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JOURNAL OF EDUCATION, Upper Canada.

VOL. VIII. TORONTO: JULY, 1855. No. 7.

CONTENTS OF THIS NUMBER.

ON THE USE OF MODELS AND DIAGRAMS.

A Lecture delivered in connection with the Educational Exhibition, London, June, 1854; by T. SOPWITH, *Esq.**

My present object is to speak of MODELS and DIAGRAMS, as applicable to ordinary use in schools.

Of these, models are the more valuable, inasmuch as they represent the solid form of an object, and can be viewed in any direction, whereas a diagram, even in its most pictorial form, only presents one aspect of the object; and if different portions of the same object are required to be shown, they must of necessity be delineated in separate diagrams. The portability and cheapness of diagrams, however, as compared with models, render them, on the whole, better adapted for extensive use in schools; and even the disadvantage of presenting only one face of an object may be turned to some account, and become a means of instruction, inasmuch as all the practical applications of drawing depend on a right appreciation of the laws under which solid forms can be represented on a plane surface.

The present time is more especially suited for some illustration of this subject, inasmuch as an opportunity is now afforded in this exhibition whereby every one may examine a great variety of the best models and diagrams. And precisely in the degree in which such opportunities are afforded, it *is* important that teachers of every class should endeavor to study their importance, and to adopt them in their several schools.

It is not my intention here to speak at any length on the subject of what may be called the highest class of models, in which machinery, or any other complicated conditions, are exhibited; because such models are only to be found, generally speaking, in the hands of those who are competent to use them, and fully illustrate their several properties. Such models are not attainable in ordinary schools, nor can they ever be largely applied in the general purposes of education. I would, however, observe, that one or two good models of mechanical construction, of a superior description, cannot fail to be of use, as examples of the highest class of illustration, and as a standard with which to compare the more elementary forms—and in works of art a few very excellent examples may be obtained at a moderate cost. For general use, however, in schools, models must be, as much as possible, of a simple and inexpensive kind, and it is to such as are within the scope of ordinary schools that I would now more especially advert.

The real use of a model is to carry the mind from the actual observation of a small object presented to the eye, to the comprehension of a larger object not presented to view, and in doing this the mind is necessarily employed in a study of relative dimensions, and of corresponding forms. Excellent models of geometrical forms, as the cube, &c., are to be had at a small cost; but in the smallest village school, unprovided with funds for the purchase of expensive models, much may be done at a very small cost—as for example, the construction of a cube, and other geometrical figures, may be explained by a piece of pasteboard, and the mode of construction is in itself an explanation of geometrical conditions; as for example, that the tetrahedron is bounded by four surfaces, the cube by six, and the pupils may with advantage be exercised in the construction of such figures. The instrument called a *genigraph* may be easily made by a country carpenter, or even by a skilful lad, and is well represented by the ordinary scales or rules used in France. It affords a ready model of various geometrical figures, and derives its name from Greek words, signifying to draw or describe angles. I am now adverting to the simplest forms of illustration, but which, simple and elementary as they are, we

* By a reference to the Act published in the *Journal of Education* for last month, (page 86,) it will be seen that the Legislature has recently granted the sum of $10,000 per annum for the supply of Grammar and Common Schools with Maps and Apparatus. See notice on page 112 of this *Journal*.

do not find them in the generality of country schools, although much progress has undoubtedly been made in late years in this direction. I do not attempt, in the compass of a single lecture, to notice the various models which are applicable to schools, or to describe separately the mode in which they are to be used; my chief object is to urge the universal adoption of models and diagrams, as a means of instruction, and to illustrate by one or two familiar examples the manner in which very cheap and simple, and yet effective models may be brought within the reach of even the village schoolmaster.

In astronomy it is desirable that all scholars should learn something of the motions, and magnitudes, and distances of the heavenly bodies. The most rapid motion which can be readily comprehended by boys is about twenty miles an hour, or one mile in three minutes. It is about double the quickest speed they see in road vehicles, and is a usual rate on railways, but it will be brought still nearer to their comprehension within the walls of the school-room, by a white ball fastened to a string of about three feet in length, and whirled round at the rate of two revolutions—nearly forty feet in each second. By graduating the length of the string, and timing the revolutions to 120 in each minute, the length of a mile may be described by the ball in three minutes; and if this were continued an hour, we should have twenty miles of space passed over by the ball. When once the minds of children are directed to a palpable illustration of this kind, they have obtained, as it were, the seeds of knowledge—they have a foundation on which to rest future researches of a like kind, and without some such solid, distinct, clear, and palpable exhibition of the rate of motion, no definite ideas will be afforded by the most skilful and elaborate study of mere figures unapplied to some such datum as I have here endeavored to describe. Very few persons have clear conceptions about space and motion. If we ask a child the meaning of a sentence which it has read, we probably find that no solid or distinct ideas of the meaning of the sentence have been formed, and so it is with children of a larger growth—with men, and even with able and accomplished men—propositions involving large conditions of space and motion are read and stated by them as truths, without even attempting to resolve them into tangible considerations. What, for example, is so common as to hear it said of Archimedes, that if he had a fulcrum on which to base his operations, the power of a lever would enable him to move the world, and so it is taken for granted that by an enormous lever, the weight of Archimedes, exerted at the extremity of its enormous arm, would suffice to move the world. In theory this is true, but how few have an idea how far it is from all practical value. If Archimedes had machinery free from friction, and in perfect equilibrium, so that his whole power could be made available, it would require, at sixteen hours a day, and using his whole power, more than seven millions of years to move the earth. But then it may be said—what do you call motion—through what vast space would he not have moved it in that immense period, if endued with life amounting, one might almost say, to a fraction of eternity itself? I have assigned a moderate enough space, through which it would be moved, viz., the one hundred millionth part of an inch. If we consider, then, that of this $\frac{1}{100000000}$ of an inch, only about $\frac{1}{250000}$ part could be accomplished in the incessant labor of fifty years, we find that it amounts to so inconceivably small space, so very far beneath the utmost power of the microscope, that instead of confirming the notion of motion, it seems, if it were possible, to add value to the notion of actual permanency. Now, in carrying ideas of space and motion from terrestrial to celestial objects, I may mention a very simple and pleasing illustration. Suppose a white ball, of ten or twelve inches diameter, placed in the open air on a clear day, when the sun and moon are both visible. The ball may be so placed as to appear immediately under the moon, when viewed through a small aperture properly fixed. It may be so placed also in regard to distance from such aperture, as to appear about the same size of the moon. Now, if the sun's rays fall on this ball, just so much of its surface will be brightly illumined as will correspond with the light portion of the moon, and the teacher will then explain that the rays of the sun are falling on two balls or globes—the one the moon, at a great distance, the other the ball, of ten or twelve inches—and by moving the latter, the increase of apparent diameter as it is brought near, and the decrease of its magnitude when removed further away, may be fully explained. On the following day similar lessons may show the altered position of the moon, and the reason of its altered phase, and illustrations of this kind may serve as a foundation on which to convey information as to the other heavenly bodies. I recommend circles to be painted on the school ceiling, representing the earth by one inch in diameter, the moon one quarter inch at a distance of thirty inches, and an outer circle of nine feet two inches in diameter, to represent the cicumference of the sun. When these enormous magnitudes have been in some degree appreciated, the distance of the fixed stars on the same scale, amounting to much more than 10,000 miles, may afford a further and most astounding example of the greatness and glory of the works of the Creator, as exemplified in the scale of the universe.

I now offer as an example of geological models, one which admits of being easily constructed, namely, by cutting sheets of variously colored paper so as to show the relative position and area of the geological formations of Great Britain. In this manner also, models of local districts may be easily made, by adopting the course of rivers as a base of operations, and then moulding the hills according to a scale of altitudes. Models of school-rooms, in card-board, might be made by active and ingenious scholars; and the great beauty of neatly-made paste-board models is such as to render them peculiarly fitted for exercises at school.

The lectures of the late Richard Dalton were an example of the great utility of models. He possessed a very large collection, illustrating mechanics, hydraulics, hydrostatics, optics, and astronomy. Among them were Attwood's machine for explaining accelerated motion, a printing press, a machine or portable mint for striking medals, a stocking-making machine, a working model of a locomotive engine and of various other steam engines, optical models, telescopes, microscopes, &c. It is much to be wished that similar collections of models could be found in every large town, and if moderate sums were appropriated by government to be given as premiums for such models, it would develop a large amount of practical merit, and be the means of furnishing an ample supply for schools.

The restorations of extinct animals now in progress at the Crystal Palace, by Mr. Wat rhouse Hawkins, bid fair to create a laudable interest in such studies; and I am glad to have an opportunity of showing, by the small models now on the table, the clear and satisfactory manner in which Mr. Hawkins proposes to shew, not only the external form, but also the anatomical structure of the bones,—one side of the model being open for this purpose, whilst the other gives a complete view of the exterior.

Great animation is excited in the minds of children by any exercises which involve manipulation. If furnished with pieces of paste-board, they will soon learn to construct a rough model showing the walls of the school, and so proceed to represent hills by fixing wooden pins at intervals of the requisite height. In like manner they may cut out in paper, or in cardboard, areas representing the comparative magnitude of kingdoms, and thus arrive at some tangible notions of the dimensions of the globe on which we live, and of the planets and stars which adorn the heavens by night. The great value of all such instruction is the right direction of the mind and understanding, so as not only to know the condition of matter, but to feel that all nature pictures forth images of the greatness and glory of God.

Under the term of diagrams, almost every description of drawing may be included, inasmuch as highly-finished pictorial effects are sometimes required to illustrate architectural and geological, as well as historical and other subjects. The numerous and interesting specimens shown in this exhibition render it unnecessary either to describe them or to speak in general terms of their great beauty and value. My object is to draw attention to the means by which they may be more extensively used in ordinary schools, and to this end we must consider more especially—

The principles of construction;
The objects capable of illustration;
The materials to be employed; and
The special advantages they afford in promoting education.

There are certain guiding principles which regulate the correct practice of all arts of design, and a knowledge of these is essential to the teacher.

A diagram is the representation of one or more objects on a plane surface.

If we suppose a cylinder to be the object of which a diagram is to be made, it is evident that if the end alone is represented we have a circle, and a projection of it may be made on a plane parallel to the axis of the cylinder, so that the outline will be a square or a parallelogram. If lines only are employed, such a diagram will give no correct idea of the true form of the object; hence it becomes necessary in representing a diagram of a cylinder, as of every other object, that due regard is to be had to the exhibition of it in such a form as to convey a clear idea to the mind.

An uninstructed person who, for the first time, attempts to make such a diagram, is disposed to make a circle for the top, and then continue lines to represent the length of the cylinder; and, under certain condltions, this may be done by a principle to which I shall shortly advert; I notice this because it has frequently happened, in the course of my experience, that I have seen a pit shaft represented in this manner—a method so fallacious, as to give the most erroneous impressions.

To explain this, I will suppose the shaft of a mine, ten feet in diameter and one hundred feet deep; we have thus a cylinder of which the length is ten diameters.

I will suppose that at the top of this shaft there are two roads, each one hundred feet long—one being direct north, and the other direct east, from the top of the shaft. Suppose also, for the sake of simplicity in form and dimensions, that at the bottom of the shaft there are two drifts or galleries, each one hundred feet in length and going in two different directions, namely, south and west. Let us suppose that the

relative position of the shaft, roads, and drifts, is to be shown in a diagram.

The inexperienced draughtsman may, in the first instance, make a drawing representing the roads, the same as on an ordinary ground plan, with the top of the pit (or hollow cylinder) at the point of intersection, by a scale, say of ten feet to one inch. He then, by the same scale, proceeds to lay down the shaft in a perpendicular line, and the south and west drifts in their relative position to the north and east roads.

Now the fallacy of such a figure as would thus be made is apparent; although many persons can correct, by their own actual knowledge of the true relation of the objects, any practical error as deduced from such a diagram; the knowledge of the designer may save him from the error of the drawing yet his diagram will convey no accurate idea to other persons.

We perceive, then, that every diagram must be designed in a certain relation to the truth, in order to convey correct ideas to others.

There are several methods of accomplishing this—

1. By a ground plan, or horizontal drawing.
2. By a sectional plan, or vertical drawing.
3. By an isometric projection.
4. By a parallel projection.

If the object to be designed or explained has relation only to one uniform plane surface, then the first of these modes is all that is required, but in every solid object the representation must depend on one or other of these methods of projection, unless perspective delineation is required. This does not come so much within the strict meaning of diagrams as generally understood, as of pictorial representation, which would introduce too wide a field for illustration in the compass of a lecture like this.

I consider diagrams, therefore, as being chiefly of such a nature as to require a close adherence to geometrical accuracy, and capable for the most part of being delineated by projection by parallel rays.

First.—On an horizontal plane, which, though it may be placed vertically, in order to be more clearly seen, is, nevertheless, so delineated as to represent a horizontal plane.

As, for example, a map of England, though placed upright against a school-room wall, is well understood to represent the nearly horizontal face of the country. Not so the geological sections or profile of railways to be found on some maps. These are to be delineated

Secondly.—By parallel projection on a vertical plane, and which, in like manner, is understood to be vertical, though lying flat on a table.

Both these models are especially meant to represent one surface only; if different surfaces are introduced, they are all laid down in separate drawings by the plain rules which regulate this method of delineation.

Thirdly.—When solid forms are to be delineated we may have recourse to isometrical drawing, which is best explained by reference to a cube, with a house and tower upon it; or

Fourthly.—By parallel projection, based on the theory of shadows, by which a principle is afforded for a mode of delineation of great practical value.

Such being the general principles or methods upon which diagrams may be conveniently constructed, we come now to a consideration of the objects capable of illustration, and this will be found to include a range so wide as to be almost co extensive with every department of human knowledge.

I shall first advert to number.—The most simple of all illustrations is that which represents a number by a space of length, and its relation to other numbers by lines of comparative length,—a method of teaching addition, subtraction, multiplication, and division, which ought to be in use in every school. A line, one inch long, is drawn to represent unity, and its extension to five, ten, or twenty times; the division into two, four, or more parts, are readily shown and made clear by a diagram. and this principle may be either applied by single lines or by bands of moderate breadth.

When the transition from one period to another is gradual, single lines, representing the time of observation, may be used; but when quantity or number is definite at separate periods, bands of moderate width are proper.

In this manner may be clearly shown the number of inhabitants in a town or parish, or in several, say ten or fifteen, towns;

The actual number of children at school;

The proper proportion according to age; and

The rate, above or below such proportion.

In the admirable diagrams of statistics prepared by the late Mr. Fletcher, the element of number is shown by intensity of shading; the useful application of such diagrams to physical geography is apparent on inspection.

A further application of diagrams of number may be made in relation to time, and I exhibit diagrams of simple and compound interest, showing the value of three and five per cent. at both these rates.

The accumulation of funds at the same rates, viz. the amount of one pound in forty years, and of one pound per annum in forty years, as also the present value of one pound payable from one to forty.

These diagrams are of great use in illustrating simple and compound interest.

Another general application of diagrams is to represent space in relation to area; for as to mere extension, that is only the repetition of number. In areas we have to deal with a different mode of progression, and the line three times the length of another is the index to an area or square of nine times. Thus the relative size of the school-room may be compared with one square yard, one rood, one acre, one square mile.

The relation of one square mile to one hundred square miles.

The relation of one hundred square miles to a county or kingdom.

The relative size of Canada, England, Scotland, and Ireland in squares.

This is easily done by taking the area in miles, the square root of which is the side of the proper square.

Then England or Great Britain may be made a scale of comparison for Europe, for land and water, and finally for the globe.

We may then proceed to represent the globe, and to illustrate its magnitude in comparison with that of the sun; and so, by a series of well-studied diagrams, carry the mind from magnitudes easily understood to those vast distances which can only be arrived at by steps of patient study, a process which is equally required in every department of art and science.

In considering area with reference to accurate divisions, we have to take into account the knowledge of scales, and to this the diagram No. 1, Surveying and Levelling, is especially directed, as shewing and explaining the use of a barometer in a school, and the construction of the Vernier scales.

Such exercises are a useful introduction to a study of the properties of air, its pressure, &c.: and are, moreover, useful manipulations—the very root of exact measurement, and of a habit of exact regard to dimensions.

One great use of diagrams is to accustom the eye to general points of information. I may here especially mention and strongly recommend, the excellent and cheap diagrams of the Working Men's Association, examples of which are on the walls of this exhibition, and ought to be very generally used in schools.

Children accustomed to draw simple forms acquire a facility which would soon enable them to multiply copies of good diagrams from copies sent to a district; and as a proof of this, I exhibit numerous examples of geometrical figures, drawn by scholars at Allenhead's school, after a few months' practice.

Schoolmasters might be paid a moderate price for such copies, according to their merit, and copies of diagrams may easily be made on tracing linen; by these and similar means no difficulty would exist as regards providing diagrams. What is most wanted is a due appreciation of their use and value on the part of conductors of schools. They may with advantage accompany almost every part of education, being available in the very outset of arithmetic to explain numeration and other rules; the copying of diagrams greatly tends to improve writing; they convey clear ideas of relative time, and show the combinations of number and time. They moreovor occupy the attention of children so as to develop a degree of attention; and a considerable acquaintance with astronomy, geology, and other sciences, may thus be made with a clearness and facility which, without such aid, cannot be attained.

It has been my wish, in the brief limits of this lecture, to direct attention to the greatly extended use of models and diagrams in general education. This subject is one which is scarcely at all understood in the great majority of the humbler class of schools. I have endeavored, by a few examples, to point out the useful aid which they afford to the teacher, the animation they impart to others in dry and uninteresting lessons, the awakening of new ideas in the mind, and the formation of correct habits of thought. All these show forth the value of such means of illustration in the school, but here their value only begins—for they establish, in the eye of the youthful student, an exact habit of observation which will be of the greatest use in every stage of life. Whether it be in the recreations of travel, in the pursuit of science or in following industrial occupations of any kind, however humble, scarcely a day can pass without affording some opportunity of applying the kind of knowledge which is thus imparted. In every department, from the complicated details of finance or other statistical conditions which claim the mind of the statesman, down to the occupations of the humblest artisan, well-constructed diagrams may be made the means of presenting, as it were, in one field of view —combinations and relations of numbers, value, or space, in relation to time or other conditions, in a way which cannot be done by mere figures or descriptions.

At no former time, or at no former place, could these considerations be more appropriately urged than in this institution, when, for the first time in the history of the world, an attempt is made to bring from different nations whatever tends to illustrate educational progress, and to present them in union with those which have been adopted in this country. A lesson of deep significance is thus afforded, for as surely

as light surpasses darkness, and wisdom surpasses folly, so will this nation decline in power, in knowledge, in wealth, and happiness, if other nations proceed in a more steady application of sound and useful principles of teaching. The state of some schools, in retired places, is scarcely one remove from the darkness of barbarism—sounds with less meaning than the war-howl of the savage (for that has a terrible, and, to his foes, a well-known meaning), sounds, I say, absolutely without meaning, are learnt by children without one solid idea of meaning attached thereto. Even the slang phrases of the ragged children of utter destitution are not pronounced without a meaning, only too clear and lamentable. Yet day after day, week after week, month after month, the routine of the reading lesson goes on without any clear perception being formed as to what the intent and purpose of the words are. The habit of reading, regardless of the correct meaning, is a fatal blow to the formation of exact habits of thought. The ideas of such a mind continue to resemble the ruggedness of a marble block, instead of the exact and beautiful form which the chisel of the sculptor develops,—not by adding one particle to that form, but by removing from it what is extraneous. So it is with the infant mind—the conversation of home and of companions, the observation of natural objects, and the necessity of comprehending much that is said, form a practical education, which in school ought to be continued by combining suitable explanations with all that is taught, and so rendering it available to future use. In this it will be found that verbal explanations alone are by no means sufficient; children are tired by prolix details; to already existing ignorance, carelessness and inattention are added. But when actual objects are presented to their view, when wonder and admiration are brought into play by new and curious combinations of form, the attention is willingly given, and the more this great advantage in imparting instruction and its value in after life is considered, the more will it appear that the cause of education may be usefully advanced by means of models and diagrams. These, more or less, are within reach of every teacher who will study the method of giving such instruction. The facilities now given by means of the Department of Science and Art, and which it will doubtless be one important object of the Society of Arts to extend by means of its journal and by its connection with institutions in various parts of the country, will, it is to be hoped, greatly improve the general character of school instruction. A solid impress of real and lasting utility may thus be given to education, tending to increase the happiness as well as the usefulness of every scholar, and to promote the best interests of this great country, which eminently depend on the intellectual skill, and on the sound religious and moral worth which are the true foundations alike of individual and national welfare and stability.

SINGING IN SCHOOL.

There is too little attention paid to the matter of singing in the schools in most sections of our country, and particularly in those of the West. In fact, in a large number of our schools it is entirely neglected. This is all wrong. Children should be taught to sing as early in life as they are taught to read. Not only at home, but at school also, is the place for such training. And the school, indeed, is the better place: there they can vie with each other in learning and singing appropriate pieces; and these very exercises are a stimulus to more vigorous exertions in learning their other lessons.

Every experienced teacher is well aware that the greatest difficulty in teaching arises from the scholar's not being interested in his studies. Whatever, then, may tend to awaken in the mind of the scholar, such an interest as his progress demands, is worthy of our attention.

It is too common an occurrence in the experience of a teacher to require proof, that scholars sometimes appear to have fallen into a kind of mental apathy—into a dormant state, from which it is almost impossible to arouse them. Yet in order that they should receive any benefit from their attendance at school, they must be shaken out of this lethargic condition—they must be aroused from their stupidity, and be led to take an interest in whatever they are engaged in, and to desire to understand what they are pursuing. Singing exercises are a great aid in affecting this. Therefore regarded only in the light of an incentive to study, and as a means of procuring an interest in the ordinary pursuits of a school, such exercises should be introduced.

In all schools they should be connected with the opening and closing exercises of each day. And in the lower and primary schools, both in the forenoon and afternoon sessions, a short time should be appropriated to the singing of interesting pieces, and to the proper instruction, which naturally accompanies such exercises. In the higher schools, once or twice a week, one hour, at least, should be devoted to instruction in the rudiments of vocal music and in singing exercises.

When properly conducted these exercises expand the chest and strengthen the lungs: they give the scholar a better command of his voice, and a fuller and more perfect intonation; and therefore whether he engages in reading or speaking, he can do it more effectively and with greater success.

Besides there is a great satisfaction to every individual in being able to sing and to understand music. It is a mistaken idea altogether that a person can not learn to sing. And yet how often we hear individuals saying: "How I do wish I understood music. I would give anything only to be able to sing, it would be such a pleasure! But I *can't* learn if I *try*."

"But I *can't* learn if I *try*;" entirely wrong; every person endowed with only ordinary capabilities *can* learn to sing. There is a musical germ implanted in the mind of every individual, and it is only from the fact of not permitting it to develop itself, that the person does not become a singer. All individuals can not probably become *good* singers, or the best judges of musical performances; yet they can arrive at such a degree of attainment, that they will be interested, not only in listening to, but also in participating in such exercises. The reason that there are so many persons who are not able to sing, arises from the fact of their not having been properly educated. The harmonical germ with which they have been endowed by their Creator, has been suffered to die from starvation and a lack of attention.

The vocal organs should be among the very first to receive attention. As in Italy and Germany, so our children should be taught to sing as early as they are taught to read. The two should go hand in hand up through the different grades of childhood and youth to maturer years.

And it is an argument in support of this position that there appears to be an inseparable connection between the finer and better feelings of one's nature, and the developement of an interest either to listen to, or to participate in musical exercises.

> "There is in souls a sympathy with sounds,
> And as the mind is pitched, the ear is pleased
> With melting airs or martial, brisk or grave,
> Some chord in unison with what we hear
> Is touched within us and the heart replies."

From my own observations and from the statements of other teachers, I believe that *singing* is a great element in the government of a school. It draws forth the better feelings of the scholar; it rounds and smooths the rough corners of his nature, and imbues him with a higher respect, and with a greater love for his teacher. But here perhaps a difficulty arises in the minds of some teachers, in regard to the capability of imparting the requisite instruction in this department. There need be no difficulty, for every teacher of ordinary talent and acquirements, (and if there are any not having this amount, they have most certainly greatly mistaken their *calling*,) can with a very little exertion so acquaint himself with the simpler rudiments of vocal music, as to be able to impart the necessary instruction. Because they have thus far in life neglected the subject, is no reason why they should continue to do so. When a person has learned all it is proper for him to learn; and his desires of knowledge have become sated, his mission certainly must be accomplished, and it is then, full time for him to make his exit from the earth.

Socrates even in extreme old age learned to play on musical instruments. Cato when eighty years old thought proper to learn the Greek language; and Plutarch when between seventy and eighty commenced the study of the Latin. Nothing of the kind, whatever the period of life, is impossible for a person of energy and indomitable perseverance. And such a person the teacher should be; and such the successful teacher is.—*Ohio Journal of Education.*

UNTRUTHFULNESS IN SCHO LS—ITS PREVENTIVE AND REMEDY.

"It (teaching) has all the interest of a great game of chess, with living creatures for pawns and pieces, and your adversary, in plain terms, the devil; truly he plays a very tough game, and is very hard to beat, if I ever do beat him." DR. ARNOLD.

The faults of men are on a grander scale than those of children; this is the rule. Exceptions exist, it is true; yet, to a man of strong character, but of rude tastes and uncultivated manners, peccadilloes give an air of boyishness, not to say of effeminacy. For the boy to rob, and the man to steal, would be to reverse the laws of natural development; for the boy to lie, and the man to perjure himself, is the ordinary growth of sin grafted upon character. Our schools, therefore, are the nurseries of faults, rather than of matured offences; of faults, as we call them, because their indirect effects are trifling, but, estimated by any other scale, sins of exceeding magnitude.

The form in which the childish propensity to evil makes its appearance, is mainly untruthfulness. That untruthfulness is universal, none who are brought into close contact with men or children can deny; that it is more prevalent with adults than with the young, I do not need to prove. The faults of men are manifold, those of children less numerous in kind. Untruthfulness in its Protean forms is the salient point in the sinful side of the young. As discernible on the first as on the seventh day of the week, no amiability is so pure that it does not conceal it, no filial love so strong that it does not shelter it. Falsehood falls from the lisping tongue of the child, and lurks in the more guarded words of the youth, at the threshold of man's estate.

Is it the fault of the parent and teacher, that falsehood often, and prevarication almost always, are looked upon by the child as venial

offences, far less culpable than swearing, stealing and Sabbath-breaking? To our shame we must confess it; and every teacher owes it to himself, to the world, and to his God, to look within him, and see how far the evil can be remedied by him. I do not suppose that any teacher entertains the idea distinctly defined, that untruthfulness is any less a sin than others of the youthful category, but its universality causes the thought to be practically forgotten. Children early conceive that truth can be sacrificed without great harm to the conscience, and manhood but gives strength to the conception.

Acknowledging that children are naturally quick to mark truthfulness in their companions, and ready to admire it, we can but confess it our duty to do all in our power to train them to a constant and high estimation of its value in themselves. While we are prompt to punish those who are untruthful, we may call repeated attention to those instances, in ancient and modern history, where men of all nations, and of every creed, have given their testimony to the beauty of truth. Why should we read, in our schools, of Darius and Fabricius, Scœvola and Cato, unless we are to profit by those words of theirs, which show how fair a thing is truth, and what a gem it is to set off even the heathen character?

And not only should the teacher call his pupils' attention to examples drawn from actual biography, but he should also, by the exercise of a little imagination, present to them situations of temptation in which they may find themselves placed. Let him picture the victory of truthfulness, and show that such a conquest, though bloodless, involves much power, and frequently is as great in its effects upon individual character as those of nations upon history. What physical courage is, boys feel intuitively; what moral courage is, they can be made to understand. The great reason why boys and boyish men have no appreciation of moral courage is, that they so rarely exercise it, and take occasion to test its worth.

When a child has arrived at such maturity as to see the excellence of moral courage in others, which, as I said in the outset, is at an early age with boys under a judicious mother's care, the teacher must devise ways to call the power into practice. This step requires much discretion. If taken wisely, it will give great solidity to the scholar's character, but if hastily, it may shipwreck a soul. There should no strong temptation be put before the child, but rather an opportunity to speak the truth with manfulness. An instance of what I mean would be this. James comes to school, some morning, tardy. His heavy tread and swollen eyes tell the story of oversleeping. How often have I seen the next step of the teacher missed! He tries to remedy the evil by throwing ridicule upon the boy, and holding him up to the laughter of the school. And so he bluntly asks, "Well, James, how is this?" The boy of course gives no answer. Indeed, none was wished. "Not up early enough, were you?" The boy sullenly answers "No," and the scholars laugh. If punctuality is to be purchased at the cost of candor, give me the latter. The truth, spoken as it has been by the boy, has no merit. It hardly deserves so high a name as truth. How much better for the teacher to ask, in a pleasant way, if he wishes to allude to the cause of tardiness, "James, did you see the sun rise this morning?" and, in nine cases out of ten, the answer will be a ready "No, sir." The antithesis involved in the question gives it point, and, while sharp, it does not rankle. If the boy is a tried one, I would ask, in a manner which would demand but one answer, "Have you any excuse to plead, James?" A boy of real moral courage will answer with a willing "No, sir," while one who has not been trained to a ready and truthful reply, will perhaps speak the syllables, but in such a manner as to convey the impression that he has an excuse, but lacks moral courage to state it. Teachers do a great wrong to the child by asking, in such a case, "James, what is your excuse? for the silence which must follow is perilous, thrice perilous, to his truthfulness. No questions should be asked in the school-room which do not demand a ready answer. By always giving such, the teacher may open a fine field for the culture of moral courage, while, by taking the opposite course, he oftentimes stimulates the youthful mind to search for foundationless excuse, and even to utter deliberate falsehoods.

Great discretion must be used in trusting children. Many read the words, "It is a shame to cheat Arnold; he always believes us," hurry to their schools with the false interpretation which they give them, and follow them with as much discrimination as success. O that teachers could be warned off from this dangerous ground! Would that they might see all of Dr. Arnold, his school and his character, before they interpret his words. This placing of young minds in positions of danger, this expecting of them to stand alone while at best they can but totter, this risking of character on the probability of giving it strength,—would that our teachers might realize its peril.—Where one mind comes out unharmed, two are maimed for life.

If we would be able to say to our pupils, as Dr. Arnold said, and said successfully, "*of course*, I believe you," it is not enough alone to give our full confidence. The heart of a child is willing to respond to a trust, but it must not be too sorely tempted. To be able to leave our school rooms for a minute or an hour, and feel that the order of the room is safe in the honor of our scholars, to be able to realize that we are dealing with minds not impregnated with deceit, but open and frank, more is demanded than the yielding of implicit confidence. If the teacher would be confided in as he is confiding, he must earn it by unfaltering faithfulness, and the possession of his own heart in purity. After all, we fall back at last upon this great principle, that, for the teacher to have truthful pupils, he must himself be truthful. His excellences of mind and heart will be repeated in the generation under his charge, and so too will his faults. Not his words alone—his whole demeanor, his whole aspect must be truthful,—truth-full, not truth-showing. No assumption of a forced dignity should give rise to the charge of hypocrisy; no artful displaying of his school should unmask, to those young but quick eyes, his own blackness; no attempts to hide his own faults, and to conceal his own deficiencies should awaken the suspicions, or repulse the sympathies, of those young hearts. If he would have his *precepts* effective, he must have his *example* faultless. With a firm reliance on a power higher than man, with a watchful and persistent determination to build up in himself a truthful, holy character, every teacher, whatever be his intellectual acquirements, may teach powerfully and effectively, by precept and illustration, how fair a thing is truth; may do much to rear up minds which can abide the day of temptation, and give strength to the falling. When we punish our pupils for untruthfulness, let us ask whether we are ourselves truthful; when we instil "line upon line and precept upon precept," let us question ourselves, and answer truly, whether we are giving the seal of a high and holy example;—for without this, untruthfulness can have no preventive, no remedy.—*Massachusetts Teacher.*

SCHOOL JURISPRUDENCE.

In governing a school, cases will often arise in which the thoughtful teacher will feel much embarrassment. He will desire to know how others have acted in similar circumstances, and what consequences have resulted. But above all, he will be especially anxious to learn what are the great principles of justice and truth, which should guide him in the midst of such difficulties. He will need reading, reflection, consultation, as well as observation and experience. To aid him in making decisions in cases of emergency, we propose to keep a column or two for the report and discussions of such topics and questions as may arise in the practical government of a school. We shall extend our remarks and observations, sometimes, to the relations subsisting between parents and teachers; and to the whole economy of the school system.

In every Medical Journal, a large space is devoted to accounts of difficult or remarkable cases which have occurred in the practice of different physicians; and these accounts embrace all the symptoms and manifestations of the disease, the methods of treatment in its different stages, and the result, whether favorable or unfavorable. Is a remarkable surgical operation performed, not only is the fact stated, but the full particulars of it are given. Does a new disease make its appearance, not only are its characteristics and all that is known of methods of treating it carefully stated, but physicians who have had to deal with it describe the cases of particular patients, and show as far as possible, in each, the manner of the attack, the progress of the disease, the precise remedies applied, and the effect of the treatment.

So in Legal Journals, reports of questions raised, arguments adduced, decisions made in trying important cases, occupy a very prominent place. And who that is conversant with the medical and legal journals of the day, but will acknowledge that their most interesting and valuable articles, especially to the young practitioner, are those containing such reports?

And why would not reports of cases which have actually occurred in the school-room be of equal value to teachers? It cannot be that *they* are the only persons who cannot profit by the experience of each other; yet we do not know of a single Educational Journal in which any space is devoted to such reports; and it would be difficult to select from all the books which have been written on the subject of education, or on the teacher's life and duties, materials enough for a single volume. This great deficiency in educational literature can easily be supplied, if practical teachers, those who are actually engaged in the business of instruction, will interest themselves in it.

These reports should come from teachers in all grades of schools, both in city and country, so as to include a variety of cases, and illustrate the various methods of instruction, discipline and management, which different teachers adopt. Moreover, they should include cases of unsuccessful, as well as successful treatment.

It may be objected to such reports, that as no two teachers will ever find themselves in precisely the same situation, the course taken by one will not in every respect be the proper course to be taken by another. This is very true, and it is also true that no man can work in the harness of another. No man can exert an influence intellectually or morally, except in his own way. One may do by a look, what

another must do by a word, and what still another can never do, however great an effort he may make; and yet something may be learned even from the experience of the last. It is scarcely less important to know the causes of failure, than of success. But were a young teacher to consider any report as indicating precisely the course which he ought, or ought not, to take, he would be injured rather than benefited by it. If, however, he should consider that each report illustrates some principle, and should examine it carefully to see what that principle is, and what are the elements of the success, or the want of success in the case described, he could not be otherwise than benefited by it.

We hope teachers of Rhode Island will contribute freely to this department of the schoolmaster, and thus give to others the fruits of their experience, and also show that the life of a teacher, instead of being, as some suppose, a mere hum-drum, monotonous course, is diversified by incidents as varied as those which occur in any other profession.

DISRESPECT TO TEACHER.

CASE 1st. We will close this article with the following report of a case, every particular of which we know to be true.

The school was composed entirely of boys, and numbered about fifty scholars, ranging from eight to sixteen years of age. It was situated four or five miles from a large city, in a village which was then, and is now, a noted resort for "fast" young men. As a consequence, the boys became acquainted with all the profane, vulgar, and slang expressions of the day, and were much inclined to be rude and pert, both in and out of school.

One day, a slight disturbance having occurred in one of the classes, the teacher asked a scholar concerning it, and received a very disrespectful and insulting reply. After a moment's silence, he went on with the recitation, apparently intending to take no notice of the offence. The scholars were much surprised at this seeming indifference, and commented on it freely among themselves at the close of school.

The next morning the teacher called the attention of the school, saying pleasantly that he wished to ask a few questions. "If," said he, "you were at play here in the yard, and a gentleman riding by in a chaise, should stop and inquire the way to Brighton, would you tell him?" "Yes," promptly answered the boys. "But how would you tell him? In pleasant, gentlemanly tones, or gruffly, as though he had no right to trouble you and disturb your plays?" "I would tell him as well as I could," said one of the boys, and all raised their hands to indicate their approval of the answer. "But suppose that a common laborer should ask you the same question, would you tell him?"—"Yes," was again the reply. "And would you tell him in as polite and gentlemanly a manner as you told the other?" "Yes," said all the boys. "But suppose that instead of one of these, a *strolling beggar*, clothed in filthy garments, and having every appearance of a man who had debased himself by his vices, should ask of you the same information, would you tell *him?*" A hearty "Yes," was as before the response. "But would you be as particular to tell him kindly and pleasantly as you would be to tell the others?" "Most certainly we should," said the boys, some even adding that they ought to be more particular to speak kindly to such a person.

The teacher had now gained his point. The scholars had established for themselves a principle which each felt was just and true, and it only remained for the teacher to make the application.

"Yesterday," said he slowly and impressively, "I asked George Jones a question, which I not only had a right to ask, but which it was my duty to ask, and he gave me a disrespectful answer. Is it possible that there is a boy in this school, who will treat his teacher worse than he would the merest vagabond that walks the streets?"

It was enough. Nothing more was said, yet every scholar felt the reproof; and the teacher did not, during the remainder of the term, have occasion to complain of the slightest want of respect on the part of any of his pupils.

CASE 2nd. Samuel dropped a pencil upon the floor, and in recovering it jostled William, his right-hand neighbor, with his elbow; he was detected, and to some questioning as to motive answered impertinently, and when reproved for this, added stubbornness to his first trivial breach of order. What course ought a judicious teacher to pursue to bring him to an acknowledgment of his wrong-doing, and to induce him to forsake all attempts at similar annoyances in future?

In a case like this, where a grave offence grows out of a comparatively insignificant one, much, in fact nearly all, depends upon the teacher's bearing and manner. If he be kind and firm, rarely indeed will small affairs grow to any importance. And one good rule will be, never, or very seldom, to ask a scholar's motive for any small breach of order. The stern demand, "What did you do that for, sir?" may frighten a child into a falsehood. At any rate it will suggest to him the propriety of seeking an excuse, or will prompt him to concealment, and all these are bad enough, but not so injurious as when the frowning question merely arouses opposition and wilfulness. Ask not often for a child's motive when he does wrong; he is not always half conscious what his motive was, and then he feels too much ashamed of it to be willing to tell it.

A little judicious waiting,—if the pupils and the offender know that their teacher is fully aware of the offence,—will in no case do harm. The only difficulty is, that they are left to suppose that the schoolmaster did not comprehend the mischief. When they understand that he knows it all, and that a day of reckoning will come after he has had time to reflect and deliberate, the delay will work good rather than injury. And in case of impertinent words or stubbornness, nothing, in our humble opinion, will avail as much as *judicious* delays. By such delays Fabius conquered Hannibal, and by them a teacher may conquer the disposition to mischief in almost any boy.—*Rhode Island Schoolmaster.*

ON TEACHING GEOGRAPHY.

If a teacher can sketch well, he should draw his own maps upon the black-board—First, tracing the outline of the country, he mentions the various kingdoms or seas whose boundaries his chalk is tracing:—second, with a few jottings of his chalk he marks out the principal mountain ranges, forming the great ridges or apices of the water sheds;—third, he traces the rivers winding their way from their mountain source or sources to the great reservoirs of the globe. He pauses for a moment to review his work,—he has sketched out the works of nature as the hand of the Creator has left them; now he has to begin to sketch the works of art and civilization—he has to people the wilderness and to trace the progressive steps of civilization; upon the banks of the tidal rivers he marks the site of the great mercantile cities; on the shores of the mountain streams he plants the names of the oldest industrial cities; on the coal fields he places those mighty manufacturing cities which have almost sprung into existence since the discovery of the steam-engine—that mightiest monarch of civilization and power, which seems to control the destinies of the world; last of all, he marks the sites of those large towns, which form the market-places of the rural population. We said that the work was progressive,—every fresh touch of the chalk is associated with some new idea, and every fresh idea has its appropriate association with some line or mark upon the board;—the sketch goes on,—it becomes more and more finished;—the skeleton becomes lined with sinews, then clothed with flesh and blood;—every fresh step towards completion excites new interest in the minds of the boys,—they wonder how a few jottings can call up the idea of mountain range, or how a winding line can call up the idea of the course of the sparkling river, or how the little mark put for the mountain city, should awaken in their imaginations, the sound of the flip flap, flap flip, of water mills, and the busy hum of industry; they wonder, but they know not, that the visible picture that their master has drawn with his chalk, would be dull and lifeless without the living moral picture with which it is associated. Such a lesson is complete in its parts and perfect as a whole.

APTITUDE OF TEACHING.

The most essential of all qualifications for teaching, is that peculiar faculty which we call, for the want of a better name, aptitude for teaching. Aptitude for teaching! what is it? There is no mistaking it, when we see it. Everybody recognises it, when it is presented to his notice. Is it a quality of the head or the heart, or does it belong to both? Is it a natural or an acquired gift? Is it an instinct, or a habit acquired by efforts, repeated from the earliest dawn of reason? Does it grow spontaneously by imperceptible gradations of development, or is it a faculty dependent upon the growth of certain intellectual and moral powers?

We witness certain teaching effects, and too readily rest satisfied with attributing them to what we call aptitude for teaching, as if it were some original and mysterious faculty, without at all seeking to discover the chain of circumstances, and the qualities of mind and character, which have contributed to form this aptitude. But we cannot allow the subject to remain in this unphilosophical condition of mysticism. The aptitude for teaching must undoubtedly be a qualification resulting from the development of certain intellectual and moral faculties of our nature. Let us endeavor to analyse this remarkable qualification; that is to say, let us endeavor to discover those qualities, intellectual and moral, with which it is invariably associated, or, rather, with which it is connected by the constant relation of cause and effect.—*Ibid.*

SOME GENERAL RULES AND PRINCIPLES.

These rules and principles are derived from various sources. They are adapted to the wants of pupils and teachers. Such summaries may be perused when more lengthened pieces might be neglected:

RULES FOR THE TEACHER.

1. From your earliest connection with your pupils inculcate the necessity of *prompt* and *exact* obedience.

2. Unite firmness with gentleness; and let your pupils always understand that you *mean* exactly what you *say*.

3. Never promise anything unless you are quite sure you can give what you promise.

4. Never tell a pupil to do anything unless you are sure he knows how it is to be done; or show him how to do it, and then see that he does it.

5. Always punish a pupil for *wilful disobedience;* but never punish unduly, or in anger: and in no case should a blow be given on the head.

6. Never let your pupils see that they can vex you, or make you lose your self-command.

7. If pupils are under the influence of an angry or petulant spirit, wait till they are calm, and then reason with them on the impropriety of their conduct.

8. Never yield anything to a pupil because he looks angry, or attempts to move you with threats and tears. Deal mercifully, but justly, too.

9. A little present punishment, when the occasion arises, is more effectual than the threatening of a greater punishment should the fault be renewed.

10. Never allow pupils to do at one time what you have forbidden, under the like circumstances, at another.

11. Teach the young that the only sure and easy way to *appear* good is to *be good*.

12. Never allow tale-bearing.

13. If a pupil abuses your confidence, make him, for a time, feel the want of it.

14. Never allude to former errors when real sorrow has been evinced for having committed them.

15. Encourage, in every suitable way, a spirit of diligence, obedience, perseverance, kindness, forbearance, honesty, truthfulness, purity and courteousness.

THE EVILS OF ABSENCE.

1. If a boy learns to feel that he may leave his duties as a scholar for trivial causes, for causes equally trivial he will leave his business when a man.

2. The time of the teacher and the whole school is wasted while this absence is being recorded.

3. The teacher's time is being wasted in reading and recording the delinquent's excuse when he returns to the school.

4. He interrupts the exercises of the teacher, or some part of the school, in finding the places at which his various lessons commence.

5. He has lost the lesson recited yesterday, and does not understand that portion of to-day's lesson which depends upon that of yesterday; and such dependence usually exists.

6. The teacher's time and patience are taxed in repeating to him the instructions of yesterday; which, however, for want of study, he does not clearly appreciate.

7. The rest of the class are deprived of the instruction of their teacher, while he is teaching the delinquent.

8. The progress of the rest of the class is checked, and their ambition curbed by waiting for the tardy delinquent.

9. The pride of the class is wounded, and their interest in their studies abated, by the conduct of the absentee.

10. The reputations both of teacher and school suffer, upon days of public examination, by failures which are chargeable to the absence and not to the instruction.

11. The means generally provided for the education of the delinquent are wrongfully wasted.

12. He sets a pernicious example for the rest of the school, and usually does actual mischief while absent.

RULES FOR STUDENTS, &C.

1. Have all your books and school apparatus fixed and ready at least one day before the school commences.

2. Be *early* in your attendance at school.

3. Be *constant* in your attendance at school.

4. Regard promptly and cheerfully all the regulations of school.

5. While in school improve all your time with a real carefulness.

6. Be *honest* in regard to your lessons; get them *thoroughly* and by your own diligence.

7. Speak and act the truth in all things and at all times.

8. Be pleasant and accommodating to your companions.

9. In the streets let your deportment be orderly and becoming; be gentle and civil.

10. Keep your books, maps, &c., in good order and well arranged.

11. Keep your desk and the floor about it in a neat and cleanly condition.

12. Before entering the school brush the mud from your boots and shoes, and avoid everything which can render the place you occupy unpleasant to the members of the school or to visitors.

13. Cultivate carefully and constantly pleasant feelings; allow yourself only in pleasant thoughts; utter only pleasant words; exhibit only pleasant actions; and in all things manifest the spirit of Christ.

14. Finally, love God and keep his commandments, for in this you will exhibit the greatest of all wisdom and secure the most desirable of all rewards. "The fear of the Lord is the beginning of wisdom, and a good understanding have they that keep His commandments."

We give below a few general rules to youth respecting their conduct when attending school:

GENERAL PRINCIPLES OF INSTRUCTION.

There are several general principles, founded in nature and deduced from observation, but too often overlooked, which should be our guide in teaching, and of which we should never lose sight.

First.—Whatever we are teaching, the attention should be aroused and fixed, the faculties of the mind occupied, and as many of them as possible brought into action.

Second.—Divide and subdivide a difficult process, until the steps are so short that the pupil can easily take them. This is what we call aptness to teach.

Third.—Whatever is learned, let it be made familiar by repetition, until it is deeply and permanently fixed in the mind. The faithful application of this principle makes thorough teaching the best kind of teaching, certainly.

Fourth.—Insist upon every lesson being learned so perfectly that it shall be repeated, as everything in a large school should be done, without the least hesitation. This cannot, however, be applied in the case of very young scholars.

Fifth.—Present the practical bearings and uses of the thing taught, so that the hope of an actual advantage and the desire of preparation for the future be brought to act as motives. This principle is often neglected.

Sixth.—Follow the order of Nature in teaching whenever it can be discovered.

Seventh.—When difficulties present themselves to the learner, diminish and shorten rather than remove them; lead him, by questions, to overcome them himself. It is not what you do for the child so much as what you lead him to do for himself, which is valuable to him.

Eighth.—Teach the subject rather than the book. The book is but an aid in acquiring a knowledge of the subject.

Ninth.—Teach one thing at a time. Advance step by step, making sure of the ground you stand on before a new step is taken.—*School and Schoolmaster.*

HINTS, SUGGESTIONS AND QUESTIONS TO TEACHERS.

Reading and spelling are, of course, among the most important things to be taught; and good reading and spelling can readily be appreciated by almost all. Hence, parents who find their children interested in these branches, and constantly improving in them, will think that they are doing well, and that their Teacher is a good one. Let these important branches receive a full share of attention.

To awaken interest in spelling, let each scholar, commencing at the foot of the class, pronounce a word, selected from the lesson, to the one at the head; and if it is missed by any, let the one who spells it "go up." Do this for a few times before beginning to pronounce the lesson yourself, and you will soon find that all the *hard* words will be pretty sure to be spelled correctly. Then you can allow them to select from a reading book, from proper names, the names of the months, or other classes of words.

To improve the voices of scholars, one of the best plans is to have them repeat in concert, after you, short, spirited passages of prose or poetry, on different pitches, rapidly or slowly, loudly or softly, as you may direct.

To prepare young scholars to declaim or rehearse without embarrassment, let them step forward, bow to the class, and *count* from one to twenty, or fifty—repeat a line of the multiplication table,—one of the tables in compound numbers,—or even the names of the days of the week, the seasons, the months of the year, or any lessons which they have thoroughly committed. They will soon take delight in the practice.

During warm weather, the regular exercises should be somewhat frequently varied by singing or concert exercises, oral instructions, etc.

In giving oral instructions, the Teacher should endeavor to come down nearly to the level of the pupils mind, but not so near that he can understand all that is said without any effort. If some scholar does not understand, and asks for explanations, give any one who does comprehend, an opportunity to explain it: never answer such questions till you have given the scholars the privilege of doing so.

The Teacher should endeavor *to be* what he would have his scholars *become;* and should remember that the surest way to make them what

they *should* be, is *to treat them as though they intended to be* just what they should.

One of the best ways to prevent falsehood is suggested in the foregoing: a skilful Teacher will easily show a boy who has lied that he is in trouble. The pupils of Dr. Arnold, the great English Teacher, were very soon broken of the habit of lying. They used to say to each other, "It is mean to lie to *Dr. Arnold*, for he always believes a fellow."—*Ohio Journal of Education.*

JOURNAL OF EDUCATION, Upper Canada.

TORONTO: JULY, 1855.

*** Parties in correspondence with the Educational Department will please quote the *number* and *date* of any previous letters to which they may have occasion to refer, as it is extremely difficult for the Department to keep trace of isolated cases, where so many letters are received (nearly 500 per month) on various subjects.

CIRCULAR TO BOARDS OF TRUSTEES OF GRAMMAR SCHOOLS.

GENTLEMEN,

The Regulations and Programme of Studies for the better organization and management of Grammar Schools will take effect immediately after the summer vacation. It is not necessary for me to offer any further explanatory remarks or suggestions in addition to those which were contained in my circular of the 17th of last February.

2. I had every reason to expect that some amendments would have been made to the Grammar School Act during the late Session of the Legislature, but the consideration of amendments proposed were deferred for further consideration. The provisions of the Grammar School Act, therefore, remain unchanged.

3. But one provision has been made which enables me to apportion one hundred per cent. upon whatever sum or sums may be forwarded by Boards of Trustees for *Maps, Apparatus,* and *Libraries* (not text-books) for the Grammar Schools. These facilities and encouragements will, I have no doubt, soon result in furnishing the schools with all needful appliances to render them both attractive and efficient.

4. Provision has also been made for the inspection of Grammar Schools; and the Council of Public Instruction have appointed the Masters of the Normal School to that office, gentlemen whose attainments and experience peculiarly qualify them for the important duty of visiting the Grammar Schools, ascertaining and reporting upon their condition and character, and to offer useful suggestions for their improvement, where practicable. I hereto annex the Instructions which are to guide the inspectors in the discharge of their duties. I trust the inspectors will meet with such a reception on the part of both trustees and masters of Grammar Schools as the importance and delicacy of their office demands.

I have the honor to be,
Gentlemen,
Your obedient servant,
E. RYERSON.

EDUCATION OFFICE,
Toronto, *25th June*, 1855.

DUTIES OF INSPECTORS OF GRAMMAR SCHOOLS.

It shall be the duty of the Inspectors of the Grammar Schools to visit each Grammar School in the course of the year, and to make enquiry and examination, in such manner as they shall think proper, into all matters affecting the character and operations of the school, and especially in regard to the following things:—

I. *Mechanical Arrangements.*—The tenure of the property; the materials, plan and dimensions of the buildings; when erected and with what funds built; neighbourhood; how lighted, warmed, and ventilated; if any class-rooms are provided for the separate instruction of part of the pupils; if there is a lobby, or closet, for hats, cloaks, book-presses, &c.; how the desks and seats are arranged and constructed, and with what conveniences; what arrangements for the teacher; what play-ground is provided; what gymnastic apparatus—if any; whether there be a well, and proper conveniences for private purposes.

II. *Means of Instruction.*—The books used in the several classes, under the heads of Latin, Greek, English, Arithmetic, Geography, &c., the apparatus provided, as maps, globes, black-boards, models, cabinets, library, &c.

III. *Organization.*—Arrangement of classes; whether each pupil is taught by the same teacher; if any assistant or assistants are employed; to what extent; how remunerated; how qualified.

IV. *Discipline.*—Hours of attendance; usual ages of pupils admitted; if the pupils change places in their several classes; or whether they are marked at each lesson or exercise, according to their relative merits; if distinction depends on intellectual proficiency, or on a mixed estimate of intellectual proficiency and moral conduct, or on moral conduct only; what rewards, if any; whether corporeal punishments are employed—if so, their nature, and whether inflicted publicly or privately; what other punishments are used; management in play hours; whether attendance is regular; what religious exercises are observed; and what religious instruction is given, if any.

V. *Method of Instruction.*—Whether mutual, or simultaneous, or individual, or mixed; if mutual, the number of monitors, their attainments, how appointed, how employed; if simultaneous, that is by classes, in what subjects of instruction; whether the simultaneous method is not more or less mingled with individual teaching, and on what subjects; to what extent the intellectual, or the mere vote method is pursued, and on what subjects; how far the interrogative method only is used; whether the suggestive method is employed; whether the elliptical method is resorted to; how the attainments in the lessons are variously tested—by individual oral interrogation—by requiring written answers to written questions, or by requiring an abstract of the lesson to be written from memory.

VI. *Attainments of Pupils.*—1. Reading; whether they can read with ordinary facility only, or with ease and expression. Art of reading, as prescribed in the programme—meaning and derivation of words. 2. Writing; whether they can write with ordinary correctness, or with ease and elegance. 3. Drawing—Linear, Ornamental, Architectural, Geometrical; whether taught, and in what manner. 4. Arithmetic; whether acquainted with the simple rules, and skilful in them; whether acquainted with the tables of moneys, weights, measures, and skilful in them; whether acquainted with the compound rules, and skilful in them; whether acquainted with the higher rules, and skilful in them. 5. Book-keeping. 6. English Grammar; whether acquainted with the rules of orthography, parts of speech, their nature and modifications, parsing, composition; whether acquainted with the grammatical structure and excellencies of the language by frequent composition in writing, and the critical reading and analysis of the English Classic authors, in both prose and poetry. 7. Geography and history; whether taught as prescribed in the official programme, and by questions suggested by the nature of the subject. 8. Outlines of English Literature; how far taught, and in what manner. 9. The Languages—Latin, Greek and French: how many pupils in each of these languages; whether well grounded in an accurate knowledge of their grammatical forms and principles; their

proper pronunciation, peculiar structure and idioms, and whether taught by oral and written exercises and compositions in these languages as well as by accurate and free translations of the standard authors. 10. Algebra and Geometry; how many pupils and how far advanced in; whether they are familiar with the definitions, and perfectly understand the reason, as well as practice, of each step in the process of solving each problem and demonstrating each proposition. 11. Elements of Natural Philosophy and Chemistry, as prescribed in the programme; whether taught; what apparatus for teaching them; how many pupils in each. 12. Vocal Music; whether taught, and in what manner.

VII. *Miscellaneous.*—How many pupils have been sent from the school to, and how many are preparing to matriculate in some University College. 2. Whether a register and visitors' book is kept, as required by the regulations, and whether the trustees visit the school. 3. Whether the pupils have been examined before being admitted to the school, and arranged in forms and divisions, as prescribed by the regulations; and whether the required public examinations have been held. 4. What prizes or other means are offered or employed to excite pupils to competition and study. 5. How far the course of studies and method of discipline prescribed according to law, have been introduced and are pursued in the school; and such other information in regard to the condition of the schools as may be useful in promoting the interests of grammar schools generally.

SCHOOL DISCIPLINE IN REGARD TO PUPILS GOING TO AND FROM SCHOOL.

In a letter from a school trustee, recently received at the Education Office, in which it was stated—"a difference has arisen between some of the supporters of the school in this section and the teacher, in reference to his responsibility for the conduct of scholars on their way to and from school. I beg to refer the matter to your decision."

To this the Chief Superintendent of Schools replied as follows:—

"The discipline of the school, and therefore the authority of the teacher, extends to all pupils from the time they leave their parents and guardians until their return to them. Pupils are as responsible to the authority of the school for wrongs they do their fellow pupils, or other improprieties they commit, on their way to and from school, as if they did such things on the school premises, or in the school. If pupils were not responsible to the school authorities for their conduct going to and from school, endless irregularities might be committed with impunity by pupils, neighbour would be set against neighbour by the alleged improprieties of each others' children, and school discipline could not be maintained. Of course the responsibility of a teacher is as extensive as his authority."

AN ACT

TO PROVIDE MEANS FOR THE SALE OF LANDS HELD FOR THE PURPOSES OF PUBLIC EDUCATIONAL INSTITUTIONS IN UPPER CANADA, WHEN SUCH LANDS CANNOT BE CONVENIENTLY USED FOR SUCH PURPOSES.

18TH VICTORIA, CHAPTER 121.

[*Received Royal Assent, 19th May*, 1855.]

Preamble. WHEREAS it hath happened and may happen, that lands have been or may hereafter be surrendered, granted, devised or otherwise conveyed to the crown, or to the trustees of any district or county grammar school, or to some other party, in trust for the purposes of, or as a site for any such grammar school, or of any other educational institution established in some county or place, and for the benefit of the inhabitants thereof generally,—and that such lands may be found not to afford the most advantageous site for such school or institution, or there may be no school or institution bearing the precise designation mentioned in the deed of surrender, grant, devise or other conveyance, or that it may be for the benefit of such school or institution that such lands be disposed of and others acquired in their stead for the same purpose, or the proceeds of the sale applied thereto; Be it therefore enacted, by the Queen's Most Excellent Majesty, by and with the advice and consent of the legislative council and of the legislative assembly of the province of Canada, constituted and assembled by virtue of and under the authority of an act passed in the Parliament of the united kingdom of Great Britain and Ireland, and intituled, *An act to re-unite the Provinces of Upper and Lower Canada, and for the Government of Canada*, and it is hereby enacted by the authority of the same, as follows:

Lands held in trust for Educational purposes, and not conveniently situated for there purpose may be surrendered to the Crown, and sold, and the proceeds applied to the purchase of other lands.

I. That in any of the cases mentioned in the preamble of this act, it shall be lawful for the trustees of any grammar school or institution or other party in whom any lands shall be vested in trust as therein mentioned, with the consent of the municipal council of the municipality in which such school or institution is or is to be established, to surrender and convey such lands to the crown unconditionally; and any lands so surrendered, as well as any lands which have been or may hereafter be surrendered, granted, devised or otherwise conveyed to the Crown for any such purpose as aforesaid, may be sold by order of the governor in council, and the proceeds applied to the purchase of other lands to be vested in the Crown for the purposes of the same school or institution, or in the case of there being no school bearing the precise designatiou intended as aforesaid by the party from which the lands so sold came to the Crown, then for the purposes of the grammar school or other public educational institution established for the benefit of the iuhabitants of the municipality generally, which shall, in the opinion of the governor in council come nearest in its purposes and designs to that intended by such party as aforesaid; and if such proceeds are applied to the purchase of lands for grammar school purposes, the title to such lands may be vested in the board of trustees for any grammar school, by their corporate name: and if there be any surplus of such proceeds after such purchase, or if it be found that no lands are required as a site for or for other purposes of such school or institution, then such surplus or proceeds (as the case may be) may be invested or applied for the purposes of such school or institution in such manner as the governor in council shall deem most for the advantage thereof.

If there be a surplus or no other lands required.

Surrender, &c., to the Crown need not be formally accepted.

II. It shall not be necessary that any such surrender, grant, devise or other conveyance to the Crown as aforesaid, be formally accepted by the Crown or by the governor or other officer or person for the Crown, but the same shall be valid, and shall vest the lands absolutely in the Crown, without such

acceptance; and a certificate under the hand of the head of the municipality, and the corporate seal thereof, that the municipal council hath, by a majority of its members present at any legal meeting thereof, consented to any surrender for which such consent is necessary under this act, shall be sufficient evidence of such consent.

Purchaser not bound to see to trusts.

III. No purchaser of land from the Crown under this act shall be in any way bound to see to the application of the purchase money by him paid, to the purpose to which it is to be applied.

Rights of private parties not affected.

IV. Nothing in this act shall be construed to impair the rights of any private party in or upon any lands, in so far as such rights would have existed and could be exercised without this act.

Lands so surrendered, &c., may be granted to Trustees of Grammar Schools, &c.

V. It shall be lawful for the Crown to grant to the trustees of any grammar school or of any other public educational institution established for the benefit of the inhabitants of the municipality, generally, any lands which have been or may hereafter be surrendered, granted, devised or otherwise conveyed to the Crown as aforesaid.

Extent of Act.

VI. This act shall apply only to lands and educational institutions in Upper Canada.

Miscellaneous.

THE "DAME-SCHOOL" OF FORTY YEARS AGO.

From "Teaching and Teachers:" a Poem, by J. R. Dix, M.D.

Well we remember that far spot, where first
The earliest beams of knowledge on us burst;
We mean SCHOOL-Knowledge—but not *there* began
The Education of the future man!
There is a School, one earlier, dearer far
Than any in Life's after-period are,
Where Earth's first teacher bends the child above,
And claims as fee, a kiss or smile of love;
Where the dim dawning of the infant sense
Is fostered into bright intelligence;
Where are no blackboards, pencils, slates or books;
Where every lesson is conveyed by looks;
Where child and teacher seldom disagree;
And the dear school room is the mother's knee.

Home Education! In Life's mid-day hour
Which of us, looking back, can doubt its power?
And who can tell with how much influance fraught
Were the home-lessons that his mother taught?
What his life's color owes unto the dye
With which his mind was tinged in infancy?
So Cowper learned from his lov'd mother's lips
The truths which cheered him in his noon's eclipse;
So Doddridge, by the fireside, from Dutch tiles,
Learned Scripture History urged by mother's smiles.

I think 'tis Hannah More who somewhere sings
"That trifles make the sum of human things;"
Trite the remark, but true. Of countless grains
The earth is made—its mountains and its plains.
By slow degrees the coral bed at length
Rises from Ocean's depths in bulk and strength,
While the Pacific's waters idly sweep
Above the invisible workmen of the deep!
What *now* so insignificant appears,
Will, in the course of slow revolving years,
Rise, solid and compact, above the wave,
O'er which, lashed into surge, the Deep may rave;
And on whose reefs some gallant vessel driven,
May lie with yawning seams and timbers riven;
Or, by the Ocean-currents wafted there,
Soil may collect; and as in gardens fair,
Upon that coral reef bright flowers may smile,
And Earth rejoice in one more fruitful isle!
So with the hidden growth of character;—
Trifles our impulses in childhood stir;
And slumbering energies *we* fail to mark
Are kindled by small fires, as by Promethean spark!
Now let my pen and ink with truth portray
The School and School Dame of a by-gone day;
And that the sketch with naturalness be rife,
With memory's aid I'll take them from the life.

Just as I saw her, when on lowly stool
I sat before the mistress of our school,
I see her now,—for, through the mist of years,
That awful Vision of the past appears,
—In years well-stricken; lame, but not so much,
But she into a cane could turn her crutch,
Which e'er the victims cranium she laid
In hopes to beat some knowledge in his head;
With a long nose hooked like a vulture's beak,
Thin, pursed-up lips, and chin of sharpest peak,
And eyes for idlers ever on the seek,
With rod beside her—tickler for dull wits,
Terror of trembling pupils—there she sits!
Quaint is her dress—a gown of common chintz,
Which many a washing-day has robbed of tints;
With waist extremely short, and scanty skirt,
Not made like those worn now, to drag in dirt;
A huge mob-cap, with bands beneath the chin,
From whose frilled front peep locks all gray and thin;
A muslin 'kerchief without spot or fold,
Protects her chest and throat from winter's cold,
And her stiff figure tells you as you gaze,
She wears those instruments of torture—stays;
Fancy all these, and there before you sits
The ancient Dame, who, as she teaches—knits.

Now for the scholars, who from near and far
Seek the Court of this petticoated Czar.

The Old Church clock strikes nine, and to his place
Comes a small boy, with pale and thoughtful face;
He is the favorite of the Dame's stern rule,
The little genius of the Village School!
When visitors drop in, 'tis *he* rehearses
Last Sunday's text, or Mrs. Barbauld's verses.
Next to him sits the blockhead of the place;
A black-eyed urchin with a saucy face,
Who ne'er was known to learn a lesson through
Without his shoulders being black and blue;
For, as we've said—the Dame was ne'er inclined
To spare the rod and spoil the youthful mind.

Still in they come—some timorous, for they know
But very little progress they can show;
Some with light step, and carriage brisk and smart;
They've got the Ten Commandments all by heart!
At last, the tardiest of the school slinks in,
And quick to make some old excuse begins;
But ah! how vainly—for the Dame's keen eyes
Perceive the truth despite the cute disguise;
And quickly stands the culprit on a stool,
A terrible example to the school!
But scant the lore our schoolmistress imparts:
No Masters, or no Bachelors of Arts
Took honors at her College. Yet should we
Forget not her who taught us A B C;
Nor scorn the teacher who first made us stammer
Our earliest lessons in the English Grammar.

Where is she now, that schoolmistress of old?
Sleeping in peace beneath the churchyard mould!
An institution of the dusty Past,
Her memory scarcely will this age outlast.
Where are her pupils? He who was the pride
Of the old lady—early drooped and died:
The blockhead who by heart no lesson got
Has since been proved the smartest of the lot;
While others who ne'er stood on three-legged stools,
With dunces caps on, have turned out but fools!—
Such varying results oft prove in truth
How fickle are the promises of youth!

And now, as Learning's ladder still we climb,
A theme of some importance asks a rhyme:
——"This world of ours is too much with us," says
The greatest poet of these later days:—
The feverish dollar-chase year after year
Steals Youth's dew from the heart, and leaves it sere;
In the fierce struggle after Fortune's prize
The memory of our school-days almost dies;
And scarcely aught survives, when far we roam,
Save the sweet memories of childhood's home,
That come amid our turmoil and unrest,
Like a breeze from the Islands of the Blest,
Which to Life's wandering, way-worn pilgrims, brings
Health, joy and peace, and healing on its wings.

Massachusetts Teacher, March, 1855.

GEOGRAPHICAL EXTENT OF CANADA.

Canada extends in length, from the coast of Labrador to the River Kaministiquia, at the end of Lake Superior, about 1,600 miles, with an average breadth of 230 miles, being nearly three times as large as Great Britain and Ireland. It contains an area of about 350,000 square miles, or 224,000,000 acres; and of these there were in 1851, as shown by the census, 17,939,328 held by residents, and 7,307,950 under cultivation, leaving about 206,000,000 acres unoccupied.

Lower Canada is comprised within the parallels of 45° and 50° north latitude and the meridians of 57° 50' and 80° 06' west of Greenwich, and embraces, according to the best estimates, and area of about 205,863 square miles. This estimate, however, is exclusive of the surface occupied by the River St. Lawrence, and part of the Gulf, which cover 52,000 square miles, making in the whole about a quarter of a million square miles, or 160,000,000 acres. Of this extent the number of acres of Crown lands surveyed is 8,126,056 acres, of which 4,334,209 have been granted and 3,791,847 are ungranted. Those lands hitherto held under the Seigneurial Tenure are 9,027,880, and the Indian Reserves 230,000 acres.

Upper Canada is comprised within the parallels of 41° and 47° north latitude and the meridians of 74° and 117° west longitude of Greenwich, and embraces an area of about 100,000 square miles, or 64,000,000 acres. Of these there went up to the 31st December, 1853, 21,049,164 acres surveyed, consisting of 357,175 acres mining tracts on the shores of Lakes Huron and Superior, 453,548 acres on the Indian Reserves in the same locality, and 20,243,441 acres laid out in park and town lots, of which 10,750,000 were held by settlers. Occupied lands form about one-eleventh part of all Canada, and of this about two-fifths are under cultivation.

"The above," says E. Campbell, Esq., of the Bureau of Agriculture and Statistics, to whom we are indebted for this information, "is "Canada on *teh map;* but of course its limits are indefinite. British "North America, as a whole, forms a ninth part of the land surface of "the globe."

The population of the country is now about 2,300,000, of which 1,300,000 are settled in Upper Canada. The immigration for the last few years has been extensive, as shown by the official returns—in 1848 it was 27,839; in 1849, 38,494; in 1850, 32,292; in 1851, 41,076; in 1 52, 39,176; and in 1853, 36,999. This is simply the direct seaward immigration and does not include that by way of the United States, nor yet the removals from the States to Canada, both of which sources of increase have become very much extended, on account of the demand for labor on the public works and the facilities for obtaining land, which are far superior to those under the cash system of the United States.

AMERICAN PROHIBITORY LIQUOR LAWS.

The rise and progress of laws in various States, prohibiting the sale of intoxicating drinks, are to be seen in the following abstract:—

1851—Passed by the Legislature of Maine.
1852—Passed by the Legislature of Minnesota.
1852—Passed by the Legislature of Rhode Island.
1852—Passed by the Legislature of Massachusetts.
1852—Ratified by the people of Minnesota.
1852—Passed by the Legislature of Vermont.
1852—Passed by the Legislature of Michigan.
1853—Ratified by the people of Vermont.
1853—Ratified by the people of Michigan.
1853—Its submission to the people pronounced unconstitutional by the Supreme Court in Minnesota.
1853—Pronounced unconstitutional by the United States Supreme Court in Rhode Island.
1853—Supreme Court equally divided in Michigan.
1854—Pronounced unconstitutional in Massachusetts.
1854—Passed the Legislature of New York.
1854—Vetoed by Governor Seymour of New York.
1854—Passed by one branch of the Legislature of New Hampshire.
1854—Passed by one branch of the Legislature of Maryland.
1854—Passed by the Legislature, but the two branches failed to agree in Pennsylvania.
1854—Passed by the Legislature of Ohio.
1854—Voted for by the people of Wisconsin.
1854—Pronounced unconstitutional in Ohio.
1854—Passed in a modified form by the Legislature of Rhode Island.
1854—Passed by the Legislature of Connecticut.
1855—Passed by the Lower branch of the New Jersey Legislature—defeated by one vote in the Senate.
1855—Passed by the Legislature of Wisconsin and vetoed; modified and passed and again vetoed by Governor Barrow.
1855—Passed for the second time by the Legislature of New York, and became a law of the State by the signature of Governor Clark.

Eight States and one territory have thus passed prohibitory laws. The question has failed in four States through legislative disagreement. It has been submitted to the people and retained by them in four other States. It has nowhere been repealed by legislative action, though it has been four times set aside by the judiciary, and in one instance re-enacted in a modified form.

NATIONAL DEBTS.

The following is a correct statement of the debts by the principal States in the World:—Austria, amount of debt £211,000,000; Baden, £7,000,000; Bavaria, £14,117,000; Belgium, £26,000,000; Bolivia, £521,000; Brazil, £12,892,000; Buenos Ayres, £2,500,000; Chili, £1,784,000; Columbia, £6,625,950; Cuba, £311,230; Denmark, £13,069,000; Ecuador, £3,817,000; England, £ 73,923,000; France, £23[illegible],000,000; Granada (New), £7,500,000; Greece, £8,250,000; Guatemala, £594,500; Hamburg, £4,000,000; Hanover, £5,174,000; Holland, £102,451,000; India (British), £48,000,000; Mexico, £10,000,000; Peru, £9,953,800; Portugal, £19,122,000; Prussia, £33,500,000; Roman States, £17,152,000; Russia, £68,000,000; Sardinia, £23,000,000; Saxony, £6,223,000; Spain £70,000,000; Sweden, £450,000; Switzerland, £160,000; Turkey, £5,000,000; United States of America (Federal), £10,000,000; Venezuela, £3,789,000; Wurtemburg, £4,850,000; total, £1,73[illegible],229,550."

MINERAL WEALTH OF ENGLAND.

On the authority of Mr. Robert Hunt, government keeper of mineral records of England, the following statement is regarded as an approximation of the annual value of its mineral wealth: Coal, as raised at the pit's mouth, £11,000,000; iron, £10,000,000; copper, £1,500,000; lead, £1,000,000; tin, £400,000; silver, £210,000; zinc, £10,000; salt, clays, ect., £500,000; giving the enormous total of £24,620,000. This is the value of the raw material. When the cost of labor employed in converting this mass of matter into articles of utility or objects of ornament is added, it will be swelled an hundred fold.

CURIOUS TYPOGRAPHICAL ERROR.

A curious typographical error is pointed out by Professor French in his latest work on the English language, in the 20th verse of the 23d chapter of Matthew. The words, which 'strain at a gnat and swallow a camel,' the Professor thinks contain a misprint, which having been passed over in the edition of 1611, has held its ground ever since. The translators intended to say, 'which strain *out* a gnat and swallow a camel,' that being the correct rendering of the original, as appears in Tyndale's and Cranmer's translations both of which have 'strain *out*.' It was the custom of the stricter Jews to strain their wine, vinegar and other potables through linen or gauze, lest unawares they should drink down some unclean insect, as a gnat, and thus transgress the Levitical law. It was to this custom the Saviour alluded, intending to say that the scribes and pharisees, while they strain out a gnat from their drink, would yet swallow a camel at a gulp.

AN INCH OF RAIN ON THE ATLANTIC.

We have been struck with that passage of Lieut. Maury's "Physical Geography of the Sea" in which he computes the effect of a single inch of rain falling upon the Atlantic Ocean. The Atlantic includes an area of 25 millions of square miles. Suppose an inch of rain to fall upon only one-fifth of this vast expanse. It would weigh, says our author, three hundred and sixty thousand millions of tons; and the salt which, as water, it held in solution in the sea, and which, when that water was taken up as vapor, was left behind to disturb equilibrium weighed sixteen millions more of tons, or nearly twice as much as all the ships in the world could carry at a cargo each. It might fall in an hour, or it might fall in a day; but, occupy what time it might in falling, this

rain is calculated to exert so much force—which is inconceivably great—in disturbing the equilibrium of the ocean. If all the water discharged by the Mississippi River during the year were taken up in one mighty measure, and cast into the ocean at one effort, it would not make a greater disturbance in the equilibrium of the sea than would the fall of rain supposed. And yet, so gentle are the operations of nature, that movements so vast are unperceived.

THE GOOD TEACHER.

Much has been said about the slowness of the public to appreciate the services of teachers; and this delicate complaint has had an unwholesome influence, generally, upon the minds of that very valuable class of public servants. It has been a weight upon the spirits, and a clog to the energies of many.

But let those to whom the important charge of the young is assigned, pay no regard to this sickly sentiment, whether it springs up from the hot-bed of a distempered fancy, or comes teeming from the lips of misguided sympathy.

In the busy task of moulding and directing the youthful mind, the powers of the good teacher are never dormant. With the richest materials of his own brain and heart, he lays the foundation of intellectual and moral excellence so firm and broad, that the waves of ignorance and vice dash with vain impotence against the solid fabric that in after years lifts itself in beauty, exhibiting his faithful labors in the proud light of monumental grandeur.

Untiring activity characterizes the teacher. Whatever he undertakes becomes immediately illuminated by the systematic vigor with which he proceeds to his accomplishment. He inspires, he animates, he excites and fully arouses the juvenile spirits around him. His manners, his interested air, his countenance beaming with the beauty and true greatness of his work, his cheering words of commendation, and his eloquent, affectionate calls upon his pupils for still stronger exertions in their studies,—all combine to make his influence upon his school powerful for good.

And need any man ask the mead of a greater praise—of a higher appreciation—than the exalting consciousness of rectitude in the performance of as noble a trust as could well be imposed, and the sure eventual gratitude with which a benefitted public will pronounce his name?

Hear, oh teacher, the encouraging appeal of the great Schiller, addressed to you, and say if you ought not to be content to "labor and wait:"—"Then," he says, "I would say to the young disciple of Truth and Beauty, who would know how to satisfy the noble impulse of his heart—through every opposition of the century, I would say—give the world beneath your influence a *direction* towards the good, and the tranquil rhythm of time will bring its development."—*Pennsylvania School Journal, March*, 1855.

EDUCATION A PROTECTION AGAINST POPULAR DELUSIONS.

BY PROF. FELTON, OF HARVARD UNIVERSITY.

There are peculiar circumstances in the present condition of our country, which the friends of education cannot, and ought not to shut their eyes against. We cannot look around us without a painful sense of the amount of ignorance and intellectual feebleness, for want of just education that prevails in our most enlightened communities.

Popular delusions break out every year, which, though not so violent or general as the astrology and witchcraft of former ages, are quite as remarkable testimonies to the dangers lying in the way of ill-balanced and uneducated minds. The power of society is now generally in the hands of the enlightened, so that these delusions stop short of the rack and the stake. But fanatics, enthusiasts, and deceivers still play their fantastic tricks upon the credulity of the weaker brethren, and find an ample harvest of influence and gain in the feebleness and folly of multitudes. The mischief is not confined to the loss of time, the dangerous excitement of the nerves, the perversion of the imagination, and the robbery of the purse; but reason, morality and virtue often pay the penalty, and suffer disastrous overthrow. No degree of absurdity transcends the power of belief in some ill-regulated minds; no personal worthlessness, or intellectual imbecility of the pretender, will open the eyes of many, blinded by ignorance, and stupified by the juggler's tricks. He who believes that the great and good of past ages condescend to communicate with those who are neither great nor good, through the legs of pine tables, from the serene abodes of departed spirits, to help certain "mediums" get a dollar for every dupe, is exposed to any extreme of cheating which the coarsest impostor may choose to practise upon him. The knavery of these dealers in spiritual rappings is more wicked than stealing, while the intellect it displays is so contemptible, that the palmistry of gypsy vagabonds rises to dignity in the comparison.

The law, perhaps, cannot reach the crime in its present form; an attempt to enforce the penalties against false pretences might aggravate the evil. To guard the community against such delusions, and to secure the happiness of individuals against such wretched and dangerous frauds, is a high function of public education not yet fully performed. This is to be done not merely by spreading knowledge among the people, but by teaching the young how to exercise their judgment; how to apply their reasoning powers; how to weigh the facts, and estimate the force of evidence; how to observe with rigid accuracy, and to report observations with stern veracity, watching against the conclusions of excited feeling, morbid imagination, or a curiosity seeking by vain efforts to grasp things hidden by the wisdom of the Creator behind an impenetrable veil. The adamantine strength of reason is the shield that must be held up between the mind and these pitiable delusions.—*Massachusetts Teacher.*

ADVICE TO PARENTS.

Be ever gentle with the children God has given you; watch over them constantly; reprove them earnestly but not in anger. In the forcible language of Scripture, "Be not bitter against them." "Yes, they are good boys," I once heard a kind father say, "I talk to them very much, but do not like to beat my children—the world will beat them." It was a beautiful thought though not elegantly expressed. Yes, there is not one child in the circle around the table, healthful and happy as they look now, on whose head, if longer spared, the storm will not beat. Adversity may wither them, sickness may fade, a cold world may frown on them, but amid all, let memory carry them back to a home, where the law of kindness reigned, where the mother's reproving eye moistened with a tear, and the father frowned "more in sorrow than in anger."

HOW TO REPROVE.

Reprove mildly and sweetly; in the calmest manner, in the gentlest terms; not in a haughty or imperious way, not hastily or fiercely; not with sour looks, or in bitter language; for these ways do beget all the evil, and hinder the best effects of reproof. They do certainly inflame and disturb the person reproved. They breed wrath, disdain, and hatred against the reprover, but do not so well enlighten the man to see his error, or affect him with kindly sense of the miscarriage, or dispose him to correct his fault. Such reproofs look rather like the wounds and persecution of enmity, than as remedies ministered by a friendly hand; they harden men with stomach, and they scorn to mend upon such occasion. If reproof doth not savor of humanity, it signifieth nothing—it must be like a bitter pill wrapped in gold and tempered with sugar, otherwise it would not go down or work effectually.—*Isaac Barrow.*

THE ART OF CONVERSATION.

In a notice of a Model School, a writer says: "An hour each day is devoted to the art of conversation, and it is thus the aim of the instructors to lead the pupils in a familiar way to a knowledge of general topics, science, arts, history, commercial transactions, the amenities of social life, etc., in order that they may be able to converse intelligently, correctly, and readily on such topics in their intercourse with society." This is a thought worthy the attention of every teacher. Teach your pupils to communicate what they know, readily and correctly, by conversation.

DEVELOPEMENT.

My neighbor, by building an addition to his house, hopes to promote his own and his family's comfort. We purpose to build an addition after addition to *your own selves*—moral additions—of new life motives; new principles of action; new aims and plans; and to place you on a higher plane of being, intellectually and morally, than you would otherwise occupy. To develope you—to enlarge your range of thought, expand your comprehensiveness, tone up your ambition, and direct it toward more ennobling objects.

LIBRARY BOOKS AS FRIENDS.

In books we have friends for every mood, conforters for every sorrow; a glorious company of immortals, scattering their sweet influences on the worn and beaten paths of our daily life. Shapes 'that haunt thought's wildernesses' are around us in toil, and suffering, and joy; mitigating labor, soothing care, giving a keener relish to delight; touching the heroic string in our nature with a noble sentiment; kindling our hearts, lifting our imaginations, and hovering alike over the couch of health and the sick pillow, to bless and cheer, and animate and console!"

Educational Intelligence.

CANADA.

SECRETARY'S OFFICE,
Quebec, 30th June, 1855.

HIS EXCELLENCY the GOVERNOR GENERAL has been pleased to appoint JOHN GEORGE HODGINS, Esquire, Deputy Superintendent of Schools for Upper Canada.

His Excellency having been further pleased, in a letter addressed to the Chief Superintendent of Schools and dated the 4th of July instant, to sanction the appointment of additional Clerks and assistants in the Educational Department for Upper Canada, the staff of the office is now complete, as follows:

The Reverend EGERTON RYERSON, D.D.,
Chief Superintendent of Schools.

1. JOHN GEORGE HODGINS, Esq.,
Deputy Superintendent of Schools.
2. THOMAS HODGINS,
Second Clerk.
3. Dr. ALEXANDER JOHNSTONE WILLIAMSON,
Clerk of Correspondence.
4. Mr. ALEXANDER MARLING,
Clerk of Accounts.
5. Mr. SAMUEL PASSMORE MAY,
Clerk of Libraries.
6. Mr. THOMAS CLARKSON SCOBLE,
Assistant Clerk.
7. LOUIS GAUTHEY,
Depository Salesman.
8. PATRICK O'NEILL,
Office Messenger.

MONTHLY SUMMARY.

Dr. J. B. Meilleur having been appointed Postmaster of Montreal, His Excellency the Governor General has been pleased to appoint the Honorable Pierre Joseph Olivier Chauveau, Esquire, to be Superintendent of Education for Lower Canada....The Honorable Sir John Beverly Robinson, Bart., Chancellor of Trinity College, Toronto, has received the honorary degree of D.C.L. from the University of Oxford, on the 20th ult....Prof. Williamson, of Queen's College, Kingston, has also received the degree of L L.D. from a University in Scotland....The Montreal *Gazette*, of the 2nd inst., states that "the first convocation of Bishop's College, Lennoxville, L. C., since its erection into a University, was held on the 26th and 27th of June. In order to make up the first convocation the corporation conferred one honorary degree of D.D., seven of D.C.S., thirty-one of M.A., six degrees of D.D., *ad eundum*, two degrees *ad eundum* of D.C.L., and fifteen degrees *ad eundum* of M.A, total thirty-nine honorary degrees and twenty-three degrees *ad eundum*. The degree of B.A. was conferred upon seven, and B.D. upon two graduates. Two degrees of M.A. were also conferred. The whole number of degrees conferred by the College at its first convocation was 73....On the 27th of June the Examinations at Victoria College, Cobourg, took place. Four degrees of B.A. were conferred, and sixteen degrees of M.D.—two of which were honorary. The exercises were of a highly interesting character. ....The Teachers' Association of the Township of Murray held a very interesting and spirited meeting on the 31st ultimo. Addresses were delivered on various subjects by the local superintendent and other experienced teachers....An effort is being made to establish a good female public school in Bradford....A school celebration was held on the Queen's Birthday in School Section No. 17, Ernestown. An appropriate address was presented to the teacher, Mr. Lewis Allen, who made a suitable reply, strongly urging upon the pupils dutiful obedience to their parents and loyal submission to the Queen and those in authority....The Examination of the Indian School, Mohawk, near Brantford, took place on the 30th ult., and is reported in the local papers to have been of a highly creditable character. The school is sustained by the New England Society, an English society, and is under the control of the Rev. A. Nelles....The Board of Public Instruction in the County of Waterloo have decided again to institute prizes, to be distributed at an annual examination of pupils to be selected from all the common schools in the county, in February next....The Canada *Gazette* announces that Professor Cherriman is installed in a new chair to be established in University College' Toronto, that of Meteorology, and to the charge of the Toronto Observatory. It also contains the appointment of Mr. Kingston, late of the Nautical School, Quebec, to the Professorship of Natural Philosophy in the same College, vacant by Mr. Cherriman's translation....At a recent meeting of the trustees and teachers of the Township of Brighton, a resolution was passed, giving the teachers one day out of every six weeks, for the purpose of attending the meetings of the Teachers' Association.... A Grammar School is about being established in the town of Dundas.... The local papers speak highly of the recent examination of the Grammar School in Brantford....In the town of Chatham has just been completed a fine school-house, built after the model of the court house, for the accommodation of the County Grammar School. The cost of the building, without furniture or apparatus, has reached £1548 11s., of which sum the Municipal Council of the County of Kent has contributed £1340, and that of Chatham £100. It is thus that we find the several towns in the country vying with each other in dedicating to the instruction of youth buildings of tasteful architecture, that are alike ornaments to the towns in which they are built, and standing monuments to the enlightened liberality of the people.

BRITISH AND FOREIGN.

MONTHLY SUMMARY.

The Regius Professorship of Civil Law in the University of Oxford, recently vacated by the death of Dr. Joseph Phillimore, has been filled up by the appointment of Dr. Travers Twiss, vicar-general of the Archbishop of Canterbury, and recently Professor of Political Economy in the same University....Mr. Graham has resigned the Professorship of Chemistry in University College, London, in consequence of his having received the appointment of Master of the Mint.....We observe from the proceedings in the Free General Assembly of the Scottish Church, that Dr. William Clark, of Wester Moffat, has placed at the disposal of the church the munificent sum of £20,000 for the erection and endowment of a free theological college in Glasgow, provided other parties in Glasgow should provide a similar sum, so that £40,000 should be immediately available for the purpose in view. The subscriptions in Glasgow towards this second sum already amount to £14,000, and the major sum of £40,000 may thus be considered as secured. But Dr. Clark's liberality does not stop here. He offers to pay down or secure an additional sum of £10,000 for the same object, provided a like sum of £10,000 addition d should be guaranteed by responsible parties within the next twelve months....A Working Men's College is now fairly established at Cambridge, England. The number of students already enrolled on the books amounts to 112. The most popular subjects are English grammar, mathematics, Latin, French, drawing, and vocal music; and the list of names includes persons engaged in almost every occupation. It is intended, by-and-by, to establish an adult school in connection with the college....Miss Burdett Coutts offers three sets of prizes, which in value will amount to £50, for "the teaching of common things."....From the report of the Working Men's Educational Union, which was read at a meeting recently held in London, under the presidency of Dr. A. H. Layard, M P., the affairs of the Union are reported to be in a highly satisfactory condition. The Diagrams in connection with the society have been sold in very large quantities. Operatives themselves had been lecturers. The Diorama had been attended by 33,975 persons....Her Majesty having discovered that a large proportion of the children of the domestic and other servants at Buckingham Palace are very much neglected in the matter of education, directed that premises in Palace-street, Pimlico, should be fitted up as a school. The instruction imparted will consist of the ordinary elements of education, combined with the teaching of the Bible, and a training in industrial pursuits, more especially of a domestic character. The whole of the expenses in connection with the school will be defrayed by her Majesty. The number of scholars of both sexes at present eligible for admission is 66. An evening school will also be established for such of the elder children as may be prevented by their engagements from attending in the day time.

UNITED STATES.

COMMON SCHOOLS IN NEW-JERSEY.

The last census shows that 6,007 white men, 8,241 white women, 2,167 colored men, and 2,250 colored women, adults, in New-Jersey, cannot read or write, making an aggregate of 18,665. Of these, 12,787 are natives and 5,878 foreigners, which is about in the ratio of two natives to one foreigner who cannot read and write. At the taking of the census the population of New-Jersey was 489,319, of which number 23,810 were colored, 465,509 whites. The ratio of colored adults who cannot read and write to the whole colored population is *one in every five*, the ratio of white adults who cannot read or write to the white population is *one in every thirty-two*. The ratio of adult white *men* who cannot read and write to the male population is one in every thirty eight, while the ratio among the white *females* is one in every twenty-eight, which seems to indicate some foul play among the "lords" of New Jersey toward the fair sex. The ratio among the colored males and females is about equal. Taking the whole population, the ratio of adults who cannot read and write is *one in every twenty-six*. The ratio of native Americans who cannot read and write is *one in every thirty-two*, (almost) and among the foreign population the ratio is *one in every ten*. From this it will appear that the ratio of those who cannot read and write is one in every five of the colored, one in every ten of the foreign, and one in every thirty-two of the native population.

Literary and Scientific Intelligence.

MONTHLY SUMMARY.

The Rev. Dr. Ryerson, Chief Superintendent of Schools for Upper Canada, now in Europe, has been appointed by His Excellency the Governor General, Honorary Commissioner for Canada, at the Paris Exhibition.... Mr. Ward, of Thorold, U. C., has invented a very destructive shell. During its trial from an eight-inch Columbian gun, some of the shells took a ricochét on the sand in front of the target, and after the ricochét, hit the target and exploded, doing serious damage, cutting several 12-inch timbers in pieces, and destroying the target. Should this invention be brought to perfection, it will probably work quite a revolution in fort and naval warfare; for instance, take a gun of 10 or 12-inch calibre, working upon a pivot on the deck of a naval steamer; one shot of this calibre, taking effect, at wind and water, would sink the largest ship of the line....An attempt has recently been made to sound the Niagara river, at the Suspension Bridge, by Mr. J. A. Roebling, with an iron of about 40 pounds weight, attached to a No. 11 wire—all freely suspended, so as not to impede the fall of the weight. He says: I let the weight fall from the Bridge a height of 225 feet. It struck the surface fairly, with the point down—must have sunk to some depth, but was no longer out of sight than about *one second*, when it made its appearance again on the surface, about 100 feet down the stream and skipped along like a chip until it was checked by the wire. We then commenced hauling in slowly, which made the iron bounce like a bell, when a cake of ice struck it and ended the sport. I am satisfied that *no metal* has sufficient specific gravity to pierce that current—even by the momentum acquired by a fall of 225 feet! The velocity of the iron when striking, must have been about equal to 124 feet per second—and consequently its momentum near 5,000 pounds. Its surface, opposed to the current, was about 50 superficial inches. This will give an idea of the strength of that current, and at the same time hint to the Titan forces that have been at work to scoop out the bed of the Niagara river....The Geographical Society of Paris have voted to Capt. M'Clure, R.N., the gold medal, for his discovery of the North-West Passage; to Capt. Inglefield, R.N., a silver medal for his discoveries in the Artic regions; and to Mr. Francis Galton, a silver medal, for his explorations in the Namaqua, Damara, and Orampo countries, north of the Orange River, in South Western Africa....The Parliamentary library of the late Joseph Hume, Esq., was bequeathed by him to the London University College....The Imperial Library of Vienna contains 16,000 manuscripts in the Greek, Hebrew, Chinese, Indian and Arabic languages, written on parchment....There is a Committee of the House of Commons sitting to consider Metropolitan Roads or Communications. At a meeting Sir Joseph Paxton gave a detailed account of a plan he proposes for facilitating communication from one place to another by the construction of a "boulevard" or "girdle" Railway. Beginning near the Royal Exchange, he proposes to pass through Cannon-street, across the Thames by Southwark Bridge, thence through the Borough to Lambeth, crossing the river again near the Houses of Parliament, through Brompton, by Gore House, through Kensington Gardens, to the Great Western, the North Western, and Great Northern stations, with a branch to Regent Circus. The length would be eleven miles, and the cost £34,000,000. The trains would be worked on the atmospheric principle. The projector expressed a belief that the scheme would be remunerative....The last report of the Christian Knowledge Society gives the following interesting extract from a letter by the Bishop of Colombo: "The fittings of the nave and choir of the Cathedral at Colombo are completed, those of the chancel are now in progress. They will be of ebony; as I wished them to be made wholly of the productions of the country, and as far as possible by native workmen. One single European has directed and superintended the work, and he is a corporal in the 15th regiment, a most expert and skilful mechanic, whose value was undiscovered till he built, under Colonel Brunker, our church at Nuwara Eliya. His taste, moreover, is equal to his skill; and, with 'Bloxham' and the 'Glossary of Architecture' in his hand, this carpenter from Greenwich (for such he was when he enlisted fifteen or twenty years ago) has built a church and a cathedral in my diocese, which surpass every structure raised before or since the tenure of Ceylon by the British."....Five thousand documents have already been transcribed by the commissioners appointed to collect and publish the entire writings of Napoleon. The most interesting of these contributions—because the least known—are those written while the hero of Austerlitz held inferior rank in the army. Numbers of letters written during the early portion of his career have been sent to the imperial Commission. They were addressed to people—often to people almost unknown—and were treasured by them after the writer had become celebrated. Of these contributions the most remarkable are about sixty letters of instructions and explanations written by Napoleon while commanding the artillery at Toulon. The Imperial Commissioners have also in their possession an autograph letter, addressed by Napaleon to Cardinal Fesch—in which he describes minutely, and clearly, the proper duties of an archbishop. Indeed, Napoleon's correspondence with the clergy promises to form a remarkable portion of his collected works. It appears that he wrote a series of letters to the Ministre des Cultes, in which he gave his notion of a good priest. The main point on which he forcibly dwells is, that the church has no business with affairs of State. It is said that these lessons to the Minister of religion are both severe and just....M. Didot, the eminent French publisher, has just issued a pamphlet against a projected paper duty in France. In 1340, says M. Didot, King Philip ordered that "paper and books, being indispensable to pupils, should be exempt from duty." King John, in 1360, confirmed that privilege; and afterward Lous XII. and Francois I. declared books exempt from every kind of impost. Henry II., in 1552, ordered that there should always be in France, a special favor shown to paper; and, in 1789, when an attempt was made to introduce a paper duty, the idea was so unpopular that the proposed plan came to nothing....An acceptable addition to the Catalogue of the British Museum library has been made in a list of the pamphlets belonging to the Royal Library. The catalogue is in twelve small octavo volumes. The pamphlets are about twenty thousand in number, extending from the reign of Charles I. to George III., by whom they were presented to the nation about thirty years ago....Governor Bradford's long lost MS., "History of Plymouth Colony and people from 1602 to 1647," has been discovered in Lambeth Palace, London. The MS. must have been taken to England when the British troops evacuated Boston in 1776....The book publishers of New York have formed themselves into an association for trade purposes....A Literary discovery of interest has lately been made. it comprises above a hundred letters of James Boswell, principally addressed to his friend the Rev. William Templer, rector of St. Gluvias, in Cornwall, whose name is mentioned three or four times in the life of Johnson. They were rescued some years ago from the hands of a shopkeeper in France, with a mass of other correspondence of less importance, addressed to this Mr. Templer, but have not been thoroughly examined until lately. Preparations are now being made for their publication....A Paris paper announces the fact of the discovery of an unpublished fragment of a lost tragedy of Euripides, by M. Egger, of the Institute....The famous portico of the Palace of the Uffizi at Florence has, at length, after a lapse of nearly two hundred years, been supplied with statues of all the celebrated men of Tuscany and Florence, in compliance with the original plan of Vasari, the architect, and of his protector, the Duke Cosmo de Medicis. Poetry and literature are represented by statues of Dante, Petrarch, Boccacio, and Redi; science, jurisprudence, politics, physics, and medicine by those of Accurso, Macchiavelli, Guicciardini, Galileo, Cesalpino, Micheli, and Morgagni; the fine arts by statues of Giotto, Arnolfo, Orcagna, Donatello, Al-

berte, Leonardo da Vinci, Michael Angelo Buonarotti, Benvenuto, Cellini, and Guido d'Arrezo. There are also statutes of the navigator Amerigo Vespucci, the archbishop Antonius, Cosmo the elder, and Laurent de Medicis; and four eminent citizens of Florence, Farinata degli Uberte, who protected the city in a great emergency; Capponi, who defended it against the French; Giovanni delle Bande Nere, the general of the Medicis faction; and Ferruccio, the last general of the republic, who perished with it.... Count Abel Hugo, brother of the renowned Victor, has just died in Paris, aged 57. He was the compiler of two esteemed works, "La France Pittoresque," and "La France Militaire," and was the author of several dramatic pieces and numerous pamphlets. Another French Author named Delbare, has also just died. He was more industrious than famous, but he had the honor of having assisted Michaud in his History of the Crusades."....It is stated in a letter from Bohemia, that a Dr. Herzog has just discovered in the archives of the town hall of Zwickau, twelve folio manuscript volumes, containing the poetical works of Hans Sachs, a celebrated German troubadour, who was born in 1494.

OBSERVATION OF THE LUNAR ECLIPSE OF MAY 1. 1855.

The evening of Tuesday, May the first, was remarkably fine and the opportunity of examining this beautiful phenomenon very favorable. The day had been brilliantly clear, and only slight hazy clouds obscured the moon partially, but did not prevent the observation. The moon became visible from behind some low clouds at 7h. 15m., and had reached an altitude of some 35°, when, at the moment predicted by the beautiful science of Astronomy, it was seen to become touched as it were by a dark substance which slowly enveloped it from the S. E. lower limb and making towards the N. E. limb, which it finally reached at 9h. 55m. 30s. p. m. The appearance at this time and a little later was very interesting, as though the moon was evidently in the shadow, still the form of the greater part was distinctly visible. This was due to the effect of the atmosphere of our earth, which beset or refracted the rays of the sun and partially illumined the moon's disc. This effect was so great that the absolute or total obscuration was very brief indeed, and very shortly after 10h. 43m., the centre of the eclipse, a faint glimmer of light could be perceived on the S. E. limb which had been first enveloped. The great size of the earth's shadow was remarkable and rendered this eclipse so perfect that it subtended 37 min. 30 sec. of the heaven, or was 2 1-5th the moon's diameter, and as she moves at about double her own diameter in her orbit in the hour, it took her just 96 minutes of time to traverse from one edge to the other. Some time before she touched the N. E. limit of the shadow, the stars of the 4th and 5th magnitude which had become visible for a few minutes began to grow indistinct, and she appeared shortly after to assume her preeminence and shine supreme as Queen of the heavens attended only by the larger stars which she seemed to permit to accompany her. A more splendid eclipse it has seldom been our fortune to witness, and the words of the poet came forcibly to our recollection:

"Queen of the silver bow, by thy pale light,
Alone and pensive I delight to stray,
To watch thy moon-beams trembling on the wave,
Or mark the floating clouds which cross thy ray;
And while I gaze, thy mild and placid light,
Sheds a soft calm upon the troubled breast,
And oft I think, fair planet of the night,
That in the orb the wretched may find rest;
The wanderers of this earth perhaps may go,
Released by death to thy benignant sphere,
And the sad children of despair and woe,
Forget in thee their cup of sorrow here,
Oh! that I soon may join thy world serene,
Poor weary pilgrim in this troubled scene.

Woodstock U. C., May 2, 1855. W. G. T.

STONE QUARRIES UNDER JERUSALEM.

A party who had explored these remarkable quaries, (which had been accidentally discovered by a dog while in pursuit of an animal) says:

Upon comparing a subsequent measurement of our guiding line, and the time spent in returning from the extreme end, we judged the length of the quarry to be rather more than a quarter of a mile, and its greatest breadth less than half that distance.

There had been some doubt expressed by one or two of the party, who had made a previous visit, as to its being a quarry; but we all agreed that though it might originally have been a grotto, it had been worked, and then the question arose, "By whom?" The answer was, "King Solomon," and for this opinion there seemed to be many reasons. The stone is the same as that of the portions of the temple wall still remaining, and referred to by Dr. Robinson to the period of the first building. The mouth of the quarry is but little below the level of the platform on which the temple stood, making the transportation of the immense blocks of stone a comparatively easy task.

The heaps of chippings which lie about show that the stone was dressed *on the spot*, which accords with the account of the building of the temple: "And the house, when it was in the building, was built of stone, made ready before it was brought thither; so that there was neither hammer, nor axe, nor any tool of iron heard in the house while it was building." The extent of the quarry, the amount of stone which must have been worked out there, and the size of some of the blocks themselves. The extreme age of the part which has been exposed to the action of the elements, and which dates back in legends and traditions to the time of Jeremiah. The fact that there are no other quarries of any great size near the city, and especially the fact that in the reign of Solomon this quarry in the whole extent was *without the limits of the city.*

PUBLIC MUSEUMS AND LIBRARIES IN IRELAND.

Mr. Ewart, Mr. G. A. Hamilton, and Mr. Kirk have introduced a bill for further promoting the establishment of free public libraries and museums in Ireland. It repeals the 16 and 17 Victoria, cap. 101, and the 99th section of 17 and 18 Victoria, cap. 103, and provides for the adoption of the act in any incorporated borough, or any town, the population of which shall exceed 5,000 persons, the adoption to be determined by the votes of two-thirds of the householders. The expenses of carrying the act into execution are to be defrayed out of the borough or town fund. Accounts are to be audited, and a copy thereof sent to the Lord-Lieutenant. The amount of the rate to be levied for the purposes of the act is not to exceed 1d. in the pound in any one year. The councils or boards of any borough and the town commissioners of any town are empowered to appropriate lands, and to sell and exchange the same for the purposes of this act. The general management of the libraries and museums is to be vested in the borough councils and town-commissioners, who are "to purchase and provide the necessary fuel, lighting, and other similar matters,—books, newspapers, maps, and specimens of art and science," &c. The property of the library and all lands and buildings will be vested in the managers. A decision against the adoption of this act will be valid for one year. Museums and libraries established under this act will be open to the public free of all charge.

ANNUAL RISING OF RIVERS.

The Nile begins to rise in June, and attains 24 to 28 feet of elevation in the middle of August, and then floods the valley of Egypt, 12 miles wide. The Ganges rises from April to August 32 feet deep, and then creates a flood 100 miles wide. The Euphrates rises between March and June 12 feet, and covers the Babylonian plains.

INTERIOR OF AFRICA.

The recent naval expedition into the interior of Africa is a notable event in African exploration; and affords a fresh starting point for the future. It is known that in the spring of last year the expedition left Liverpool in the screw steamer Pleiad, built, we believe, expressly for the purpose by Mr. Macgregor Laird. The government share in the expedition was limited to a money contribution and the appointment of certain officers, among others, of Dr. Raikie, of the Royal Navy. The report of that gentleman to Lord Clarendon on the result of the expedition was read at the meeting of the Royal Geographical Society on Monday, and it is in every way satisfactory. The expedition started from the island of Fernando Po, and entered the Kwora from the sea on the 12th July. On the 4th August the Pleiad reached the confluence of the Chadda and the Kwora, passed Dagboh, the furthest point hitherto reached, on the 18th, and steamed nearly 200 miles further up the river. On the 30th September the Pleiad turned westward once more, with the falling of the waters, and reached Fernando Po on the 7th November. For the present we shall not dwell on the details of this expedition. The most remarkable fact in its history is, that it voyaged far up a river hitherto so destructive to human life, and returned without the

loss of a single man. This alone, quite apart from the extent of the exploration' and the information collected by the explorers, is sufficient to give it a distinct place in the progress of African research. It is now established that the river is navigable in the rainy season with perfect security; and the explorers testify to the willingness of the natives along its banks to trade with Europeans. It is obvious that the civilisation of Africa can only be accomplished by the extension of commerce, and that commerce can only be extended by an accurate survey of the resources of the country within the reach of our marine. The great rivers are the highroad of trade in all countries; and now that it has been proved that steam and the screw can carry us safely along the waterways of Africa, we trust that the example will be followed up by still more energetic exertions. Much credit is due to Mr. Laird for his spirited share in the Chadda expedition, and to him its successful prosecution is in a great measure due.—*London Globe.*

Departmental Notices.

PUBLIC SCHOOL LIBRARIES.

To Municipal and School Corporations in Upper Canada.

Until further notice, the Chief Superintendent of Schools will apportion *one hundred per cent.* upon all sums which shall be raised from local sources by Municipal Councils and School Corporations, for the establishment or increase of Public Libraries in Upper Canada, under the regulations provided according to law.

In selecting from the General and Supplementary Catalogues, parties will be particular to give merely the catalogue number of the book required, and the department from which it is selected. To give the names of books without their number and department, (as is frequently done,) causes great delay in the selection and despatch of a library. The list should be on a distinct sheet of paper from the letter.

SCHOOL MAPS AND APPARATUS.

The Legislature having granted annually, from the commencement of the current year, a sufficient sum of money to enable this Department to supply Maps and Apparatus (not text-books) to Grammar and Common Schools, upon the same terms as Library Books are now supplied to Trustees and Municipalities, the Chief Superintendent of Schools will be happy to add one hundred per cent. to any sum or sums, not less than five dollars, transmitted to the Department, and to forward Maps, Apparatus, Charts and Diagrams to the value of the amount thus augmented, upon receiving a list of the articles required by the Trustees.

EDUCATION OFFICE,
Toronto, 18th June, 1855.

EXAMINATION OF COMMON SCHOOL TEACHERS FOR THE COUNTY OF YORK.

THE BOARD OF PUBLIC INSTRUCTION for the County of YORK, hereby gives Notice, that an EXAMINATION of COMMON SCHOOL TEACHERS will take place in the Localities hereinafter mentioned, viz.:—

At the NEW COURT HOUSE, CITY OF TORONTO, on WEDNESDAY, the First day of AUGUST next, at 9, A.M.

Examining Committee:—Rev. J. JENNINGS, H. J. GRASETT, J. BARCLAY, Messrs. MCMURRICH, HAYES, CATHCART, G. A. BARBER, Rev. W. BELT, A. WICKSON.

RICHMOND HILL.—THURSDAY, 2nd AUGUST next, at 9, A. M.

Examining Committee:—Rev. J. G. ARMSTRONG, Dr. BLAKE, J. DICK, Messrs. A. WRIGHT, G. P. DICKSON, D. BRIDGFORD and Rev. G. S. HILL.

NEWMARKET.—TUESDAY, 31st JULY, inst., at 9, A. M.

Examining Committee:—Rev. T. BAKER, Jos. HARTMAN, Esq., Warden; R. H. SMITH, T. NIXON, J. E. MAXWELL, Dr. PYNE and H. MOORE.

All Teachers and others, presenting themselves for Examination, will be required to select the particular class in which they propose to pass, and previous to being admitted for Examination, must furnish to the Examining Committee satisfactory proof of good moral character, such proof to consist of the Certificate of the Clergyman whose ministration the Candidate attended, and in case the party has taught in a Common School, the Certificate of the Trustees of the School Section will be required. Each Candidate is required, if possible, to attend the Examination in his own School Circuit.

The BOARD will meet at the COURT HOUSE, on TUESDAY, the 25th of SEPTEMBER next, at NOON, for the purpose of receiving the Reports of the several Examining Committees, Licensing Teachers, and for other business.

JOHN JENNINGS,
Chairman.

Office of County Board,
Toronto, 26th June, 1855

UNIVERSITY OF TORONTO.—MATRICULATION.

THE ANNUAL EXAMINATIONS will commence on the 24th day of SEPTEMBER.

The following SCHOLARSHIPS, will be offered for competition amongst candidates for admission, viz:

In *Law* seven of the value of £30 per annum each (Three amongst Candidates for admission in *Law* and *Arts* simultaneously, who purpose entering on a course of study in *Law*, extending over five years; and four amongst Candidates for admission in *Law* and *Arts* simultaneously, and Bachelors of Arts, who purpose entering on a course of study in Law, extending over three years)
In *Medicine*, three of the value of £30 per annum each.
In *Arts*, fifteen of the value of £30 per annum each.
In *Civil Engineering* three of the value of £30 per annum each.
In *Agriculture* three of the value of £30 per annum each.

At the same period undergraduates and Canditates for Degrees in *Law* and *Medicine*; Students of the standing of one or two years from Matriculation, and Candidates for Diplomas, in *Civil Engineering*, or *Agriculture*, are required to present themselves.

The following Scholarships will then be offered for competition, viz:—

(1.) Amongst Students of the standing of one Matriculation.:
In *Law* three of the value of £30 per annum each.
In *Medicine*, three of the value of £30 per annum each.
In *Civil Engineering*, two of the value of £30 per annum each.
In *Agriculture*, two of the value of £30 per annum each.

(2.) Amongst Students of the standing of two years from Matriculation:
In *Medicine* two of the value of £30 per annum each.

(3.) Amongst students of the standing of three years from Matriculations:
In *Medicine* two of the value of £30 per annum each.

Each of the Scholarships, established in this University, is tenable for one year, but the Scholars of each year are eligible for the Scholarships of the succeeding year.

Graduates or Undergraduates of any University in her Majesty's dominions are admissible *ad eundem*, but are required to produce satisfactory Certificates of good conduct, and of their standing in their respective Universities.

Attendance on Lectures is not required, as a qualification by this University, except for Students in Medicine.

Candidates who purpose presenting themselves for Examination at either of the above mentioned periods, are required to transmit the necessary Certificates to the Registrar, at his office in the Parliament Buildings, at least four weeks before the first day of Examination.

Further information as to subjects of Examination and other particulars, can be obtained on application to the Registrar.

Senate Chamber, Parliament Buildings, Toronto, June 30th, 1855.

VICTORIA COLLEGE.

THE FALL TERM of this University will OPEN on THURSDAY, the 13th of SEPTEMBER, 1855.

For further information see Gazette, copies of which may be had on application.

S. S NELLES, M. A., President.

Cobourg, June 23, 1855.

FIRST CLASS TEACHER WANTED.

FOR THE FIRST ENGLISH SCHOOL at BERLIN, County of Waterloo. Application will be received from Teachers holding a FIRST CLASS CERTIFICATE for the above situation, by the undersigned, up to the 1st day of SEPTEMBER, next. Applicants to apply personally, with their credentials, to WILLIAM DAVIDSON, Secretary Board of School Trustees.—Berlin, 9th July, 1855.

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☞ All communications to be addressed to Mr. J. GEORGE HODGINS, *Education Office, Toronto.*

TORONTO: Printed by LOVELL & GIBSON, *Corner of Yonge and Melinda Streets.*