature brands him with stigma and opprobrium ! How she hangs labels all over him, to testify her disgust at his existence, and to admonish others to beware of his example ! How she loosens all his joints, and sends tremors along his muscles, and bends forward his frame, as if to bring him upon all-fours with kindred brutes, or to degrade him to the reptile's crawling ! How she disfigures his countenance, as if intent upon obliterating all traces of her own image, so that she may swear she never made him ! How she pours rheum over his eyes, sends foul spirits to inhabit his breath, and shrieks, as with a trumpet, from every pore of his body, "BEHOLD A BEAST !" Such a man may be seen in the streets of our cities every day ; if rich enough, he may be found in the saloons, and at the tables of the "Upper Ten ;" but surely, to every man of purity and honor, to every man whose wisdom as well as whose heart is unblemished, the wretch who comes cropped and bleeding from the pillory, and redolent with its appropriate perfumes, would be a guest or a companion far less offensive and disgusting.

Now let the young man, rejoicing in his manly proportions, and in his comeliness, look on *this* picture, and on *that*, and then say, after the likeness of which model he intends his own erect stature and sublime countenance shall be configured.—*Horace Mann's Thoughts for Young Men.*

PRACTICAL POWER OF KNOWLEDGE.

The globe, with all its dynamical energies, its mineral treasures, its vegetative powers, its fecundities of life, is only a grand and divinely-wrought machine put into his hands ; and, on the condition of knowledge, he may wield it and use it, as an artisan uses his tool. Knowledge inaugurates us into the office of superintendent and director of the elements, and all their energies. By means of knowledge, they may all be made ministering servants for our profit and our pleasure. Such is the true philosophic relation in which we stand to this earth, to the perfect system of laws which govern it, and to the mighty and exhaustless energies with which its frame, and every organ of its frame, is filled. It is our automaton. Gravitation, repulsion, caloric, magnetism, air, water, fire, light, lightning,—through knowledge, we can play them all, as Maelzel plays his chessmen !—*Horace Mann's Thoughts for Young Men.*

THE GREAT TEMPTATION TO YOUNG MEN.

But there is one pitfall of temptation, into which the young man of our day is in danger of falling, and into which the mercantile young man is in especial danger of falling. The gods of this world, the polytheism which has so long co-existed with Chemistry, is fast dying out. Men are rapidly coming to the worship of one deity ;—the only misfortune is, that it is neither the living or the true one. They deify wealth ; and while they most falsely transfer their worship to an idol divinity, they most faithfully fulfil the letter of the commandment, and love it with all their heart and soul and mind and strength. Were it currently reported and believed that the river of Jordan rolled over golden sands, or that the pool of Bethesda was surrounded by "Placers," the Christian would vie with the Jew for the rebuilding of Jerusalem ; all ships would be "up" for Palestine instead of San Francisco ; and the Holy Land would be again unpopulated,—not by a host of God-worshipping, but of gold-worshipping Crusaders.

Now I wage no war against wealth. I taint it with no vilifying breath. Wealth, so far as it consists in comfortable shelter and food and raiment for *all* mankind ; in competence for bodily want, and in abundance for every mental and spiritual need, is so valuable, so precious, that if any *earthly* object could be worthy of idolatry, this might best be the idol. Wealth, as the means of refinement and embellishment ; of education and culture, not only universal in

its comprehension, but elevated in its character ; wealth, as the means of perfecting the arts and advancing the sciences, of discovering and diffusing truth, is a blessing we cannot adequately appreciate ; and God seems to have pronounced it to be so, when He made the earth and all the fulness thereof,—the elements, the land and sea, and all that in them is,—convertible into it. But wealth as the means of an idle or a voluptuous life ; wealth as the fosterer of pride and the petrifier of the human heart ; wealth as the iron rod with which to beat the poor into submission to its will, is all the curses of Pandora concentrated into one. It is not more true, that money represents all values, than that it represents all vices.—*Horace Mann.*

THE CHILD'S WAY TO HEAVEN.

Oh ! I am weary of earth, said the child,
As it gazed with tearful eye
On the snow-white dove which it held in its hand,
For whatever I love will die.

So the child came out of its little bower,
It came and looked abroad,
And it said, I am going this very hour—
I am going to heaven, to God !

There was shining light where the sun had set,
And red and purple too ;
And it seemed as if earth and heaven met
All round in the distant blue.

And the child looked out in the far, far west,
And it saw a golden door,
Where the evening sun had gone to its rest
But a little while before.

There was one bright streak on the cloud's dark face,
As if it had been riven ;
Said the child, "I will go to that very place,
For it must be the gate of heaven."

So away it went to follow the sun,
But the bright clouds would not stay,
And still the faster it tried to run,
The faster they moved away.

Then the evening shades fell heavily,
With night dews cold and damp,
And each bright star on the dark blue sky
Lit up its silvery lamp.

A light wind wafted the fleecy clouds,
And it seemed to the child that they
Were hurrying on to the west, while the stars
Were going the other way.

And the child called out, when it saw them stray,
By the evening breezes driven,
Bright stars, you are wandering far away
From the azure path to heaven.

Then on it went through the rough waste lands
Where the tangled briars meet,
Till the pricklers scratched its dimpled hands,
And wounded its little feet.

It could not see before it well,
And its limbs grew stiff and cold,
And at last it cried, for it could not tell
Its way in the open world.

So the child knelt down on the damp green sod,
While it said its evening prayer,
And it fell asleep as it thought of God,
Who was listening to it there.

A long, long sleep—for they found it there—
When the sun went down next day :
And it looked like an angel, pale and fair,
But its cheeks were cold as clay.

The sunbeams glanced on the drops of dew.
That lay on its ringlets bright,
Sparkling in every brilliant hue,
Like a coronet of light.

From the N. Y. Journal of Education.

COMPARATIVE VIEW OF EDUCATION IN GREAT BRITAIN AND THE UNITED STATES.

The object of the present article is not to give a detailed account of education either in Britain or in the United States, but only to point out in what particulars their methods and means of instruction differ. The writer's knowledge is derived from personal observation, from teachers, and from official documents.

The differences observable in the education of the two countries, has naturally arisen from the different circumstances of each. The United States have labored under the disadvantages of a more scattered population, and more urgent demands upon their time to procure the necessaries of life. When the colonists arrived in the new world, they had to clear away the forest, build houses, fence in their fields, and defend themselves and their possessions against wild beasts, and more formidable wild men; besides attending to the many wants of a newly established community. This left less time and means to be devoted to education. At the same time, the value of practical knowledge would be more appreciated than in a country where less labor was requisite to procure a subsistence, and the absence of all time honoured abuses, and invidious distinctness of classes, would naturally produce a system adapted to the whole of the community. Hence the education of the United States aims more at *immediate* practical application, and embraces a wider range, while it is less thorough in the amount of knowledge which it communicates on any particular subject, and less efficient as an instrument of mental discipline.

The plan of teaching the higher branches by means of printed questions is more common in the United States, than in Britain, where the student is generally required to answer such questions as his teacher may ask. Instead of a single text-book, the British student is frequently required to master several treatises on the subject. The teacher gives out a certain subject for study, and mentions the authors that may be consulted. When he comes to examine the scholar, he does so in a general way, without caring whether the answers to his interrogatories are given in this treatise or that.—On the contrary, in the United States, one book only is generally studied by the scholar. Another difference in the method of teaching, exists in regard to written exercises. These are much more common in Britain, where the examinations for degrees are frequently conducted altogether in this way, some of the teachers being present the whole time to see that the student obtains no assistance, either from books or notes, or from a third party.

The branches taught in Britain are fewer in number, and consist chiefly of such as were cultivated in early times. The sciences of recent origin, such as geology and chemistry, generally form no part of the regular course in the higher Institutions; but the extent to which the subjects of study are taught is usually greater. This is particularly the case with the classic languages, and with the mental and moral sciences. The time devoted to study is nearly the same in both countries, being only a little longer in Britain. Hence, as the subjects taught there are fewer, they can afford to teach them more thoroughly and extensively. The greater number of teachers, and the larger libraries belonging to the first class seminaries, also give in that country an additional advantage.

The branches which the British student is required to master, in order to obtain a degree, differ widely in the various colleges of Britain; but they are almost always fewer than in the United States.* The more recent institutions, such as London University, require more studies than Oxford or Cambridge. The reader must not suppose, however that the subjects which are not specified as essential and necessary to be pursued to obtain a degree, are therefore not taught in the British seminaries. There are no branches of human knowledge, of general interest, which may not be learned in most of the Universities. Thus Oxford has professors of Arabic, Sanscrit, Botany, Civil Law, &c., although attendance on these classes is optional with the candidates for degrees. The attendance at such classes is generally small, and the professors are paid in a great measure from the annual proceeds of endowments.

* In this respect, Scottish Universities most nearly resemble those of this country. The small number of subjects requisite for an examination at Oxford, would rather surfeit an American student.

The ancient practice of declamation is much less common in Britain than in the United States. It is altogether optional in many of the English Universities, and has been totally discontinued in most of the Scottish. The practice of giving prizes and honors to distinguished students is more common in Britain.—In most Institutions, the efforts of a few Students are quickened by the hope of reward and distinctions.—The general absence of these hot-bed stimulants is a decided advantage to the Colleges of this country.—We state as the result of considerable observation, that prizes and honors lead to superficial attainments, and stimulate to fevered exertion those who require no stimulant, while they produce no effect whatever on those who do. The great object is the prize, not a profound knowledge of the subject; and it is a common case with distinguished prize-takers, at the end of their curriculum, to sell their books, with the fixed determination of never paying any more attention to the subject. Within a month after the opening of a class, the superior attainments, and external advantages, or abilities, of a few members, make it evident to all the rest that competition will end only in defeat, and therefore they pay no regard whatever to prizes or honors which they cannot attain.

On the subject of discipline, we remark that much more severity is practised in Great Britain than in this country. The injunction of Solomon, not to spare the rod, is generally observed in the schools and academies: and the fines, public reprimands, and expulsions, which are sure to follow any marked violations of the college rules, are such as would cause a loud outcry among the students of American colleges. The doctrine that moral suasion alone is in every case omnipotent, most British teachers, of every class, consider not only untrue, but ridiculous. In consequence, however, of the early discipline applied to the rising generation, they are generally less inclined to violate the rules when they enter college than pupils in the United States; and hence, rebellions, offering personal violence to teachers, playing practical jokes on fellow-students, &c., are much less common among them. In the lower seminaries the lash is applied not only for misconduct, but for negligent study.

With respect to the price of tuition, and the facilities for obtaining an education, the advantage is decidedly in favor of the United States. Free schools, so common in all the northern and middle states are almost unknown in Britain. It is true that there are several such schools both in England and in Scotland, but they are not open to the public generally. They rather resemble the military school at West Point, in respect to the terms of admission, which are mostly in the hands of a few individuals. These often show a preference which excludes the more deserving portion of the youth; and therefore these schools are frequently in a very languishing condition. As the wages of the working classes are lower than in the United States, while the necessaries of life are dearer, it is no wonder that illiterate parents should not care to send their children to school; and hence the gross ignorance of a large number of the poorer classes throughout England. In Scotland the public schools established in every parish are endowed,* so that the charges for tuition are much lower than in England. Hence the number of persons totally illiterate is comparatively small. The Sunday Schools have done much in England in teaching children to read. The number attending these schools in England and Wales in 1833, exceeded one million and a half. Still the number of illiterate persons in that country is very great. In 1840, one-third of all the men, and one-half of all the women married were unable to write. In Ireland, popular education is much more generally diffused. Until very recently England had no system of public education for the people at large; and the one recently started is very limited and unsatisfactory. By an estimate in the Year Book, of the number actually educated in England, it appears that in the provision for the instruction of the whole population between 1800 and 1840 there is a deficiency of half a million. In the United States, provision is made for furnishing all the people with the means of educating their children at a cheap rate, and very frequently without any charge, while the price of labor, and the necessaries of life are such that almost all possess ample means of educating their children without any public aid.

The condition of academic education in these respects is very

* The teachers in these schools are almost all graduates of colleges, and besides the elementary branches, they teach the classics and mathematics.

greatly in favor of the United States. The minimum expenses of a student at Oxford or Cambridge is about \$400 a year, whereas in the colleges of the United States, board is furnished at so cheap a rate, and the tuition fees are so low, that the student might defray all necessary expenses* with one-third of the sum. In Britain, again, the student obtains little or no assistance from educational societies; he is dependent on his own funds, and those of his relatives; whereas the associations just mentioned, frequently defray a great part of his expenses in the United States, and private benevolence is also exercised towards students in narrow circumstances to an extent unknown in Britain. Hence the number of persons who receive a college education is comparatively much greater in the United States than in Britain.

The standing of teachers in Britain is much higher than in this country, owing chiefly to the permanence of their situations, and their comparatively higher incomes. Amidst our rapidly increasing population, and equally rapid exchange of circumstances, institutions of learning do not possess, in America, that stability and fixedness of circumstances which generally characterize those of Britain: hence teachers in good situations here do not feel secure in the enjoyment of their present advantages, and therefore they are ready to adopt some other vocation. They are further incited to this course by the smallness of their incomes, which arises, in a greater measure, from the comparatively small number in attendance; and this is chiefly owing to the thinness of the population, and the consequent multiplication of seminaries.† It therefore generally happens that persons who take up teaching, are those who either cannot do anything else, or who expect to relinquish it as soon as they can enter upon some more lucrative pursuit. Much has recently been said and written about *elevating the teacher*. The whole may be expressed in two words—*permanence and profit*. Until these be secured to teachers, all other attempts to elevate them will come to naught: when these are secured, they will, *ipso facto*, take a higher standing in the community. The British teacher stands higher simply because his situation is more permanent and more lucrative. Compared with the earnings of other classes of the community, his remuneration is fully fifty per cent. higher than in this country. For these reasons, it is more common there for persons who assume the office of teacher, to follow it for life; and it is comparatively a rare thing to see a teacher in any of the high seminaries, resigning his situation, while it is well known that in this country the case is far otherwise. The frequent change of teachers among us renders education much less thorough and efficient than if the teacher was induced to devote all his energies and confine his future expectations to his present duties, and his pupils enjoyed the advantage of an uniform and consistent course of instruction.

The above remarks, so far as they regard the higher branches of education, apply particularly to male students. Advanced female education demands a brief special notice. That of American females is distinguished as embracing a much wider range of studies, and including many branches which in Britain are studied only by persons of the other sex. We never saw in Britain a class of young ladies studying logic, or psychology, nor did we ever hear or read of such a thing in that country, and a similar observation might be made regarding several other studies, whereas it is well known that in American academies we not unfrequently find more female than male students studying such branches. Until lately, British girls of the lower and middle classes studied little except the elementary branches of education, those of the upper classes were taught, in addition, music, painting, embroidery, with one or two modern languages, and nothing more. Recently they have introduced physiology, botany, and a little natural philosophy and history into the Scottish seminaries, which generally precede those of England in the work of improvement. Still, the course of female education is much less extensive than in the United States, where less time is devoted to music, needle-work, and modern languages,

* We mean of course, college expenses—fees for study, books, board and fuel—excluding apparel, travelling expenses, and such books as are not necessary for a student. The price of text-books in this country is little more than one half of what they cost in Britain.

† Although it is very convenient to have the means of college education brought near to the various sections of this widely extended country, there can be little doubt that the rapid increase in the number of colleges, without a corresponding increase in the means of efficient support, has been very detrimental to the cause of liberal education in this country. Colleges have been too often established to languish, and exist as colleges only in name, since they are in fact nothing more than high schools or academies.

and much more to be solid branches of education. Hence, although we cannot suppose that female education in this country is unsusceptible of farther improvement, it may be said with truth that American ladies are more intelligent, as a class, than those of any other country. Female education in other parts of Europe is still more defective than in Britain, and intelligent and thoroughly educated ladies met with in any part of Europe are mostly self-taught, or are indebted for their attainments to parental or private instruction.

TEACHERS' INSTITUTES IN UPPER CANADA.

As it is designed to hold Teachers' Institutes in each County Town of Upper Canada this Summer, and as curiosity may be awakened to learn something of their history and design, we beg to direct the attention of our readers to the 202nd, 207th, and 217th pages of the first volume of this *Journal*, and to the 99th page of the second volume, for valuable information on the subject. The following remarks on the Teachers' Institutes of the State of Massachusetts, we take from the *Boston Common School Journal*:—

"It is said, that several of these useful meetings are to be held this Spring, under the direction, of the new Secretary of the Board of Education. We hope teachers will not lose the opportunity which will thus be presented of acquiring instruction, encouragement, and a spirit of virtuous emulation. Indeed, such meetings rarely fail to benefit the community where they are held, as much as the teachers, by exciting attention to schools, and by enlightening the people as to the excellencies and defects of our System of Free Schools and showing them what is their duty in regard to it.— We hope that, wherever they may be held, the people will attend the exercises and lectures; and we pray the Trustees to be liberal towards the teachers, encouraging them to attend, and allowing them ample time to do so. If the Trustees should go farther, and actually pay the expenses of their teachers while at the Institutes, we believe the money so expended would yield a larger return than any other money they may be called on to expend. No town in Massachusetts has yet been liberal enough to set an example in this matter. 'Pinch a servant, and he will pinch you,' says the proverb; 'enlarge him, and he will magnify you.'"

RELIGION AN ESSENTIAL ELEMENT OF GREATNESS.

It will be difficult to find any thing in the English language exceeding in truthful eloquence the following passage from Daniel Webster's Eulogy, upon the death of the Hon. Jeremiah Mason, a distinguished member of the Bar in Massachusetts:—

"But, sir, political eminence and professional fame fade away and die with all things earthly. Nothing of this character is really personal worth. They remain. Whatever of excellence is wrought into the soul itself, belongs to both worlds. Real goodness does not attach itself merely to this life, it points to another world. Political or professional fame cannot last forever, but a conscience void of offence before God and man, is an inheritance for eternity. Religion, therefore, is a necessary and indispensable element in any great human character. There is no living without it. Religion is the tie that connects man with his Creator, and binds him to his throne. If that tie be all sundered, all broken, he floats away, a worthless atom in the universe, its proper attractions all gone, its destiny thwarted, and its whole future, nothing but darkness, desolation and death."

THE BRITISH COLONIAL EMPIRE.

According to Martin, in his account of the British Colonies, twenty-five written, and various unwritten languages, are spoken throughout this great empire of colonies. There are about 5,000,000 Christians, 50,000,000 Hindoos, 20,000,000 Mohammedans, 10,000,000 Budhists, and millions of other idolaters of various descriptions, in the British foreign possessions. The whole population is estimated at 130,000,000. Of these, not more than 26,000,000 eat flesh abundantly; about 10,000,000 sparingly; 24,000,000 occasionally; and 70,000,000 live principally on vegetables and fish. About 34,000,000 make wheat, oats and barley their principal granivorous food; 16,000,000, potatoes, pulse, and other vegetables; and 80,000,000, rice, maize, millet, &c. About 10,000,000 drink wine frequently; 25,000,000 distilled liquors; and 60,000,000, are water drinkers.

PROGRAMME OF THE SEMI-ANNUAL EXAMINATION
OF THE NORMAL AND MODEL SCHOOLS FOR UPPER
CANADA, AT THE CLOSE OF THE WINTER SESSION,
1849-50.

SATURDAY, TUESDAY, WEDNESDAY AND THURSDAY, 13th, 16th,
17th AND 18th, APRIL, 1850.

NORMAL SCHOOL.

SATURDAY (PRIVATE).—*Examination for His Excellency the Governor General's Prizes in Agricultural Chemistry, &c.*

Tuesday.—Mr. ROBERTSON, 10-11—Philosophy of Grammar. Mr. HIND, 11-12—Science and Practice of Arithmetic, with the use of Logarithms—Mensuration. *Intermission*—Mr. ROBERTSON, 2-3—Geography—Mathematical, Physical and Political. Mr. HIND, 3-4—Algebra—Geometry—Algebraic formulæ, applied to Mensuration and Surveying. Mr. McCALLUM, 4-4½—Book-keeping.

Wednesday.—Mr. HIND, 10-11—General Principles of Mechanics and Hydrostatics—Steam Engine, Locomotive—the Natural Sciences. Mr. ROBERTSON, 11-12—General Rules of Orthography and Composition of Words and prefixes and affixes—Rudiments of Logic. *Intermission*—Mr. HIND, 1½-2½—Agricultural Chemistry—Physiology. Mr. ROBERTSON, 2½-3½—General History—Synchronic Table. Mr. TOWNSEND, 3½-4—Hullah's System of Vocal Music. 4—Distribution of the Prizes given by the Governor General, by His Excellency in person.

MODEL SCHOOL.

Thursday—SCHOOL ROOM.—Mr. SANGSTER, 9-9½—Mechanics.—Mr. McCALLUM, 9½-10—Book-keeping and Grammar.—Mr. SANGSTER, 10-11—Geography.—(Senior Division.)—Mr. McCALLUM, 11-12—History. GALLERY.—Mr. SANGSTER—Arithmetic—(Junior Division.)—Mr. McCALLUM—Object Lessons.—Mr. SANGSTER—Object Lessons—Geography—(Senior Division.)—*Intermission*—Mr. SANGSTER, 2-3—Arithmetic—(Senior Division)—Algebra, mental and practical, and Geometry.—Mr. McCALLUM, 2-3—Grammar and Geography—(Junior Division) Mr. TOWNSEND, 3-3½—Hullah's System of Vocal Music.

NORMAL SCHOOL EXAMINATION.

NOTICES OF THE TORONTO PRESS.

Condensed from the British Colonist.

The Public examination at this valuable Institution, took place last week, at the close of the winter session. The teachers in training acquitted themselves admirably. The examinations lasted the whole of two days—Tuesday and Wednesday—and were conducted by the respective Masters, in the order set down in the programme.

The examinations were witnessed by many of our fellow citizens, and not a few of those occupying prominent stations on the Bench, at the Bar, in the Pulpit, and at the Executive Council Board. All appeared to be very much gratified with what they witnessed; and there were those who, on former occasions, seemed to doubt the utility of the institution, but who now bear willing testimony to its efficacy and usefulness. In order to form a correct estimate of the system pursued in the Normal School and the nature of the instruction imparted, it is necessary to attend all the examinations. A casual visit will not suffice. Those who only witnessed the examinations of the second day, may be impressed with a belief, that the instructions are superficial and better adapted for shew than for practical usefulness; but had they been present at the commencement, and been regular in their attendance to the close they would have seen that the teachers-in-training have been thoroughly drilled in all the important branches of study, to which their attention had been directed during the session. We are much pleased on this account to see the members of the Executive Council present, during the Examinations on Tuesday forenoon. Those who attended were the Honourable Messrs. Baldwin, Leslie, Hincks and Price. They were enabled to form a proper estimate of the elementary instruction imparted in the

Normal School, and to ascertain that it is by no means of that superficial character which it has been sometimes represented to be by parties who had not a fair opportunity of judging correctly. The Honourable gentlemen appeared to be very much gratified with what they witnessed, and at the close entered into conversation with Dr. Ryerson and Messrs. Robertson and Hind. They are, on doubt, quite alive to the important influence which the Normal School has already exercised, and must continue to exercise, on the common schools of the country, and the youths who attend them; and the appearance of intelligence and respectability which the teachers-in-training represented, must have impressed them with a still higher estimate of its value and importance. An annual supply of from 100 to 200 teachers, male and female, sent out from this valuable Institution, is one of the greatest boons which can be conferred on the community; and under the able and efficient instruction of Messrs. Robertson and Hind, there can be no doubt that each succeeding session will witness an improvement, by which the province will be proportionably benefited.—Without giving a minute description of the examinations, we may mention that the Governor General's prizes in Agricultural Chemistry were competed for on Saturday. The examinations for these prizes were private, under the direction of competent judges, appointed by the Board of Education, viz: Professor Croft, Mr. Buckland, and E. W. Thompson, Esq., with whom were associated the Masters of the Normal School. The several competitors had to give in written answers to a series of printed questions which had been previously prepared by the examiners. The first prize was adjudged to Mr. Weston Herriman, of Whitby. The successful competitors for the second, were Mrs. Dorcas Clark, Pickering, and Mr. Finlay MacNab, North Elmsley, County of Lanark. The subject of Agricultural Instruction, is one which now occupies a very extended and well deserved attention. No one who listened to the examinations of the teachers-in-training, could fail to foresee, in some measure, the benefits which must shortly result to our farmers, by having a number of young men, competent to teach the fundamental principles of their art, spread among them. Agricultural Instruction is much needed throughout the province, and it must be rapidly and extensively disseminated, to meet the requirements of a vast farming community; and in the present circumstances of the province, any more elaborate and extensive system of instruction does not seem necessary, than that which may be acquired and taught by the teachers of our common schools. As the term of attendance at the Normal School, will in future be nine months, ample time and opportunity will then be afforded, to young men of talent and energy, to acquire as much knowledge of Agricultural Chemistry, as will enable them not only to communicate a knowledge of its elementary principles, to the sons of farmers, but also in the form of experimental lectures to farmers themselves. We call the attention of farmers to its circumstances, who in their occasional capacity of School Trustees, have opportunity of demanding and obtaining instruction, if they seek, as teachers, those who are distinguished at the Normal School, by their endeavour to make themselves competent to convey information on husbandry, in all its branches. On Wednesday afternoon the Governor General visited the Normal School, to distribute the prizes. His Excellency was accompanied by the Hon. Colonel Bruce and one of his A. D. C. When the Governor arrived, the class was engaged in singing, under the direction of Mr. Townsend, in Hullah's system of Vocal Music. Upon His Excellency entering the Hall, the class up-standing, sang "God save the Queen," in excellent style.

His Excellency having taken his place on the platform, the Rev. Dr. Ryerson Chief Superintendent of Schools, observed (smiling) that although the removal of the Seat of Government may have proved advantageous to the city generally, the Normal School had not participated in those advantages. [This remark, had reference to the removal of the School from the Government House and the temporary occupancy of the Temperance Hall, which affords inadequate accommodation.] Dr. Ryerson referred with satisfaction to the prosperous condition of the Normal School, under its able masters, Messrs. Robertson and Hind. He stated that the present session there are 137 students admitted, of whom 43 were females. There were 25 rejected. During the Session, 36 had left, either from ill health or incompetency to take charge of Schools, including 3 cases of final suspension. At present, the class consisted of

101, of whom 13 were paying pupils, so that the number attending were 88. Of these, 65 taught Schools, previous to their coming to the Normal school, and the remaining 23 had never been employed in teaching. Of the number in attendance, about 13 would receive no certificates for various causes. The number in attendance, who have been all or part of the previous session, was 27. These who receive weekly assistance, during the session, numbered 66. The assistance was to the extent of 5s. per week, for board money. The session lasted five months; and hitherto there were two such sessions in the year. In order to dispense with the attendance, during the hot summer months, and to prolong the period of the session, it has been determined, by the Board of Education, to have hereafter, but one session of the Normal School in the year, which will continue for nine months, commencing at the beginning of September, and ending with the close of May. This is considered an improvement. The teachers in training will receive the usual assistance of 5s. per week, during the whole of the Session, and it is hoped that the protracted period of attendance will make a perceptible difference on those who may avail themselves of it. Hitherto, frequent instances have occurred of teachers returning a second, or part of a second, session, to receive further instruction; but with the proposed long session, it is hoped that such return may be unnecessary. In order to distribute the advantages of the Normal School as equally as possible over the Province, it has been arranged by the Board, that in future, candidates for admission shall be examined by a committee of school Superintendents, in their several counties. That the number to be received, and to be entitled to the weekly assistance, will be in the proportion of three for every County or Riding member returned to Parliament, and two for every City or Town member. Should any County, Riding, City or Town omit to send their quota, the deficiency will be supplied from among the other applicants—the number of pupils thus receiving assistance will be 117 for the session. As many others as may apply, and be found qualified, will be admitted on their engaging to become teachers; but no more paying pupils will be admitted, as it is considered advisable, in future, to confine the Normal School exclusively to the purpose for which it was established, viz: the training of persons for the arduous and important duties of School Teachers. The qualifications of applicants for admission into the Normal School will be made known in due time. Dr. Ryerson having resumed his seat,

His Excellency the Governor General arose and addressed the class. He remarked that if the removal of the Seat of Government had not been attended with unalloyed satisfaction to the citizens of Toronto, he had since learned many a hard lesson in the place where the Normal School was formerly held. (Laughter.) Before presenting the prizes, he desired to express his acknowledgements to those gentlemen who had been good enough to act as judges on the occasion, without whose assistance, and the admirable manner in which they had been seconded by the labours of Mr. Hind, what he (Lord Elgin) had done would have been entirely useless. When the public mind of England had been aroused to the necessity of popular education, it was thought that there would be no difficulty in finding a sufficient number of teachers for the schools then established, that where the demand was created the supply would speedily follow; this was soon discovered to be a mistake, and that it was necessary to supply the want by carefully training them. It was satisfactory to think that in the early days of Canadian education, this fact had been recognized, and the desire to remedy it been evinced by liberal grants by Parliament to this institution, and attendance of large numbers of pupils. The prizes which he had offered were in one department only of the studies prosecuted in the institution; he hoped, however, that they would not think from that circumstance that he was disposed to undervalue the other branches of instruction; he thought that the knowledge imparted should be as extensive as circumstances would admit, that the education of the persons who were to undertake the task of moulding the minds of the rising generation of the province, should be as high as possible, with a due regard, which should always be paid, to the great principles of religion and Christian morality. He did not undervalue other branches, but he had offered prizes to those who had attained most proficiency in the knowledge of scientific husbandry, because he believed that too little attention had hitherto been paid to it, and because it was one from which the Province might derive great benefit.—He knew that there was a prejudice amongst practical

men, against scientific agriculture, and it was not altogether unreasonable, as there had been, no doubt, a great many things set forth under high sounding titles, which were not founded on sound basis, and had proved only sources of loss to their projectors; these failures however, arose from not understanding thoroughly the true principles of the art. The difference between the two parties was simply this, the practical man judged of matters on a small scale, the scientific man on a large one; the practical man was in danger of taking an exception for a rule, a consequence for a cause; both agreed in their being certain natural laws, by which they were obliged to act; but the practical man judged only from his own experience of these natural laws—he refused to believe or profit by any thing which he had not seen. He adopted the fallacy of Hume, who said that all things contrary to experience were false—that miracles were contrary to nature, and therefore untrue. He believed that in giving the practical man scientific information, they were not only giving him the means of direct benefit to himself, but giving him a guard against the projects of mere speculators. One other reason actuated him in choosing this subject. He thought it of the utmost importance in this country to raise the character of the agriculturist, to make the pursuit honorable, that young men might not suppose that their time was thrown away in cultivating the soil. In Great Britain, all the leading public men, statesmen, and even warriors, the Consort of Her Majesty himself, were scientific agriculturists, and even in knowledge of detail could put practical farmers to the blush. In the neighbouring country also, he had lately seen that at the trial of a new plough, the gallant soldier, who now occupies the position of President of the Republic, handled the instrument with the skill of a workman. In this age no art would keep its place among honorable pursuits unless science was called to its aid, and he trusted that those before him, in the positions which they would shortly fill, would inculcate on their pupils the great importance of its introduction into Canadian Agriculture. His Excellency concluded with an earnest prayer that they might be successful in doing so, and that God might bless them in all parts of the laborious duty in which they were about to engage. His Excellency having handed the prizes to the several parties, resumed his seat. The Rev. Mr. Jennings having pronounced the benediction, the assembly separated.

On Thursday the examinations in the Model School took place. There was a very large attendance of spectators, all of whom appeared to take great interest in the proceedings.—The Model School is a School attached to the Normal School, where the teachers in training are enabled to practice what is taught them in the Normal School. There are two established teachers in the Model School, Messrs McCallum and Sangster, who conduct it under the daily supervision of the Masters of the Normal School. There is at all times a large number of pupils (nearly 300) in the Model School, who pay the trifling sum of 3d. per. week for tuition. There are generally more applicants for admission than can be accommodated. The pupils acquitted themselves to the entire satisfaction of all, evidencing the manner in which the school is conducted, the ability of the teachers, and the usefulness of such a place, to afford daily practice in teaching to the teachers-in-training at the Normal School. Those who have witnessed the examinations at the Model School, will scarcely credit the progress made by the little boys, in these branches, the great facility with which they answered all questions put to them, and the extraordinary interest they all take in what is before them. May success always attend these valuable Seminaries!

Condensed from The Globe.

The winter Session of this useful Institution, has just been closed with a series of examinatory exercises of a most interesting nature. These were conducted by the very talented and energetic teachers, Messrs. Robertson and Hind, with much spirit. In all the departments, the trials were most satisfactory. The great majority of the Students displayed in their replies a very thorough knowledge of the subjects of study, which are very numerous, and many of them difficult. Some of the branches taught, the pupils will of course never be called upon to teach in the Common Schools of Canada, but their study exercises a powerful influence in training the mind of the Student, and are calculated to be highly useful in that point of view. We believe the course of instruction is the same as in the Normal Schools in the States, and we are confident the efficiency of the management is quite as great as in those in-

stitutions. We were particularly pleased with the examination of the pupils by Mr. Robertson, upon a subject on which he had lectured in the course of the session—i. e. the best mode of teaching a school, the most efficient system of rewards and punishments, the true meaning of Education, &c., &c., on all which subjects Mr. Robertson appeared to have thoroughly impressed his pupils with very correct views, acquired in his experience as a teacher.

JOURNAL OF EDUCATION.

TORONTO, APRIL, 1850.

AGRICULTURAL EDUCATION IN UPPER CANADA.

In the *Report on a System of Public Elementary Instruction for Upper Canada*, prepared in 1846, the subject of Agricultural Education is referred to in the following terms :

"Agriculture—the most important department of human industry—has not as yet been introduced in any form whatever as a branch of elementary Education in our Schools. The Legislature has given some pecuniary assistance, and Societies have been formed with a view to encourage experiments and promote improvements in Canadian Agriculture; but experiments without a knowledge of principles will be of little benefit; and improvements in the practice of agriculture must be very limited until the science of it is studied. * * * The agricultural pupil should be made acquainted with the different kinds of soils, and their characteristic qualities; the modes of qualifying and improving each; different kinds of manure and other improving substances; the effects of different soils on different crops; rotation of crops, and the best methods of producing and securing them; agricultural implements and the machines which have been invented to save labour; different kinds of stock, and the various modes of feeding them, with the economical advantages of each; the method of keeping full and accurate accounts, so that he may be able to ascertain precisely not only his gross profits and losses, but the profit and loss in each detail of the system, and from each field of his farm. Of course, specimens, models, pictures, or drawings, should be used in teaching these elements of Agriculture."—pp. 141-142.

Practical effect has, as far as possible, been given to these views by the course of instruction pursued in the Normal School; and Mr. HIND has displayed much ability and zeal in communicating a large amount of scientific and practical information on Agriculture in a short space of time, and under many disadvantages, during each session of five months,—but which will hereafter be extended to nine months. In the grounds attached to the Government House (heretofore occupied by the Normal School) Mr. HIND commenced and pursued for two seasons a variety of interesting agricultural and botanical experiments, illustrative of his lectures; and the extent to which he has been accustomed each session to give instruction in the science of Agriculture, may be inferred from the printed questions of examination to candidates for the GOVERNOR-GENERAL'S Agricultural Prizes, inserted on the 58th page of this Journal.

We have pleasure in directing attention to the communication (first article in the present number) from Mr. HIND on the subject of Agricultural Education. The Hon. A. FERGUSSON has recently called public attention to the establishment of an agricultural professorship in the Provincial University; but we would respectfully submit, that although such a professorship might be endowed out of the funds of the University, whether it ought not to be established in connexion with the Normal School, rather than in connexion with the University? The undergraduates of a University are the last men in any country to give attention to the science of Agriculture, even if they had time, during their collegiate course. The attempt to establish an Agricultural lectureship in the Toronto University was entirely unsuccessful; the attempt to introduce agricultural science as a branch of instruction in the Normal School, under the circumstances, has been entirely successful. The classes in the Normal School are more than four times as large as those in the University, and consist of men who are connected with the agriculturists of the country by birth, association, past and future employment. Were a model farm connected with the Normal School in Toronto, (as is the case in Dublin,) the frequent visits of the students to such farm during their course of instruction, and the actual residence and labours of the more gifted of them upon the farm for a few months afterwards, would soon raise up an able agricultural lecturer for each county in Upper Canada, with one or more agricultural teachers in each township.

We hope the local newspaper press will aid in diffusing information as widely as possible, in their respective Counties, respecting the Teachers' Institutes mentioned in the following Circular:—

TEACHERS' INSTITUTES IN UPPER CANADA.

Circular from the Chief Superintendent of Schools to Teachers, Superintendents, and other Officers of Common Schools throughout Upper Canada.

The 65th section of the present School Act authorizes the holding of a TEACHERS' INSTITUTE in each County in Upper Canada, "under such regulations as may be prescribed by the Superintendent of Schools, by and with the sanction of the Governor-General in Council."

The requisite sanction has been obtained for this purpose. The Board of Education has proposed to the Masters of the Normal School to devote a part of the next few months to conducting such Institutes; and Messrs. ROBERTSON and HIND have very cordially acceded to the suggestion, and expressed their utmost readiness to visit all the Counties in Upper Canada, as far as practicable, in the prosecution of a work for which they are so admirably qualified.

It becomes then my official duty to specify some of the regulations which should govern the proceedings of these TEACHERS' INSTITUTES, before stating the times at which they will be held in the several Counties of Upper Canada.

A Teachers' Institute is a meeting of Teachers assembled two, four, or ten days, or two or four weeks, for the purpose of improvement in their profession. During each evening of such Institute, a public lecture is usually delivered on some subject connected with Common School Education. During each day the Teachers composing the Institute, are either formed into classes, for school exercises, under able instructors, or discuss the modes of teaching the various subjects of Common School instruction, and school organization and discipline.

What is contemplated during the approaching summer is intended as a preparation for or introduction to Teachers' Institutes, rather than holding such Institutes themselves. It is intended to limit each meeting (with one or two exceptions) to two DAYS, including two evening lectures—the first on the eve of the first day of the Institute, the second on the evening of that day. In some cases, a third lecture may be delivered the evening following.

The evening lectures will commence at 8 o'clock. The exercises each day will commence in the morning at nine, and continue until noon; will be resumed in the afternoon at two, and close at five.

The subjects which will engage attention during these exercises will be chiefly, the METHODS AND PRINCIPLES OF TEACHING *Reading, Writing, Arithmetic, Orthography, Geography* (with Mapping), *Natural and General History, Grammar*, and, in some instances, perhaps, higher subjects; also School Government and Discipline. Some of these subjects may occupy much less time and attention than others, according to their relative importance, and as circumstances may suggest. Collateral subjects may on some occasions be introduced; but the proceedings of each Institute will be under the direction of the Masters of the Normal School.

During many years such Institutes have been held in various parts of Germany; and during the last four or five years, they have been held with great advantage and success in the New-York and New England States. They have been numerous attended by Teachers, School Officers, and other educationists, and have been productive of the happiest results in respect both to Teachers and large portions of the community where they have been held.

Shall we have proof in the experiments now to be made that such Institutes may be held in Upper Canada? Will Canadian Teachers show that they have as much energy and noble ambition to attend and participate in the proceedings of such Institutes as Teachers in other countries? If Teachers desire their position and profession to be advanced, they must exert themselves, and not depend on others, or sit down in complaining inactivity. No one circumstance would speak more in behalf of Canadian School Teachers than to see them as one man attending the Institutes about to be held; and the proceedings of such Institutes largely attended cannot fail to be individually useful to Teachers, and give a powerful impulse to the cause of public education.

And may we not hope for as much cordial co-operation on the part of local Superintendents of Schools, Ministers of religion generally, and other public men, as is shown by corresponding orders of men in neighbouring countries? Upon public and patriotic grounds, it is hoped that pains will be taken in all the congregations, and through the press, and in other convenient ways, to give the widest publicity to the evening lectures; and that School Teachers,

Superintendents, Clerical, and other School visitors and officers will attend the day exercises of the Institutes.

I venture to assume from personal experience of such courtesy, that the Court Houses in the several counties will be allowed to be used for holding these Teachers' Institutes; and that the Superintendent of Schools in each city or town where an Institute may be appointed, will make the necessary preparations as to place, lights, &c. Perhaps, in some instances, a more convenient place than the Court House may be obtained for the evening Lectures, if not for the other exercises, of the Institutes.

I confidently hope also, that School Trustees will in all cases readily assent to the absence of their Teacher long enough to attend the Institute in their County, and that as many as possible of the Trustees themselves will also attend. I would likewise bespeak the favourable consideration of the friends of education in the Towns and neighbourhoods where these Institutes may be held.

It is not probable that the Masters of the Normal School will be able to make a second visit to the several Counties of Upper Canada; all, therefore, who wish to understand the principles of teaching and system of instruction adopted in the Normal School, and sought to be introduced into all the Schools in Upper Canada, are earnestly invited to attend these Institutes, and to do so in every instance from the beginning to the end of their proceedings, in order to be able to judge intelligently of the system of school-teaching which they will develop.

I shall be happy to make a personal visit to the several Counties in the course of the ensuing autumn, to confer with local School-officers on the provisions of the School-law and the establishment of School libraries, to furnish them with copies of the School Act and all Forms, Regulations, &c., required for its execution, and to consult on the best means of promoting the interests of education generally.

It only remains for me now to state the times and places at which Messrs. ROBERTSON and HIND will hold Teachers' Institutes for the several Counties in Upper Canada.

PLACES.	FOR THE COUNTY OR COUNTIES OF	DATE.
St. Catharines,	Lincoln, Haldimand and Welland,	May 30 & 31
Hamilton, . . .	Wentworth and Halton,	June 4 " 5
Simcoe,* . . .	Norfolk,	" 7 " 8
Guelph,† . . .	Waterloo,	" 7 " 8
Woodstock,* . .	Oxford,	" 11 " 12
Goderich,† . .	Huron, Perth, and Bruce, . . .	" 11 " 12
London, . . .	Middlesex,	" 14 " 15
Chatham, . . .	Kent,	" 18 " 19
Amherstburg, .	Essex,	" 21 " 22
Cornwall, . . .	Stormont, Dundas, and Glengarry,	July 4 " 5
L'Orignal, . .	Prescott and Russell,	" 9 " 10
Bytown, . . .	Carleton,	" 12 " 13
Perth,	Lanark and Renfrew,	" 16 " 17
Brockville, . .	Leeds and Grenville,	" 19 " 20
Kingston, . . .	Frontenac, Lennox & Addington,	" 23 " 24
Pictou,	Prince Edward,	" 26 " 27
Belleville, . .	Hastings,	" 30 " 31
Cobourg, . . .	Durham and Northumberland, .	Aug. 2 " 3
Peterborough, .	Peterborough,	" 6 " 7
Barrie,	Simcoe,	" 15 " 16

Let it be specially observed, that the first lecture in each place above mentioned, will be delivered in the evening previous to the first day named for holding the Institute; and it is hoped that Teachers, and all others purposing to attend the Institute, will be present at the preceding evening's preliminary lecture, and thus be prepared for entering upon the proceedings of the Institute the morning following.

EDUCATION OFFICE, E. RYERSON.
Toronto, 16th April, 1850.

NORMAL SCHOOL INSTRUCTION AND TRAINING.

NEW ARRANGEMENTS FOR EXTENDING ITS BENEFITS.

We beg to direct the attention of the *Public Press*, and of our readers generally, to the new and modified regulations (inserted in the succeeding column) which have been adopted by the Board of Edu-

cation, for the admission of candidates to the Normal School, and for extending the benefits of that institution as widely as possible to every County in Upper Canada.

The great practical advantages, and even absolute necessity of the Institution are now attested by every intelligent observer; and the only complaint made, has been that the period of instruction was too short, and the course too limited. The Board has now felt itself enabled and even called upon to do what could not have been successfully attempted at the commencement of the Normal School, before teachers and the public at large were impressed with the importance of its instructions and training exercise. The Board now feels that it is but responding to a public demand, in extending the period of instruction in all cases from five to nine months. In most cases the Teachers have felt that at the end of four or five months, they had just learned how to learn, and that a continuance of the same course of lectures and training two months longer, would more than double the benefits of the four or five previous months' exercises. So deeply impressed have the Teachers-in-training been on this point, that a very large proportion of them (we believe nearly every one who could command the means) have ventured a second session, entirely at their own expense. Some obtained the means of doing so by teaching school, and after six months' or a year's absence, returned to the Normal School a second session.

The same facilities which have heretofore been afforded to approved Teachers for attending the Normal School during five months, will now be extended to nine months. But it should be borne in mind that the weekly aid of five shillings allowed, in addition to free instruction and the use of books, is only temporary, and will be discontinued as soon as the demand for Normal School Teachers and instruction becomes sufficiently strong to secure a supply without much assistance. In the State of New-York, aid was at first given to students in the Normal School to the amount of a dollar and a quarter per week each; it was then reduced to a dollar per week, afterwards to three quarters of a dollar; and latterly the only pecuniary aid given has been the payment of the Students' travelling expenses. We think we are indulging in no extravagant expectations, but are warranted from the experience of the past, in anticipating that in the course of five years, weekly aid to Teachers-in-training will not only be superseded, but that one Normal school will not be adequate to supply the demand for such instruction; that not less than three such schools will be required—one to the West and another to the East—each receiving the support now granted to the parent and central institution. Men have attended the Normal School, who possess the talents and qualities, which, with some further discipline and experience, would admirably fit them to take part in the management of any new Normal School. Canada should never look abroad for its professors or teachers any more than for its statesmen, merchants, engineers, farmers, and artisans. The Teachers in the Model, or practising School of our Normal School, have been trained in that Institution, and are inferior to none we have seen in that position.

We hope there will be found intelligence and energy enough in every county in Upper Canada, to seize the advantages which the Board of Education offers in the regulations to which we have referred. Let every young Teacher—and every young man who purposes to devote his life to the development of the youthful mind—exert himself to secure a Normal School training. If he can procure the recommendation of local examining Superintendents, well; but if not, if his character be good, his heart right, his mind settled in purpose, his elementary knowledge sufficient, and can command the means of paying a dollar and a half for a few months, let him not forego or defer the advantages of the Normal School; he will be sure of free instruction, and the use of all necessary books, and he will ever bless the day that conferred upon him, and enabled him to confer upon the youth of his country, the benefits of such a system of instruction. The following are the

REVISED TERMS of Admission into the Normal School, Toronto.—Adopted the 12th of April, 1850, by the Board of Education for Upper Canada.

THE BOARD OF EDUCATION anxious to adopt such measures as appear best calculated to render the training of the Normal School as thorough as possible, and to diffuse its advantages over every County in Upper Canada as equally and as widely as possible, adopts the following regulations in regard to the duration of the

* This Institute will be attended by Mr. ROBERTSON alone.
† This Institute will be attended by Mr. HIND alone.

future Sessions of the Normal School; and the mode and terms of admitting and facilitating the attendance of Students at that Institution.

ORDERED—I. That there shall, during each twelve months, be one Session, which shall commence on the first Monday in September, and close the last week in May.

II. That no male student shall be admitted under eighteen years of age, nor a female Student under the age of sixteen years; nor unless, in addition to the qualifications heretofore specified for admission, (namely, to read and write intelligibly, and understand the simple rules of Arithmetic,) each Student be acquainted with the elements of Geography and English Grammar.

III. That the weekly aid of five shillings each heretofore allowed by the Board to approved Students to facilitate their attendance at the Normal School, shall be extended hereafter for a period of nine months, under the following regulations:—1st—The Students shall be admitted from the several Counties, Cities, and representative Towns of Upper Canada in proportion to the number of the Representatives in the Legislative Assembly; namely, three for every County member, and two for every member of a City and Town. The Township, Town, and City Superintendents of Common Schools are requested to meet not later than the first Tuesday in August, (at least to the number of three) at ten o'clock, A. M., in the County Town, to examine candidates for admission into the Normal School during the ensuing Session, in accordance with the terms of admission prescribed by this Board, and recommend such as they shall judge qualified for admission and worthy of the facilities of attendance afforded by this Board, arranging such approved Candidates in the order of merit,—inserting the names of all whom they recommend, (how many soever there may be,) and forthwith transmitting their names to the Chief Superintendent of Schools. 2nd—Should any County, City, or representative Town not avail itself of the facilities here offered, a sufficient number of approved candidates will be admitted from other places, beyond the proportion of candidates above specified; and should not the complement of one hundred and twenty Students be thus recommended, the Board would receive a sufficient number of approved candidates, on examination, as heretofore, at the commencement of the Session.

IV. That the foregoing Resolution is not to limit the number of Teachers-in-training to be admitted, on their personal application, (duly recommended) to free tuition, and the use of books, without the addition of any allowance for board during the Session.

V. That, in future, no private pupils be received into the Normal School, but that the Institution be confined exclusively, to the instruction of Teachers-in-training; nor shall any persons be admitted as Students unless, in addition to the qualifications required by the third Resolution, they produce a certificate of good moral character, signed by the Clergyman or Minister of the religious persuasion with which they are connected, and declare their intention to devote themselves to school-teaching, and that their object in coming to the Normal School is to qualify themselves better for the important duties of that profession.

VI. That all Candidates for admission into the Normal School must present themselves during the first week of the Session, otherwise they cannot be admitted; they shall board and lodge in such houses, and under such regulations as are approved by the Board of Education; and their continuance in the School is conditional upon their diligence, progress, and observance of the General Regulations prescribed by this Board.

*VII. That all communications be addressed to the Reverend Dr. RYERSON, Chief Superintendent of Schools, Toronto.

By Order of the Board of Education for Upper Canada,

J. GEORGE HODGINS,

Recording Clerk.

EDUCATION OFFICE,
Toronto, 12th April, 1850.

N. B.—Board and lodging, for Students, may be obtained, at the Houses approved by the Board of Education, at from 7s. 6d. to 10s. per week.

EXAMINATION PAPER FOR HIS EXCELLENCY THE GOVERNOR-GENERAL'S PRIZES, IN AGRICULTURAL CHEMISTRY, VEGETABLE AND ANIMAL PHYSIOLOGY.—FIRST PRIZE, £5—SECOND PRIZE, £3.

APRIL 13th, 1850.

PART FIRST.

1. Describe the improvements which, in late years, have been effected in Husbandry.

2. What connection does there exist between Chemistry and Agriculture?

3. What connection does there exist between Geology and Agriculture?

4. Give an approximate analysis of a fertile soil. State the reasons why substances you mention are necessary.

5. What is meant by the physical condition of a soil? Give the names and physical properties of those compounds which most effect the physical condition of the soil.

6. Explain how granite rocks are disintegrated and decomposed.

7. How may a bed of clay be formed at some distance from the base of a range of granite hills? How may a bed of sand be formed under the same circumstances?

8. Describe the nature and mode of action of those forces which determine the relative position of sand and clay with reference to the source from which they originate.

9. In what state must all inorganic substances be, before they can enter into the composition of vegetables? Name those agents which are most influential in producing that state, and give examples.

10. What is the nature of the first chemical change which takes place when seeds germinate?

11. State the source of the Organic Food required by plants before they have thrown out leaves; also the name of that manure you would preserve and apply to the soil for the purpose of inducing a speedy development of the leaf.

12. When leaves are well developed, from what medium do they derive their chief supply of organic food? What is the chemical composition of that medium? and in what manner do vegetables affect its constitution? State also its mechanical properties.

13. What is the object of applying manure to the soil? Name certain important compounds which are not generally returned to the soil in the form of farmyard manure.

14. State the reason why there is a deficiency of important compounds in dry stable manure and propose a remedy.

15. Do all plants affect the fertility of a soil in the same manner? Give illustrations.

16. How does a wet soil retard the progress of vegetation? What would be your remedy?

PART SECOND.

17. What is the rationale of ploughing? of rotation of crops?

18. What are the chief agents in effecting the various chemical changes which result?

19. What effect will draining have upon the roots of plants, and how many it be supposed to answer in the climate of Canada? Illustrate by diagrams.

20. Give an analytical table of the most common non-nitrogenized principles found in vegetables.

21. What is fermentation? Into how many stages may fermentation be divided?

22. What is the first stage of fermentation? When does it take place? Through what agents? What advantage is taken of the first stage of fermentation in the practical arts?

23. What is the nature of the second stage of fermentation? Illustrate your explanation by examples.

24. Explain the mode in which the third stage of fermentation may be of practical use, and illustrate by means of symbols the theory of the process.

25. Of what do the fats and oils found in vegetables consist? What is soap? What change must take place in the constituents of vegetable or animal fat before a soap can be formed?

26. What important compounds does milk contain? Of what is the curd of milk composed? and why does it assume the solid state when an acid is introduced into fresh milk?

27. Explain the cause of the souring of milk.

28. What organic proximate principles are identical in plants and animals?

29. What change is effected by respiration in the non-nitrogenized elements of our food? Where does this change take place, and how does it affect the temperature of the body?

30. Trace the course of the blood, firstly, through the lesser or pulmonary circulation: secondly, through the greater or systemic circulation.

31. Explain the transformation of food into chyle. Where is conversion of chyle into pure blood supposed to take place?

32. Name the most prominent of those compounds which are found in the liquid excrements of animals.

Total number of marks requisite for complete answers to all the questions, 500. The following is the number obtained by the most successful competitors:

1. W. L. Herriman	410	4. Francis Oakley	- - 324
2. { Finlay McNab, } { Dorcas Clark }	349	5. Augusta H. Haley	321
3. Philip Lynch	- - 325	6. Duncan Sinclair	- - 305

The Prizes were therefore awarded to the competitors numbered 1 and 2.

REMARKABLE MECHANICAL TALENT.

There is a French Canadian boy at St. Hyacinthe, who has constructed a working model of a steam Locomotive complete in all its parts, about eighteen inches in length, without any assistance or instruction even in the use of tools. He is only about 14 years of age and has had to make for himself every implement necessary for this work, with the exception of one or two files. Among these implements is a rude species of turning lathe and the tools for making screws. His Models have been the Engines, which he had seen on the St. Lawrence and Atlantic Railway. The little Mechanic has nothing in his personal appearance that would indicate the possession of any talent whatever; and it is possible that his vocation, now so evident, would have remained unknown even to himself, but for the passage of the Railway near his father's house,—so true is it that every fresh improvement stimulates to new thought. We learn that it is the intention of some gentlemen, residing in the neighborhood of St. Hyacinthe, to make up a purse for the purpose of enabling the little fellow to pursue a course of studies, calculated to improve the talent which he has exhibited in so striking a manner.—*Montreal Herald.*

DISTRIBUTION OF THE INCOME OF THE NEW-YORK STATE LITERATURE FUND.

In addition to the valuable statistics contained on page 43 of this *Journal* relating to the Legislative Appropriations to *Colleges* in the State of New-York, we add the following detailed account of the distribution of the Income of the Literature Fund of the State by the Regents of the University to the several *Academies* entitled to receive it:—

At a meeting of the Regents of the University, on the 28th day of February, 1850, the distribution of \$40,000 of the income of the Literature Fund for the last year was made among several *Academies* entitled to participate therein. A certificate of the distribution has been delivered to the Comptroller, by whose warrant the amount apportioned to each *Academy* will be paid by the Treasurer of the State, on drafts or orders therefor, drawn on him by the Treasurers of the several *Academies*; such drafts or orders being accompanied by a proper certificate from the President or Secretary of the *Academy* under its corporate seal, and that the person signing said drafts is the Treasurer of the *Academy* duly appointed by the Trustees thereof.

Addison	\$152 61	Auburn	339 10
Albany	455 37	Do Female Seminary	373 02
Albany Female	755 68	Augusta	84 78
Albany do. Seminary	152 61	Aurora	150 18
Albion	363 34	Ball Seminary	60 56
Alfred	620 05	Binghampton	385 13
Amenia Seminary	498 94	Brockport Coll. Ins.	452 94
Ames	133 33	Brookfield	222 34
Amsterdam Female do	159 87	Brooklyn Female	787 79
Argyle	201 05	Cambridge Washington	339 10

Canandaigua	201 05	Mexico	363 33
Canajoharie	133 23	Middlebury	247 06
Canton	133 23	Millville	196 20
Cary Coll. Seminary	176 83	Monroe	87 20
Cayuga	283 39	Montgomery	225 26
Champlain	101 74	Moravia Institute	87 20
Cherry Valley	222 83	Mount Pleasant	101 78
Chester	84 78	Munro	324 57
Claverack	33 94	New-Berlin	251 91
Clinton,	36 34	Newburgh	152 61
Clinton Gram. School	237 38	New-Platz	121 11
Clinton Liberal Ins.	370 60	New-York Free	469 90
Clover-st Seminary	191 36	North Salem	203 47
Cortland	576 44	Norwich	251 91
Cortlandville	249 49	Nunday Literary Ins.	164 72
Coxsackie	58 14	Ogdensburg	109 00
Deaf & Dumb Inst. N.Y.	537 69	Oneida Conference Sem.	634 58
Delaware	210 73	Onondaga	232 54
Delaware Literary Ins.	633 65	Ontario Female	448 10
DeRuyter Institute	278 55	Ovid	130 81
Dutchess County	142 92	Oswego	167 14
East Bloomfield	186 52	Oxford	346 36
Elmira	501 36	Peekskill	111 42
Erasmus Hall	128 39	Phipps Union Seminary	450 52
Fairfield	501 36	Plattsburg	365 75
Falley Seminary	375 44	Pompey	125 95
Farmer's Hall	346 38	Poughkeepsie Female	208 31
Fayetteville	111 42	Pratsville	29 10
Fort Covington	48 45	Red Creek Union	290 65
Franklin (Malone)	297 93	Rensselaer Institute	96 98
Franklin (Prattsburg)	365 75	Rensselaer	92 05
Fredonia	438 41	Rhinebeck	205 89
Friendship	70 25	Riga	220 42
Galway	58 14	Rochester Col. Ins.	289 24
Genesee Wesleyan Sem.	969 14	Rochester Female	104 16
Genesee & Wyoming do	314 83	Rome	249 48
Genesee	213 16	Rutger's Female Ins.	653 96
Genoa	220 42	Sag Harbor Institute	26 87
Gilbertsville Academy & Collegiate Institute	237 38	St. Lawrence	290 66
Glen's Falls	375 44	Sandlake	113 85
Gouverneur Wesleyan Seminary	452 95	Sanquoit	138 08
Grammar School of Col- umbia College	477 18	Schenectady Lyceum & Academy	518 32
Grammar School Univer. City of New York	261 60	Schoharie	411 77
Granville	123 53	Schuylerville	251 91
Greenbush & Schodack	46 03	Seneca Falls	205 89
Greenville	48 45	Seward Female Sem'y	191 36
Groton	234 96	Sherburne Union	150 19
Hamilton	283 39	Spencertown	31 52
Hartwick Seminary	106 58	Springville	220 42
Robert Hall Institute	247 06	S. S. Seward Institute	121 11
Hubbardsville	33 94	Starkey Seminary	198 08
Hudson	237 38	Stillwater do	135 65
Ithaca	484 41	Troy	186 52
Jamestown	273 71	Troy Female Seminary	540 11
Jefferson Co. Institute	266 44	Union Hall	356 07
Johnstown	113 84	Union Literary Society	205 89
Jordon	278 55	Union Village	181 67
Keesville	142 92	Utica	96 89
Kinderhook	251 60	Utica Female	387 55
Kingboro	121 41	Vernon	138 08
Kingston	486 82	Walkill	174 41
Lansingburg	141 92	Walworth	125 95
LeRoy Female Sem'in'y	501 36	Washington	53 14
Liberty Normal Inst.	130 81	Westfield	314 88
Little Falls	312 46	Whitehall	169 56
Lowville	184 09	Whitesboro'	31 52
Macedon	247 06	Whitestown Seminary	472 30
Manlius	125 95	Wilson Coll. Institute	319 72
Mayville	135 65	Windsor	84 78
		Yates	295 50
		Total	\$40,000 00

By order of the Regents of the University
T. ROMBYN BECK, Secretary.

Educational Intelligence.

CANADA.

*Eastern District Common Schools, 1849.—Compiled from the Report of the District to the Chief Superintendent of Schools:—*No. of Schools, 161; average time open by qualified teachers, 9½ months each; amount paid Teachers, £4,643 1s. 4½d.; No. of Pupils, 7,082—of boys, 3,951—of girls, 3,131; average attendance of pupils in Summer, 4,508—of boys, 2,576—of girls, 1,932; in winter, 4,347—of boys, 2,576—of girls, 1,771; No. of children of school age, 13,831; Common School Libraries, 1; Vols. therein, 36; Sunday School do., 11; Vols. therein 1,235; Public do., 1; Vols. therein, 100; total libraries, 13; total Vols. therein, 1,371; School visits by Supt., 170; by Clergymen, 113; by Councillors, 63; by Magistrates, 142; other visits, 264; total visits, 752; No. of Academies and District Grammar Schools, 2; pupils therein, 30; Private Schools, —; total Educational Establishments, 163; total pupils therein, 7,112. The Superintendent observes, that "many of the Schools, from causes which you may well understand, are in a very low state, still the number of good schools is rapidly on the increase; and the people are beginning to appreciate the talents of a Normal Scholar or an able Teacher. Let me here state, as beyond all doubt, that although we may have alterations and changes in school matters, nothing short of the Free School system will truly uplift the country; and this would, I am confident, do it in a few years. The time for this great work is now come; and I hope it will not be lost by any false step or more useless experiment. You will be happy to learn that I have sent a reply to the Government Circular strongly in favour of your late Circular, and more especially the system of Free Schools."

*Town of Cornwall Common Schools, 1849.—Compiled from the Report of the Board of Trustees to the Chief Superintendent:—*No. of Schools, 6; average time open by qualified Teachers, 10½ months each; amount paid Teachers, £183 8s. 3½d; No of Pupils, 304—of boys, 154—of girls, 150; Average attendance of pupils in Summer, 188—of boys, 93—of girls, 95; in winter, 165—of boys, 95—of girls, 70; No. of Children of School age, 356; Common School Libraries, —; Sunday School do., 3; Vols. therein, 200; Public Libraries, —; School visits by Supt., 11; by Clergymen, 96; by Councillors, 5; by Magistrates, 1; other visits, 13; total visits, 126. No Superior or Private Schools reported. The Superintendent states,— "Agreeable to your Circular of the 19th of December, last, it has been deemed advisable for the present, to continue the School Trustees of last year; and to adopt the present system of managing the Schools."

*Town of Prescott Common Schools, 1849.—Compiled from the Report of the Board of Trustees to the Chief Superintendent:—*No. of Schools, 4; average time open by qualified Teachers, 8 months each; amount paid Teachers, £176 8s. 0½d.; No. of Pupils 259—of boys, 167—of girls, 92; Average attendance of pupils in Summer, 226—of boys, 144—of girls, 82; in winter, 233—of boys, 153—of girls 85; No. of Children of School age, 450; Common School Libraries, —; *Sunday Schools do.; — Public Libraries, 1; Vols. therein, 200; School visits by Supt., 11; by Clergymen, 10; by Councillors, —; by Magistrates, —; other visits 4; total visits, 25. No Superior Schools reported. Private Schools, 13; Pupils therein, 50; total Educational Establishments, 7; total Pupils therein, 309.

*Town of Picton Common Schools, 1849.—Compiled from the Report of the Board of Trustees to the Chief Superintendent:—*No. of Schools, 4; average time open by qualified teachers, 10 months each; amount paid teachers, £76 8s. 6d.; No. of Pupils, 265—of boys, 140—of girls, 125; Average attendance of Pupils in Summer, 114—of boys, 54—of girls, 60; in winter, 146—of boys, 76—of girls, 70; No. of Children of School age, 493; Common School Libraries, —; Sunday School do., 1; Vols. therein, 200; Public Libraries, —; School visits by Supt., —; by Clergymen, 4; by Councillors, —; by Magistrates, 2; other visits, 13; total visits, 19; No. of Academies and District Grammar Schools, 2; Pupils therein, 23; Private Schools, 5; Pupils therein, 209; total Educational Establishments, 11; total Pupils therein, 502.

*Wellington District Common Schools, 1849.—Compiled from the Report of the District to the Chief Superintendent:—*No. of Schools, 113; average time open by qualified Teachers, 9 months each; amount paid Teachers, £3,668 4s. 1½d.; No. of Pupils 6,975—of boys, 3,985—of girls, 2,990; Average attendance of Pupils in Summer, 2,943—of boys, 1,636—of girls, 1,307; in winter, 3,763—of boys, 2,278—of girls, 1,490; No. of Children of School age, 12,547; Common School Libraries, 2; Vols. therein, 583. No other libraries reported. School visits

by Supt., 89; by Clergymen, 267; by Councillors, 49; by Magistrates, 38; other visits, 292; total visits, 735; Academies and District Grammar Schools, 2; Pupils therein, 40; Private Schools, 6; Pupils therein, 168; total Educational Establishments, 121; total Pupils therein, 7,183. The Superintendent observes:—"As the great advantage attending Free Schools is every day becoming more apparent (as an instance, in the village of Preston, the school having increased from 25 to 110 on becoming free) it might deserve consideration whether Trustees should not be imperatively required to tax the Section to the extent of at least twice the amount of the School Grant."

*London District Common Schools, 1849.—Compiled from the Report of the District to the Chief Superintendent:—*No. of Schools, 220; average time open by qualified Teachers, 8 months each; amount paid Teachers, £5,538 9s. 10½d.; No. of Pupils; 9,263—of boys, 4,840—of girls, 4,423; Average attendance of Pupils in Summer, 4,096—of boys, 2,345—of girls, 1,751; in winter, 4,477—of boys, 2,649—of girls, 1,828; No. of Children of School age, 16,547; Common School Libraries, —; Sunday School do., 36; Vols. therein, 3,179; Public Libraries, —; School visits by Supt., 194; by Clergymen, 95; by Councillors, 62; by Magistrates, 49; other visits, 377; total visits, 777; Academies and District Grammar Schools, 3; Pupils therein, 45; Private Schools, 2; Pupils therein, 30; total Educational Establishments, 225; total Pupils therein, 9,338. The Superintendent remarks:—"I regard the Normal School as one of the most potent agencies we have for the improvement of the Schools. The increased number of valuable Teachers sent forth from the Institution—the enlightenment of the public mind as to the advantages of education are two powerful agencies for the advancement of our schools which are in successful progression; and I hope the abolition of the present system of Rate-bill and the substitution of something better will soon form a third. As to the School Act of last Session, if I may venture to announce the feelings of the Trustees and others officially interested, I would say that it is not regarded very favourably. My own opinion is, that a less sweeping alteration of the late Act, yet so as to have made its provisions harmonize with the new Municipal Institutions, would have been enough. This being the last official Report, which I am likely to have the honour to transmit in connexion with the Schools of the county, I will add, that I can look back over nearly five years of official experience and observe a decided improvement in the Schools of this county and in the public mind in reference to them. For instance the numerous local disputes which were once so destructive to the progress of the schools are now comparatively hushed. No one is now heard to contend against the ordinary taxation in support of the Schools. Better supplies of the National Books are provided: and a greater number of well-informed and useful Teachers are at work. Of course, I must refer to the old exception, that much, very much remains to be done; but it is at least gratifying to observe that there has been an advancement upon the right side. And perhaps I may be permitted, upon this occasion, to express my high opinion of the ability with which the Educational interests of the Province at large have been presided over; and to acknowledge the attention with which my official communications with the Department have been received."

*Town of Port Hope Common Schools, 1849.—Compiled from the Report of the Board of Trustees to the Chief Superintendent:—*No. of Schools, 4; Time open by qualified Teachers, 12 months each; amount paid Teachers, £211 13s. 4d.; No. of Pupils, 195—of boys, 142—of girls, 53; Average attendance of Pupils in Summer, 113—of boys, 74—of girls, 39; in winter, 127—of boys, 86—of girls, 41; No. of Children of School age, 492. No Libraries of any kind reported. School visits by Supt., 16. No other School visits reported. No Superior Schools reported. No. of Private Schools, 4; No. of Pupils therein, 70; total Educational Establishments, 8; total Pupils therein, 265. The Superintendent remarks, "I am happy to say that the Schools are considerably improved. The Board of Trustees are still acting; and as far as I know, the Teachers, Town Council, and parties interested in the Educational interests of Port Hope are desirous that the Board be continued."

*Town of St. Catharines Common Schools, 1849.—Compiled from the Report of the Board of Trustees to the Chief Superintendent:—*No. of Schools, 6; Time open by qualified Teacher, 9 months each; amount paid Teachers, £326 10s. 6d.; No. of Pupils, 437—of boys, 261—of girls, 176; Average attendance of Pupils in Summer, 229—of boys, 142 of girls, 87; in winter, 160—of boys, 98—of girls, 62; No. of Children of School age, 889. None but six Sunday School Libraries reported; No. of Volumes 600. School visits by Supt., 17; by Clergymen, 6; by Councillors, —; by Magistrates, 5; other visits, 30; total visits, 58. Academies, 1; Pupils therein, 40; Private Schools, 10; Pupils therein, 300; total Educational Establishments, 17; total Pupils therein, 777.

Common School Examinations.—We learn from the local papers of the very gratifying Examinations which have lately been held of the following Schools:—

Grantham, S. Section, No. 1.—Mr. T. Keys, lately of the Normal School, Teacher. J. G. Stevenson, Esq., Township Superintendent, in the Chair. The Trustees, the parents, and a number of ladies and gentlemen present as spectators. The branches in which the classes were examined, were Reading, Spelling, Writing, English Grammar, Geography, Arithmetic, Book-Keeping, and the rudiments of general history, in all of which the Examination was highly creditable both to teacher and pupils, and gratifying to all present. After the Examination, Mr. Stevenson delivered an appropriate address; the Trustees and parents of the pupils then expressed their entire satisfaction with the progress that the pupils had made, and with the system followed by Mr. Keys, their teacher.

Willoughby, S. Section, No. 7, Mr. R. Morrison, Teacher. The Examination commenced at 10 o'clock, A. M. The pupils answered with much readiness the different questions in Geography, English Grammar, Arithmetic, &c. At half-past 3 o'clock P. M., the examination closed, and the company retired until 7 in the evening, when a great many additional spectators assembled. The teacher having made a few remarks the pupils recited many short pieces, together with several dialogues, which were performed in a manner very pleasing to all present. Many appropriate, and well selected pieces of music were sung during the evening.

Grimsby, S. Section, No. 11.—*Present to the Teacher.*—An interesting correspondent writing to the *Mail* says:—When I arrived in sight of "Science Hall," I found carriages lining both sides of the way. On entering I found the place filled with pupils, ladies and gentlemen. The examinations on Physiology and Natural Philosophy were highly creditable. The same character, I am told, distinguished the examinations in Grammar, Arithmetic, and Geography. During the exercises the audience was gratified with Music, from a juvenile choir connected with the school, which had been taught by Mr. Roberts. Pieces of Composition were read by the females; and declamatory pieces by the boys. After the exercises, the Teacher called upon the Superintendent, Dr. Wolverton, to address the school. In his remarks, Dr. Wolverton noticed the great progress the school had made since he last visited it. He admired the zeal, and energy which had characterized the Teacher, the Trustees and supporters of the school. Mr. Roberts in his remarks contrasted the present active system of education with the old one. The writer then addressed the school, and showed the security of an educated community against error. Infidelity itself was harmless amidst a morally and religiously instructed people. At the close, one of the Trustees, J. P. Bridgman, Esq., came forward with a large, well-finished Bible—cost \$7—purchased by the supporters of the school, to present to the esteemed Teacher. The entire examination, with but one exception, bore a serious character; in fact such a one I never witnessed. The hidden fountain of many hearts both of parents and children was opened. Parents were moved from two causes,—1st, on seeing their children acquit themselves so nobly, and 2nd, from the thought of having soon to part with one who has laboured so indefatigably and successfully for their offspring. Children wept, because the relation which had existed so happily between them, and their affectionate instructors, was soon to be sundered. Thus ended an interesting examination.

Dunfries West, S. Section, No. 25.—Mr. Alex. McClelland, Teacher. Before the Superintendent, Trustees and others. There were 64 pupils present—24 more than last year. They were examined in the usual branches. The Superintendent, Mr. Allan, briefly addressed the Teacher and the Scholars, stating that the examination was highly creditable to the scholars, and to the skill and ability of the Teacher.

Guelph, S. Sections, No. 2 and No. 8.—Mr. Blake and Mr. Hough, Teachers. The late examinations in these schools, conducted by the Superintendent, were very satisfactory indeed.

Bytown.—*Miss Fraser's Select School.*—Judging from the happy faces of the children—the pleased and grateful manner of the parents—the dignified, confident demeanour of the Teachers, and the approving smiles of the observers,—the happy effects of the impulse given to female education in this place by the mild persuasive systematic course adopted in the school were evident. The children went through their examination with much credit. We observed among those present, the Superintendent of Common-Schools, several Clergymen, and Gentlemen.—[B. Packet, 30th March.

County of Middlesex Teachers' Association.—A meeting of Teachers for the purpose of forming an association, was held pursuant to requisition, in the new school-house of London, on Saturday the 6th inst. Mr. Nicholas Wilson was called to the chair, and Mr. Peter Murtagh appointed Secretary. Mr. Robert Wilson addressed the meeting on the importance and utility of Teachers' Associations; he pointed out their

beneficial influence on Common School Education in a lucid manner, and concluded by moving the adoption of the following resolution:—"That it is expedient to form a Teachers' Association for the County of Middlesex, and that the Teachers present at this meeting should originate the same." A constitution having been submitted and adopted, the following officers were appointed:—Mr. R. Wilson, President; Mr. D. Y. Hoyt, Vice-President; Mr. T. Ferguson, Recording Secretary; Mr. P. Murtagh, Corresponding Secretary; Mr. Watters, Librarian; and a Committee of fifteen. The following Resolutions were then adopted:—1. "That the present School Act is too prolix, too intricate and too incomprehensible for the management of school affairs, and that, in the opinion of this Association, an amended School Bill is urgently required." 2. "That this Association forthwith petition the Legislature, praying that a clause be introduced into the proposed amendment to the present School Act, to the effect that none but practical Teachers be legally qualified to fill the office of Superintendent of Schools for Towns or Counties." 3. "That Teachers' salaries should be paid quarterly: and that the Government appropriation should be available in the beginning of the second quarter of every year." 4. "That Schools supported entirely by property taxation would be better attended and much more effective than those supported by rate-bill." 5. "That this Association considers it the duty of Township Councils to erect or cause to be erected near every School-house a comfortable residence for the accommodation of the Teachers." 6. "That the *Journal of Education* is entitled to the warmest support of every friend of popular instruction, and that Teachers should by every means in their power extend its circulation, and thereby promote its greater utility." [7. Thanks to local Editors.] 8. Copy of proceedings to be forwarded to local papers "and also to the Editor of the *Journal of Education*, with a request that they insert the same in their journals." 9. "That the Association do now adjourn until the 11th of May next, to meet again in the same place at the hour of 12 o'clock."

The assembly broke up after the committee of management had selected the following members to prepare Essays to be read at the adjourned meeting, viz:—"The Importance of Linear Drawing as a branch of Common School Instruction"—Mr. R. Wilson. "Vocal Music, its utility in Schools"—Miss M. Haigh. "Mnemonotechny, or the Art of Memory"—Mr. T. Ferguson. "The Proper Management and Government of Schools"—Mr. Lancaster.—[Condensed from Report transmitted.

Worthy of Imitation.—J. A. Carman, Esq., the munificent founder of the Dundas Seminary in Matilda, has written to the Rev. A. Dick, Superintendent of Common Schools for that Township, stating that he will place in that gentleman's hands, next January, a prize of £12 10s. to be awarded as follows:—To the Teacher of the best and most efficiently managed School in the Township, £5; to the Trustees of the same, in apparatus, £2; to the Teacher of the second best, do. do. £4; to the Trustees of the same, in apparatus, £1 10s. The time which said Teachers shall have taught in this Township, in the year 1850, shall not be less than eight months; and the Trustees shall not be entitled to the award, unless their school shall have been taught six months, in the year 1850, by the Teacher who may receive the award. The prize to be annual, provided the experiment proves satisfactory. Geo. Brouse, Esq., has also promised a similar prize on the same conditions. Wm. Elliot, Esq., has further pledged himself to give a prize of the same amount to the writer of the best essay (who must also be a Teacher in the Township,) on "The most effective and best method of teaching Common Schools." In communicating these encouragements to exertion to the Trustees and Teachers of the Townships, Mr. Dick adds, "You will also receive the *Journal of Education* for the present year, through the liberality of Jacob Brouse, Esq., Townreeve, and George Brouse, Esq., Councillor. It will remain the property of the several School Sections, each receiving one number monthly, and ought to be carefully preserved.—You may expect a visit and lecture from me in the month of July." At the close of the gratifying examination of the Dundas Grammar School, of which Mr. Dick is Principal, Mr. Albert Carman, a pupil, delivered a very elegant address "On Education," which has been published.

Chief Superintendent at Niagara.—On Monday evening the Chief Superintendent of Education delivered a most interesting Lecture in the Court House, before the Mechanics' Institute and others, on the subject of General History. He spoke upwards of two hours extemporaneously. We have heard expressions of regret that the Doctor's engagements did not permit him to carry out his original intention of giving three successive lectures on the same subject.—[Mail, 27th March.

Richmond Hill Grammar School.—A meeting has been held on the 23rd ult., to promote the establishment of a Grammar School at Richmond Hill. A site has been granted and part of the money subscribed.

We are happy to learn that at the College at Chambly, measures are about to be adopted to ensure scientific Agricultural education. A

farm of 54 acres attached to the College, will be cultivated on the best principles, and Agricultural Chemistry will be carefully studied. This arrangement, we understand, is to take effect on the 1st of May next.—[Montreal Gazette.

BRITISH AND FOREIGN.

Students in the British Universities.—Returns were lately presented to Parliament respecting the number of students entered annually in the books of each College or Hall within the Universities of Cambridge and Dublin, during the last five years. At Oxford University the number entered in 1845 was 438; in 1846, 410, in 1847, 406; 1848, 411; and in 1849, 440. At Cambridge the number entered were—in 1844, 533; in 1845, 527; in 1846, 560; in 1847, 515; in 1848, 499. At Trinity College, Dublin, the numbers were, in the five years ending the 2th of July last, 1845, 366; 1846, 358; 1847, 371; 1848, 333; and in 1849, 327.

Lord Brougham has been re-elected President of University College, London.

Sheriff Gordon has been elected Lord Rector of the University of Aberdeen, by a majority of seventy-two over Thomas Carlyle.

Munificent.—Mr. Beaufoy, a large distiller, has, at his sole expense, erected in Lambeth, at a cost of upwards of £3000, a building, covering an area of 1230 square yards, calculated to afford ample room for the instruction of 1000 children.

Retrograde.—Several of the best institutions for education, established by Ibrahim Pacha, have been deprived of the funds appropriated to their support, and several of the professors from abroad have been obliged to leave.—[Cor. N. Y. Commercial Advertiser.

Education in New South Wales.—From Jenkin's "Exploring Expeditions" just published at Auburn, N. Y.—A most commendable interest is manifested in the establishment of Schools, Colleges and literary Societies; and the Government has liberally extended to them its fostering care. As early as 1817, one-eighth of the revenue of the Colony was set apart for educational purposes. Large tracts of land were also given to female orphan Schools, and a portion, consisting of 50 or 100 acres allotted to each orphan. Schools were likewise founded for the civilization and education of the natives. In 1838, the number of scholars attending the public Schools, to the support of which Government contributed over £12,000, was nearly 4,000; and there were upwards of 1,800 scholars attending private Schools. There were three Collegiate Institutions at the same time, which were well attended: King's School at Parramatta, and Sydney College, and Australian College at Sydney.

UNITED STATES.

Agricultural College, State of New-York.—The select committee of the Assembly appointed to consider the subject of establishing an Agricultural College and Experimental Farm, made a report accompanied by a Bill for the establishment of such an Institution. The Bill provides for a college, with a farm attached; to be under the care of fifteen trustees, one from each judicial district of the State; the trustees to meet in June next, and organize, locate the college, buy and stock the farm, erect the buildings, fix on a course of studies, plan of labour, terms of admission, &c. The Bill authorizes the State Comptroller to borrow \$100,000 for the purposes of the college. The cost of the establishment of the college, including the purchase of a farm of 600 acres, is computed at \$93,000—the farm to be cultivated by the labour of the scholars, who are to be employed four hours a-day in practical agriculture, in all its various branches. The branches of education to be pursued at the school are natural philosophy, practical chemistry, particularly as applicable to the analysis of soils and manures; geology and mineralogy, botany and horticulture, mathematics, engineering, and practical surveying, the principles of rural cultivation, and the veterinary art. The annual expense for each scholar admitted, to be \$100, which will include tuition, board, washing, fuel, and lights.

Schools in Baltimore.—The whole number of schools now in operation in the city of Baltimore is twenty-nine. The whole number of scholars attending these during the past year was 6,763, and the whole number of teachers 107, of whom 32 were males and 75 females. The expenditure during the past year amounted to \$59,608 53, being \$2,154 04 less than the expenditures of the previous year.

Free Schools in Louisiana.—The free school law of Louisiana is working well. The State is divided into 692 districts; 618 have schools, attended by 22,000 children. The fund is only half as large as it should be, and the Governor recommends its increase.

Education in Wisconsin.—Wisconsin has the basis of a munificent school-fund. It consists of a domain equal to 2281½ square miles, there being 1,500 towns one mile square, in each of which is devoted to this object: and besides this, 781½ sections were given by Congress, at the admission of the State into the Union, making in all, 1,460,000 acres, which is valued at \$170 per acre, giving a fund of \$2,432,000. In addition to this, all property that may accrue to the State by escheat or forfeiture, and the money received for fines, are to be added to the fund. The constitution requires that each town shall raise annually by tax for the support of common schools, a sum not less than half the amount received from the fund. It is thought the amount for distribution in 1851 will be about \$106,878, and that the number of children will be this year about 100,000; which will average more than \$1 a scholar. Teachers' Institutes have been established in every county in the State, with one exception. There were 25 organized counties and 316 towns, in which there are 1430 school districts, and in 50 towns not reported, 350 districts. The teaching averages 9.93 months. The average wages of teachers is \$15.23 for males, and \$6.92 for females. The valuation of school houses is \$75,810.75—number of brick 26, stone 26, frame 294, log 359. The highest valuation of any house is \$5,000, and the lowest 75 cents. Number of select and private schools 94, and of incorporated academies 2.—[Newark Advertiser.

Normal School in Michigan.—The State of Michigan has appropriated twenty-five sections of salt lands for the establishment and endowment of a Normal School, to be located at Ypsilanti. These lands the *Detroit Tribune* says are very valuable, and will readily command a market. The School is to commence about the first of November next. Each county will be permitted to send every year three times as many students as they have representatives in the Legislature. This school will be the first of the kind established west of the State of New-York.

Literary and Scientific Intelligence.

Curious Book.—A work has lately made its appearance in London which may be ranked among the curiosities of literature. It is entitled "*Biographical Bibliography*, or a Dictionary of 26,000 works, ancient and modern, relating to the History of the Public and Private Life of celebrated men of all Times and of all Nations, from the Beginning of the World to our Days." It is dedicated to Alexander Von Humboldt, as the "*Premier connétable* of scientific Europe." This work is the fruit of twelve years' labour, the exploration of twenty great libraries, and of 10,000 catalogues." It is a tall quarto, of nearly 800 pages. If favourably received, the author intends to bring out as a sequel "*Historical Biography*, to contain all the monographs relating to the people and countries of the universe."

A Book written in Human Blood.—At a late sale in Paris a characteristic *souvenir* of the Reign of Terror was exposed and sold for £62 10s. It consisted of a manuscript copy of the "*Contrat Social*," written in aristocratic blood, and bound in human skin!—the product of the tannery once established in the Palace of Meudon, and a present to the Mayor of that place from the workmen.

The Library of the Vatican, was commenced fourteen hundred years ago. It contains 40,000 manuscripts, among which are some by Pliny, St. Thomas, St. Charles, Barromeo, and many Hebrew, Syriac, Arabian and Armenian Bibles. The whole of the immense buildings forming the Vatican, are filled with statues found beneath the ruins of ancient Rome, with paintings by the masters, and with curious medals and antiquities of almost every description. When it is known that there have been exhumed more than 70,000 statues from the ruined temples and palaces of ancient Rome, the reader can form some idea of the richness of the Vatican. The Vatican will ever be held in veneration by the student, the artist, and the scholar. Raffaello and Michael Angelo are enthroned there, and their throne will be as durable as the love of beauty and genius in the hearts of their worshippers.

Origin of the Ottoman Empire.—Towards the close of the 13th century, that is to say, at the very moment when the election of a Swiss Knight to the Germanic throne was laying the foundations of the Imperial house of Austria—events of equal singularity were preparing the seat of the rival Cæsars for the progeny of a Turkish freebooter. The Asiatic Continent, from its central highlands to the shores of the Mediterranean, had been utterly convulsed by the tremendous irruptions of ZENGIS KEAN; and in the course of the subsequent commotions, a Turkoman Chief, named ORTOGRAL from the banks of the Oxus, found himself wandering on the hills of Anatolia, at the head of 400 families. A service which he accidentally rendered to a native prince, was acknowledged by a grant of land; and the estate was soon expanded into a respectable territory by the talents which had originally acquired it. The inheritance of ORTOGRAL devolved in 1289, upon his son, OSMAN, or OTGEMAN, who, at the death, in 1299, of his patron, the SULTAN of Iconium, no longer

hesitated to proclaim his independent sovereignty. Such was the origin of the house of Othman. The name is a vernacular epithet of the royal vulture, and signifies a "bone-breaker."—"Turkey and Christendom." in a late *Edinburgh Review*.

A Lunar Daguerreotype of the Moon's surface has at length been obtained; although hitherto, scientific men deemed it impossible to obtain one. Five have recently been taken by Mr. S. D. Humphrey, of Canandaigua, N. Y., with a half-size American camera, on a medium plate. The first was obtained by an exposure of two minutes, the camera remaining permanent. During this short interval the Earth had moved forward so rapidly, that the figure of the moon was elongated to an oval shape. On the fourth picture, obtained in *three seconds*, the representation was strikingly clear and distinct. The figure was round, and the representation so perfect that its appearance under a microscope resembled the full moon as seen through a telescope. These pictures, which were exhibited at the American Cambridge Scientific Association, Dec. 1849, conclusively show that lunar light possesses the chemical principle, or force, in a high degree; and it is to this source that we may reasonably attribute its supposed action in producing phosphorescence and other changes in animal or vegetable substances.

Velocity of Light determined by Actual Experiment.—A very ingenious method of determining the velocity of light has lately been contrived by a French philosopher, M. Fizeau: Two telescopes are placed some miles apart, but so that the image of the object glass of each is formed in the focus of the other. A glass at an angle of 45° in the first telescope, sends the light, admitted through the side of the telescope, towards the second, where it is reflected directly back from a mirror placed in the focus, to be viewed at the first telescope. A disc with 720 teeth was placed in front of the first telescope so as to close and admit the passage of the light alternately. This disc is moved by clock work. It is evident that, when the ray escaping by the aperture returns after reflection to find a tooth in front of the object glass, no light will be seen. The first eclipse took place when the disc was revolving at the rate of 12 6-10ths revolutions per second with a double velocity, the point again shone out, was eclipsed with a triple rapidity, re-appeared with a quadruple one and so on. The result agrees remarkably with the velocity assigned by astronomical observation, being 192,000 miles per second.

Ancient Monuments in the Island of Nicaragua, Central America.—The Hon. E. G. Squier has lately furnished to the American Ethnological Society a most interesting account of ancient monuments discovered by him in the Islands of Nicaragua. He says "they are very different from those discovered by Mr. Stephens at Copan. Instead of the heavy and incongruous mass of ornament with which those were loaded, most of these are simple and severe, and though not always elaborately finished, are cut with great freedom and skill. There is no attempt at drapery in any of the figures. Some are erect, some seated, and others are in crouching or reclining postures. One which our men called "Gordo," "the fat," might pass for one of Hogarth's beer-drinkers petrified. He is seated, or rather thrown back in his seat, with an air of the most intense abdominal satisfaction. The material, in every case, is a black basalt. The figures are supposed to represent deities of the Aztec Pantheon, and bear a striking resemblance to the symbolical heads in the ancient Mexican ritual. These monuments, like those of Copan, do not seem to have been originally placed upon the teocalli, but erected around their bases. These teocalli are composed wholly of stones, but uncemented and in their rough state.

Imitative Galvanism.—To imitate the combination requisite to produce galvanic action: use a solution of ferrocyanate of potash, a compound of iron, nitrogen, carbon, and potash, with a little alkali for one side; a solution of the red ferrocyanate for the other side, and connect the two with a solution of chloride of sodium, or common salt.

How Chronometers are tried at Greenwich.—They are ranged round "the Chronometer Room" the first or second week in January, and each is daily compared with an astronomical clock, and its rate carefully noted. This is continued until the middle of July, during which time the temperature of the room is considerably varied: the windows are opened during six or seven weeks of the coldest period, and for about the same time the heat is raised 80° or 90° by fires, which are attended at intervals of two hours night and day. For an extreme trial, an iron tray is provided for such chronometers as are to be rested over the stove, the mean temperature being about 100° Fahrenheit, and for the cold, they are placed outside a window on the north side of the building.

An Incident in Arctic Navigation.—As extraordinary public interest is now being felt in the fate of the heroic Franklin, an extract from a recent paper in the *United Services Journal*, illustrative of the extreme danger of that sort of navigation in which it is to be feared, like the ill-fated *President*, the *Erebus* and *Terror* have mysteriously perished, may be interesting: "While the *Hecla* was struggling with accumulated perils, the *Fury* was continually grazed, and sometimes heeled over by a degree of pressure, which those unacquainted with

Arctic Navigation would be unable to conceive. A heavy floe, some miles in length, drove fast down upon the ships; in a few minutes it came in contact at the rate of $1\frac{1}{2}$ miles an hour, with a point of land ice, breaking it up with a tremendous crash, and forcing countless masses, each being estimated at many tons in weight, to the height of fifty or sixty feet, from whence they rolled down on the inner or land side, and were quickly succeeded by a fresh supply. Thus threatened by the danger of being crushed and overwhelmed by these stupendous and gigantic masses of ice hurled as in the classic fiction of the war of Titans and threatened with instant annihilation under the uplifted and violently convulsed mountains of ice, the crews remained quiet spectators of the terrific struggle; being within five or six hundred yards of the spot where nature was playing this gigantic and fearful game." Both ships, however, escaped.

Opening of the Britania Tubular Bridge.—On the 5th of March the opening took place of the great Britania tubular bridge across the Menai straits. A train with 700 passengers passed through it, and it was tried with laden wagons of 300 tons in the centre of each span. The utmost deflection produced was 4-10ths of an inch, which was not so much as would be produced by half an hour of sunshine, it being also believed that it could bear a deflection of 13 inches. The occasion was one of great excitement and rejoicing, and the structure will now constitute one of the greatest wonders of modern science.

Equestrian Statue of Frederick the Great.—The papers announce that the colossal equestrian Bronze statue of the great Frederick, the marvellous production of M. Rauch, will be raised and uncovered, on the 15th of October next, the birthday of his present Majesty. This vast work of art, which, with the exception of the horse and its immortal rider, are still incomplete, will equal, it is said if it does not exceed, all others, ancient or modern, in majesty and dignity of conception, in characteristic fidelity of portraiture, and in the wonderful variety and yet complete harmony of its component parts. The whole, taken from its base to the summit of the mighty soldier's hat, will exceed forty-seven feet in height, of which the crowning equestrian statue will occupy nearly eighteen feet.

Ancient Antiquities.—Nineveh was 15 miles, by 9, and 40 round, with walls 100 feet high, and thick enough for 3 chariots abreast. Babylon was 60 miles within the walls, which were 75 feet thick, and 300 high, with 100 brazen gates.

The temple at Diana, at Ephesus, was 429 feet high to support the roof. It was two hundred years in building.

The largest of the pyramids is 471 feet high, and 653 feet on the sides; its base covers, 11 acres. The stones are about 30 feet in length, and the layers, are 208. 360,000 men were employed in its erection.

The labyrinth of Egypt contains 300 chambers and 12 halls.

Thebes, in Egypt, presents ruins 27 miles round. It had 100 gates.

Carthage was 25 miles in circumference.

Athens was 25 miles round, and contained 250,000 citizens, and 400,000 slaves.

The temple of Delphos was so rich in donations, that it was plundered of £100,000 sterling, and Nero carried from it 200 statues. The walls of Rome were thirteen miles in length.

Vicissitudes of Watt, the Inventor of the Steam Engine.—A young man wanting to sell spectacles in London, petitions the Corporation to allow him to open a little shop, without paying the fees of freedom, and he is refused. He goes to Glasgow, and the corporation refused him there. He makes acquaintance with some members of the University, who find him very intelligent, and permit him to open his shop within their walls. He does not sell spectacles and magic lanterns enough to occupy all his time; he occupies himself at intervals in taking asunder and re-making all the machines he can come at. He finds there are books on machines, written in foreign languages; he borrows a dictionary, and learns the languages to read those books. The University people wonder at him, and are fond of dropping into his little room in the evening, to tell him what they are doing, and to look at queer instruments he constructs. A machine in the University collection wants repairing, and he is employed. He makes it a new machine. The steam-engine is constructed; and the giant mind of Watt stands out before the world—the author of the industrial supremacy of this country the herald of a new force of civilization. But was Watt educated? Where was he educated? At his own workshop, and in the best manner. Watt learned Latin when he wanted it for his business. He learned French and German; but these things were tools, not ends. He used them to promote his engineering plans as he used lathes and levers.—[Sir. R. Kane's Inaugural Address.

Miniature Steam-Engine. We have this week had shown to us, under a glass shade of the size of a lady's thimble, a steam-engine that might have served for a cotton mill in Lilliput. The whole machinery, fly-wheel included, stands upon a twopenny piece; yet so exact and skillful is the workmanship, that when a steam-pipe is applied (for there is no boiler), the engine is immediately set in motion, and works with admirable precision.—[Gateshead Observer.

Editorial Notices, &c.

For an account of the SEMI-ANNUAL EXAMINATION OF THE NORMAL AND MODEL SCHOOLS, we refer to the pages 54 and 55 of this *Journal*; and on page 58 we insert the questions proposed to the candidates for the GOVERNOR-GENERAL'S Prizes for proficiency in the Science of Agriculture. In all respects this examination is the most satisfactory we have yet witnessed since the establishment of the Normal School, as gratifying as former examinations have been. Those who attended the elementary part of the Normal School examination, and the examination of nearly 300 children in the Model School (the school of practice for Students in the Normal School) had the opportunity of witnessing the utter groundlessness of the imputation made by some uninformed or hostile persons, that due attention is not paid to the first elements of a Common School Education: whereas those are the subjects to which the highest importance is attached, and on which the most anxious attention is bestowed. Nor are Teachers-in-training introduced to any of the higher branches of English Education until they have been thoroughly grounded in the more elementary branches. It should also be remembered that more than three-fourths of these students have been actual School-teachers before coming to the Normal School; and a very large proportion of them had received first class or general certificates of qualification as teachers, which they presented on applying for admission to the Institution. It may likewise be remarked that the mode of instruction in the Normal School is by oral lectures, not book-teaching; that Students learn to investigate subjects, and not to go over so many pages of a book—to think, to compare, to reason, not to load the memory—to master principles, not chapters—to be trained, not crammed.

But it is not to be supposed that all who have been trained in the Normal School will be able teachers. It will be seen by the account of the concluding proceedings of the Examination, that all the Teachers in attendance have not received pecuniary aid or even a certificate on leaving,—though they have been exemplary in their conduct, and permitted to attend the lectures and exercises of the Institution. And there will be found like discrimination in the certificates given to others. Several students, after one or more month's trial, have been dismissed for want of the requisite capacity or diligence, and have gone forth as teachers; and we have known attacks made upon the Normal School by persons who ought to have known better, on account of the deficiencies of these persons who professed to have come from the Normal School, but who had no certificate of approbation, much less of qualification, from the authorities of that Institution.

The testimonies however from Counties where approved Teachers from the Normal School have been employed, are numerous, and ample to place the Institution above the attacks referred to; while competent judges who have witnessed the examinations, and attended some of the daily exercises in both the Normal and Model Schools (all of which are at all times open to visitors from any part of the Province) have expressed but one opinion as to the practical and thorough character of the system of instruction pursued in those important establishments.

GOOD EXAMPLE—JOURNAL OF EDUCATION.—We refer with much pleasure and satisfaction to the disinterested generosity of Messrs. Carman and Elliot, and the Messrs. J. & G. Brouse of Matilda, recorded among our items of *Educational Intelligence* on the 61st page. Such noble efforts to raise the standard and elevate the character of our Common Schools and of the profession of school-teaching; as also to promote the circulation of valuable information on educational subjects among the School Sections of the Township, deserves especial notice and commendation. In addition to the Prizes of Messrs. Carman and Elliot, the Messrs. Brouse have ordered, through the Township Superintendent, (the Rev. Mr. Dick), a copy of the current year's volume of the *Journal of Education*,

for each of the Schools in the Township which they represent in the County Council,—to be paid for out of the remuneration which they have received while in attendance at the Municipal Council as Reeve and Deputy Reeve. We cordially thank the gentlemen referred to for their valuable and spontaneous co-operation in the promotion of the great work of popular education and social advancement in which we are mutually engaged, and cannot too warmly recommend their admirable example to all others who wish to see Canada, at no distant day, occupy a proud pre-eminence in the universal education of her people, and the general intelligence and morality of her sons.

It is however a matter of surprise and regret to remark, that so few School Teachers have availed themselves of the *Journal of Education*, although so prominent an object and feature of it has been to elevate the position and advance the interests of the Teacher. By the diffusion of educational information and a growing estimate of its value and importance in any School Section, no person is so directly benefitted, in a pecuniary point of view, as the Teacher; and therefore no one is more deeply concerned than himself to procure and circulate a *Journal of Education*. If, however, the Teacher prefers a political to an Educational Journal, and has not spirit and zeal enough to use any of the means which all experience has pointed out to advance the interests of his profession, he cannot complain that those among whom he lives are alike indifferent to it. If a man will not endeavour to help himself, he will look in vain for help from others.

On the other hand, we have been gratified with many happy examples of the extent to which Teachers have been benefitted themselves, and the interests of education advanced in their Sections, by their exertions in obtaining and promoting the circulation of the *Journal of Education*. Our only object in voluntarily and gratuitously assuming the labour and responsibility of issuing this *Journal*, is to advance the most important and general, yet most neglected interest of the country; and thankful and encouraged should we feel, and happy would it be for the people and youth of the land, did the spirit of the Councillors, and Messrs. Carman and Elliot of Matilda, and of some Teachers and Trustees whom we could name, animate the Councillors, Teachers and Trustees in every Township of Upper Canada.

Since writing the foregoing, the Municipal Council of *South Crosby* has ordered a copy of the *Journal of Education* for each School Section in that Township.

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