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ADDITIONAL NORMAL SCHOOLS.

There are two objects in working out system of Public Education which should not be lost sight of viz.: efficiency and economy. In regard to the paramount importance of the first there can be no difference of opinion. Without efficiency there can be no real education.

In order to secure this very desirable end great efforts have of late been made by the Government and Educational Department of this Province. The School Law has been revised, a new series of school books issued, a programme of studies and limit table drawn up, a new system of inspection instituted, and many other minor changes made, all of them of more or less importance. It is evident, however, that no matter how excellent the *machinery* of our educational system, no matter how much care is bestowed upon *detail* in school legislation, ou realization, as a people of the benefits accruing from education must be limited indeed, so long as our schools are taught by *untrained* teachers.

It is not a little remarkable that in matters pertaining to the higher interests of the body politic so little care is bestowed, while in other matters of far less importance there is the utmost caution observed. For instance, no man would engage a mechanic to do the most ordinary piece of work unless he felt sure that he was possessed of some training, and had, by previous practice, accustomed himself to work of a somewhat similar kind. Even farm laborers, porters and clerks are trained to their respective duties. In the art of teaching how different! Young men and women in their teens, fresh from the pupil's form, with minds very feebly developed, without an intelligent idea in regard to mental science, without the slightest knowledge of the natural order in which the faculties of the mind unfold themselves, assume the *role* of teacher, are engaged by a Board of Trustees and undertake to direct the education of some sixty or seventy young immortals. Now what great benefit to them that there is a programme of studies, that our textbooks have been revised, that such excellent facilities are afforded for the education of the young? Not knowing how to communicate the first idea, these helps are comparatively useless. These improve-

ments may be a highway to an intelligent teacher, but what is the good of a highway to the man who cannot walk? What is the good of those improvements to those who do not know how to use them? It is useless to plead that *experience* will remove all these deficiencies. The amount of injury inflicted before experience has accomplished its legitimate work is incalculable. Bad habits are formed, many things neglected that cannot afterwards be easily remedied, wrong methods of study are pursued, and a general lack of symmetry and completeness allowed to prevail that may destroy, to a very great extent, the future usefulness of both scholar and teacher.

That this is the great bane of our Public Schools must be evident from the fact that so far as the Normal School training is traceable we have only 844 holding certificates from that institution out of 5,306 teachers actually employed in the Province. This leaves about 4,500 engaged in a profession for which, so far as we know, they have had no training whatever.

In point of *economy* the advantages to the country from trained teachers are very important. Who can calculate the time wasted by the awkward efforts of an inexperienced young man in a Public School? Without system or tact, without a knowledge of the means best adapted to secure certain ends, without any training to communicate instruction according to the capacity of his pupils, he struggles on day after day "putting in" his time, to be sure, but perhaps doing positive injury to those for whose benefit he is supposed to be laboring. On the other hand, were he properly trained, every day would add to the efficiency of his school and to the knowledge of his pupils. Like a master mechanic, he would never fail in adapting means to an end. The "eternal fitness" of certain principles for the accomplishment of certain results would be well understood, and without doubt or hesitation he would labor intelligently, seeing the end from the beginning.

The necessity of trained teachers to assume the management of our schools being now established, it might be well to consider how we can best bring about an increase of their number. There are always obstacles in the way of every reform, and this does not escape the fate of its predecessors. And first we might mention *low salaries*. The expense of a Normal School training, even in this favored Province, is considerable to many a young man. Nor is there any guarantee that after the labor and expense there will be such *pecuniary* advantages as will justify the outlay. The salaries of Normal trained teachers are not much in excess of those holding merely county certificates. Indeed many Boards of Trustees never take the fact of training into consideration at all. All they want to know is "What is the *lowest* wages you will take?"

Again, teaching is yet but a temporary occupation. There is no permanence about it. Many use it as a stepping-stone to other professions, and many others get so disgusted with the fickleness of Trustees and the trifling pretexts on which they feel justified in changing teachers, that they leave it for some other vocation more permanent. To such there is no inducement to submit themselves to a course of training that may not reimburse them for the outlay incurred.

There is yet another obstacle—the distance to be *travelled* by many to reach the only Normal School in the Province. At first sight this should not appear a very great obstacle in itself; with our railway facilities for cheap travel, it might seem that no one need be prevented from this cause. But what do we find on looking to Table K. of the Chief Superintendent's Report, which contains an abstract of the counties from which the students who attended the Normal School since it was opened have come? Just this, that out of 6,418 who were ad-

mitted, 1,907, or nearly one-third, were from the County of York, 273 from Ontario, and 268 from Durham. Whereas more distant counties, such as Essex, sent only 23, Kent 76, Bruce 51, Hastings 77, Renfrew 20, Russel 18 and Glengarry 40.

The only inference deducible from the above is that *convenient access* to a Normal School is a strong inducement in itself to attend its sessions and get the benefit of its instruction and training. And following out this idea to its legitimate conclusion we would infer that additional Normal Schools would vastly increase the number of trained teachers in the country.

But we have the example of other countries as well, to justify the erection of additional Schools of this kind. England and Scotland have 37 Normal Schools; Germany 140, including public and private; Norway and Sweden, 15; Switzerland 4; the United States 87, besides 27 Normal or Training Departments in Colleges or Universities; the Province of Quebec, with a population less than ours by nearly half a million, has 3; the State of Illinois, with one-third the area of Ontario, and a population of only two and a half millions, has 10, Massachusetts, with a population 200,000 less than ours, has 7; and Vermont, with a population of only about 300,000, has 3.

These facts should weigh heavily with those anxious to improve the education of the masses. Why a large Province like Ontario, with a surplus of over $4,000,000 in her Treasury, should hesitate a moment to increase her educational facilities, it is impossible for us to conceive. The amount contributed for school purposes every year is fast increasing, and no doubt the efficiency of our schools is also increasing, but we fear not in the same ratio. Any one that reads the reports of the different Inspectors, while they find much cause for congratulation, cannot fail to perceive the general unanimity with which they refer to "deficient accommodation" and a lack of *thoroughness* in mental discipline. And how can it be otherwise without trained teachers —without men and women in the profession whose minds have been disciplined by contact with facts and principles and a clear insight into the process by which mental culture is to be attained?

Another consideration. Should the Government of Ontario see fit to provide such Normal School facilities as the interests of the country require, it should be *imperative* upon all teachers to avail themselves of its advantages for a longer or shorter time.

What we would propose is this, that so soon as these additional Normal Schools are put into operation no certificates of qualification shall be issued to any person to teach a Public School except to those who have gone through a certain prescribed course at some one or other of these institutions. In the case of those already holding certificates that might expire, the fact of their teaching for three years might be considered as good as a course at the Normal School. The reason for this obligation is somewhat similar in principle to compulsory attendance at school. All are taxed to provide the facilities of education for the good of the united whole. In this case the people would be taxed to support institutions for training teachers and in their own interest they should *require* teachers to avail themselves of the advantages afforded.

We trust that in giving their attention to the matter, the Government of Ontario will be guided solely by what is evidently the interest of the *whole* Province, and that very soon, young men and women, anxious to engage in the noble work of developing the powers of the mind, will have such facilities as will enable them to bring to that work habits fully formed for the faithful performance of such arduous and responsible duties.

TOWNSHIP BOARDS OF TRUSTEES.

As the School legislation of the Province is to be revised and consolidated during the present session of the Ontario Legislature, we think it a fitting opportunity to consider the advantages to be derived from substituting for Local Boards of Trustees the more comprehensive system of Township Boards.

Many of our readers are aware that the School Improvement Act of 1871, makes it optional now, by a vote of the majority of Sections in any Township, to abolish Section Boards and substitute Township Boards instead. Previous to 1871, to secure this change, the unanimous voice of all the Sections in the Township was required.

It might be argued that as no Township has yet taken advantage of this provision in the School Act, that there is no desire on the part of the people for any further legislation. Indeed, we might fairly conclude that the great majority of the people are opposed to Township Boards, were it not, that in matters of this kind experience teaches us that we always advance *slowly*. It took nearly twenty years experience of Free Schools before we felt safe to abolish the Rate Bill nuisance, and now there is no one who would wish to return to it. We have had a great many years experience of Section Boards, and although there is no *active* popular demand for a change, yet we feel convinced that the reasons which can be advanced for substituting Township Boards are so cogent that there need be no hesitation on the part of our Legislature to take the necessary steps at once.

If we look to the example of the Eastern States, to whom we are indebted for many valuable hints in school legislation, we find that they are fast abolishing the Local Boards. Maine, Vermont, Massachusetts, and such other States as Ohio, Pennsylvania and Iowa have already adopted the Township system and pronounce it vastly superior to the old plan. In the State of New York the system prevails of uniting three or four Sections under one Board, thus reducing, very materially, the number of Boards in a Township. So rapid has been the growth of the Township system in Connecticut, that the Secretary of the State Board of Education says in his report, "Let the public sentiment advance as it has done for the past five years, and the Section system will be entirely abandoned."

In discussing the advantages of Township Boards we cannot do better than give a few extracts from the reports of those officials whose experience gives weight to any argument they might advance. We first quote the remarks of the State Superintendent of Kansas, who, in discussing the advantages of the Township system, says:

"1. *Boundaries*—It will end and for ever put to rest the interminable disputes about School section boundaries, personal heart-burnings and animosities, secret malice and revenge; neighborhood feuds and public broils engendered by this prolific source of strife and contention will cease to exist. The law having once permanently established each township a school division, the trouble will then be at an end. There being no more boundary disputes about which the people can make themselves miserable, they can unite in building up good schools.

"2. *School officers reduced*—It will dispense with a large number of school officers and elections, and simplify the control and management of our public schools. The present law provides three officers for each school section, the new one but six for each township, thus dispensing with a large number of superfluous officers, simplifying the management, and securing uniform work in all the schools. The petty annoyances and loss of time occasioned by so many school

meetings and elections will, in a great measure, be avoided.

"3. *Diminish aggregate expense*—It will diminish the aggregate expense of our schools, and establish a uniform rate of taxation. It is a fact recognized by the best educators both in Europe and America, that the number of pupils which can be taught to the best advantage by the unclassified schools of the rural section by one teacher is about forty. Another deleterious effect of this independent school section system lies in the opposite direction; for when the number of pupils under one teacher exceeds fifty or sixty, the teacher cannot do justice to his school, and when it reaches seventy or eighty, proper instruction is entirely out of the question. If a change were made from the old system to the new, the school board could from time to time unite small schools and divide large ones, so as to adapt them to the wants of the people, and then adapt the teachers to both; very much after the manner in which the system is administered in our larger towns.

"4. *Uniform taxation*—Taxation for school purposes would become more uniform, inasmuch as under the present system the people in the smaller and weaker sections pay three or four times as much as their neighbors in the larger and more wealthy sections and often get much less of it, both in quantity and quality, as they are never able to employ the best teachers. In the township system, the tax is levied equally upon all parts of the township, and as the object to be attained, which alone justifies such taxation, is the education of all the children without distinction, nothing less than an equal provision for all should satisfy the conscience of the people.

5. *Graded or classified schools*—It will provide for the establishment of a system of graded schools. This is the highest development of the free public schools ever yet attained by the best educators in any country. It is the perfection of school economy. The greatest superiority of city schools over those in the rural sections is explained in the fact of the complete gradation and classification of the former. The only feasible method yet devised for grading and classifying country schools is provided in the township system. And it will do for the country schools what it has already done for the city schools, in bringing order out of confusion, light out of darkness, and success out of failure.

"6. *Convenience of school location*—Townships containing a given number of inhabitants, or a certain amount of taxable property, or both, could have their primary and intermediate Schools fixed in different parts of the township, so as to be of easy access to the smallest pupils. Then with a superior or high school at the centre, free to all between twelve and twenty-one years of age, kept open at least ten months in each year, the system would be complete. With such graded schools in each township, the superior education necessarily resulting therefrom, the increased interest in the the schools, and the great economy of time and means employed in their management, would soon bring them into universal favor.

"7. *Efficient supervision*—It will secure a more efficient system of school supervision. Under the present system, the time of the County Inspector is largely occupied in organizing schools, classifying pupils, changing union section boundary lines, cutting off here and adding there, in the vain hope of finding some golden mean of fixity. Under the system the County Inspector would be relieved from most of this unprofitable work and would be able to spend his time more exclusively among the schools, looking after and fostering their best interests, and prompting teachers and members of the school boards to the full performance of their manifold duties. With the increased responsibilities the school board becomes a supervisory committee, vigilant and active, ever watching with zealous care the sacred trust confided to them in securing for every child in the section the best education possible.

Briefly to summarize the advantages of the township system we quote the following from the Maine *Journal of Education*:

1. It would secure just as many schools as the necessities of the community demand, each being an integral part of one central organization, and adapted to the wants of each individual.

2. It would dispense with a large number of school officers.

3. It would establish a uniform rate of taxation.

4. It would furnish more uniform and equal advantages and privileges to every citizen.

5 It would allow the child to attend school where his own interests would be the best conserved, with no restraint save what the general interests might require.

6. It would prevent strife about district lines.

7. It would diminish the aggregate expenditure of schools.

8. It would secure a more efficient system of school inspection and supervision.

9. It would secure permanency of supervision.

10. It would secure greater permanency of teachers.

11. It would secure a better class of teachers.

12. It would secure better compensation to competent teachers, and less employment for incompetent ones.

13. It will secure better school houses.

14. It will secure greater facilities to teachers for reference and illustration.

15. It will enable townships to establish graded schools.

16. It will secure uniformity of text-books in the same town.

17. It will result in more uniform methods of teaching.

18. It will secure the establishment of a course of study, and will tend to keep pupils longer in school.

19. It will secure to the State department more reliable statistics.

20. It will insure schools in every district and prevent a bare majority from depriving a respectable majority of school privileges.

21. It will tend to diminish neighborhood quarrels.

22. It would ensure the employment of fewer nephews and nieces, sisters and sisters-in-law.

23. It would insure a larger aggregate of interest on the part of the community in each school.

One of the great difficulties experienced under the present system is with regard to the *boundaries* of Sections. Endless trouble and annoyance arise to Inspectors in the settlement of local quarrels, that seem to burn the fiercer the smaller the interests involved. It also happens that in arbitrations for the arrangement of these difficulties, no matter how judiciously the Inspector, who is umpire by law, acts, his decision is questioned, perhaps his motives impugned and his usefulness, to a certain extent, impaired. The abolition of the Sections would remove this difficulty and contribute largely to the peace and harmony of many localities where nothing but bickerings and acrimonious feelings have, for a long time prevailed.

Another advantage not enumerated above would be the payment of Teachers' salaries quarterly. It is certainly a great hardship to teachers in rural districts, that, save the paltry amount of government and municipal grant which they receive, they are compelled to wait till the close of the year for their salary. In towns and cities this is not the case. Nor is it the case with any other laborer. To young men and women starting in the profession, and particularly to many men with families, it is a great inconvenience and often a loss, and provision should be made, by some legal enactment, to remove so great an imposition upon the profession.

The advocates of the present system of Local Trustees urge that three men in a section, themselves rate payers, are more likely to be interested in the school than men living in another part of the Township. At first sight this appears reasonable. But to what extent do Section Trustees show their interest in education?

By the Chief Superintendent's Report we find only a trifle over one visit each a year recorded by Trustees to each school. In other respects we know of nothing generally done, except engaging the teacher and signing the necessary orders and reports. True, there are many School Trustees both zealous and efficient, but yet is it not equally true that there are many others who are neither? Is it not also self-evident that five or six competent men could be much more easily found in a Township, than thirty or perhaps sixty? The best men are certainly required for this office, and a board of six, thoroughly qualified, could do much bet-

ter than any number of detached Boards, many of them requiring more knowledge of the educational interests of their respective sections than they possess.

But how would you do with sections where good school houses are now built? Would you tax them over again to build new school houses for other sections? We answer, not at all. The present boundaries of the section might be maintained till every section was provided with a school house sufficiently good to meet the requirements of the law, and those sections that have already provided the legal accommodation might be exempted from taxation for building purposes. Mr. D. J. McKinnon, Inspector for Peel, puts the case very clearly. He says:

"If A. and B., two merchants in the dry goods trade, having stocks valued at $7,000 and $3,000 respectively, agree to go into partnership on even terms, with a capital of $20,000, on the understanding that their present stocks shall be the property of the firm, it would be absurd for B. to say, 'We have now $10,000 between us, and the $10,000 more required will be just $5,000 apiece because, you know, we're equal partners.' 'No,' A. would say, 'I've $7,000 in now, and you've $3,000, so I shall put in $3,000 and you $7,000, and then we'll be on even footing.' And so may it be arranged with existing school property. Let the township board, if formed, buy up all the school property of the various sections at a valuation, so that the value of such property shall be deducted from the building taxes of those who have paid for it, and thus even-handed justice is done."

But, would not trustees resident in some of the sections do injustice to those sections where there were no trustees to represent them? We ask why? Surely selfishness does not so prevail as to destroy all sense of justice. Besides, if this objection possessed any force, those States which have adopted the township system would be clamoring for a return to the local board system. But there is no such clamor. On the contrary, we have the evidence of the Superintendents of those States, showing that there is no desire at all on the part of the people for a reversal of the township system.

Another change advocated in certain quarters is to give the whole control of our public schools over to the municipal councils. To this proposition we decidedly object. It would not be in the interests of education to subordinate its advancement to political preferments. It is well known that municipal elections very often depend upon political influences, that, to say the least of them, are somewhat questionable. To ask the people to entrust the education of their children to a system that depended for its existence upon political influences is asking too much. It is also well known that there are many men of ability and experience in school matters who positively refuse to contend for municipal honors, because they would not stoop to the amount of baiting ofttimes necessary to secure their election. These men would serve willingly and efficiently as school trustees. They are the men above all others, who are best qualified for the office. To deprive the public of the benefit of their experience and adaptation for duties of such an important character would be a great loss indeed. Better to divide by distinct official responsibilities public duties that are not necessarily conjoined.

LIFE THEORIES.

BY H. ALLEYNE NICHOLSON, M. D., D. SC. F. R. S. E., ETC., PROFESSOR OF NATURAL HISTORY, UNIVERSITY COLLEGE, TORONTO.

One of the most fruitful, as it is one of the most important, of the controversies of the present day, is that which concerns the nature of Life, its connection with matter, and its still more recondite connection with mind. Quite apart from the question of the origin of life—a question which has exercised some of the leading intellects of the country, and which is still far from being settled—lies the equally difficult problem as to its nature. It may safely be said that of all the points which have occupied thinking men during the last fifty years, none is of more intrinsic importance than this, or more urgently demands solution. The beliefs of the coming generation will depend largely upon the answer which may be given to this question; and we have passed the stage at which any answer will be considered satisfactory that is based upon mere authority, and that does not possess the credentials which are conferred by facts alone. Comparisons are proverbially odious; but if science must be compared with other departments of human activity—as has lately become the fashion—its votaries should rest their claims upon what science has done, and is doing, toward the final answer of a number of theoretical questions such as the nature of life. The railway, the steamboat, the telegraph, are great achievements, of which science may well be proud, and for which the world owes more than it yet comprehends. Rightly weighed, however, these, and a thousand similar discoveries, sink into insignificance, when compared with the benefits which have accrued to the progress of free thought and free enquiry from the hand of science. The final settlement of questions such as the origin of Life, the origin of species, the descent of man and his antiquity upon the earth, the laws of life and health, and the like, will do more to elevate and enoble the human race as a whole, than even the telegraph, and the railway. The practical results of science have been gigantic, but they will be overshadowed, in the long run, by the splendor of the theoretic results which have already been obtained, or are in process of attainment. There will be many who will dissent from this view, and no man living is in a position to predict what we may ultimately expect from the march of science. Those, however, who have attentively watched the course of events during the last few years, cannot fail to have seen that the last and greatest result of scientific progress has been brought about in the world of thought and not in the world of practice. The world has much for which to thank science, but for nothing more than the extraordinary expansion of thought and enquiry which has taken place in almost every department of human knowledge.

New and hitherto untrodden regions of thought are being rapidly opened up; new methods of investigation are being daily brought inio play; new results are hourly being brought to light; and the time has come when men are no longer afraid to press facts home to their legitimate conclusions. It is true that the vanguard of the scientific army has pushed on too far and too fast; positions have been taken up which will be found to be untenable, and a retreat is in part inevitable. Domains of thought have been overrun and temporarily sacri-

ficed, which can never be the legitimate conquest of science; others, because inaccessible, have been declared to be barren and valueless; and the scientific method of research has been recklessly imported into questions with which science has essentially nothing to do. A reaction, however, has already set in, and the way has been paved for the admission that there exists a world of thought higher than the scientific one, a world, the phenomena of which are not to be learned through the senses, and the laws of which are not to be studied by the microscope, the balance or the dissecting-knife. It is true, also, that to a large extent science is a torch for learning and not a hammer for building. Many an old and cherished belief has crumbled away before its consuming breath, and others only wait their time to fall, but science can put nothing in their place. Science may undermine a creed or annihilate a dogma, but no religion will ever owe its birth to the spirit of scientific research. And yet the antagonism between science and religion is an apparent one only, and has no real existence. No truth, however great, can flourish if based upon error. It is the true function of the science of the future to lay broad and deep the foundations upon which may be raised the noble superstructure of the religion of the future, to rehabilitate ancient truths by disentangling them from the errors with which they have been mingled, and to demonstrate clearly and unmistakably the strict limitation of its own powers.

In carrying out this, its highest function, no more important question has come before science than that which concerns the nature of life. Upon this question the scientific world is divided into two opposing schools, generally known as the "Physicists" and "Vitalists," but more truly and appropriately distinguished as the "Materialists" and "Spiritualists"—provided that we remove from the latter term the opprobrium which has fallen upon it from its accidental connection with certain extraneous circumstances. In considering the doctrines held respectively by these two schools we may give the Materialists the first place, as they have undoubtedly managed to secure at the present moment a predominance of adherents and a pre-eminence of position as compared with the Vitalists.

The Materialists or Physicists start with the two primary conceptions of "force" and "matter," and deny that there is any real difference between the two. Force and matter, they say, are absolutely inseparable; the one cannot exist without the other, and they are to be properly regarded as being nothing more than "two aspects of something, one and indivisible." Proceeding upon this arbitrary and unproved assumption—arbitrary, because "force" and "matter" are merely *terms*, expressive of human ignorance and not of knowledge, and unproved because we know nothing of the *things* which these terms represent—they pass on to the well known and admitted law of the indestructibility of force and the conservation of energy. Whatever "force" may be, and of that we know less than nothing, it is quite certain that force may be transformed, but can never be destroyed. When a cannon-ball strikes a wall, the force which it previously possessed when in motion is not lost on its stopping, but is expended partly in the production of heat and partly in producing motion in the particles of which the wall is composed. When we boil water the heat of the fire is not lost, but is expended in making the particles of water move further away from one another so as to constitute steam. Thus mechanical motion may be converted into heat, or heat may be changed into mechanical motion; and in all cases more of the force employed is lost, but a given amount of heat will always produce a given amount of mechanical movement and *viee versa*. Similarly, heat, light, electricity, and chemical affinity are all convertible. Any one force may al-

ways be converted into any other force, but no force is ever lost or destroyed. This doctrine of the "Transformation of Energy" is undeniable, and its demonstration must be regarded as one of the greatest scientific achievements of the century. The advocates of the physical nature of life, however, go much further than this. They assert that the forces which are manifested by living beings are just the same in kind as the ordinary physical forces. They assert that what is called "vital force," or the force which renders a living man different to a dead man, is nothing more than an ordinary physical force, "transformed" by its passage through the organism. They assert that just as when we pass heat through a certain combination of metals and it changes into electricity, so when we pass heat, light, and other physical forces through an ingeniously contrived apparatus of muscles, bones, nerves, and the like, we get, by "transformation" all the forces which distinguish the living being. Even thought is not exempt from this origin, for they assert that it is nothing more than the "transformed" motion of the microscopic particles of nervous tissue. So that we may believe, with an eminent German physiologist, that "the brain secretes thought as the liver secretes bile," whilst poetry and religious feelings are "the product of the small intestines."

On the other hand, the "Vitalists," or "Spiritualists" do not admit the identity of force and matter as proved, probable, or even provable. They fully admit the "correlation" of the physical forces and the indestructibility of energy, but they deny that the energy which resides in a living organism is entirely "transformed" physical force. They believe, on the other hand, in the existence of a "vital force," a force superior to, and different in kind from, the ordinary physical forces, a force capable of controlling and modifying the material forces of the universe. They believe that this vital force is entirely *sui generis*, distinct from all known physical agencies, and that the phenomena of mind are due to forces of an essentially distinct and higher class to even the phenomena of life itself.

In the words of Dr. Lionel Beale, one of the most distinguished members of the spiritualistic school of scientific men, the materialists have confused the very distinct conceptions conveyed in the terms "power," "force," and "property." "*Power* is capable of activity; it may design, arrange, form, construct, build. *Property* is passive, and belongs to the material particles, and is no more capable of destruction than the particles themselves. *Force* differs from property, in that its form or mode may be changed or conditioned, and assume other forms, and be afterwards restored to the original one. Power may cease and vanish, but property is retained, and force in one form or another is persistent. Neither matter, nor force, nor property, can wholly disappear; but all order, design, arrangement, guidance, form, structure, construction, may vanish. *Power* alone imposes upon the material, the wonderful order which everywhere manifests itself in nature."

To the argument of the physicists that force and matter are identical, and living beings are constructed by the transformation of sun-force acting upon matter, it may be replied that force constructs nothing, and is even opposed to construction. The sun will not build a house—why should we suppose that it has built our bodies? "Force may destroy and dissipate, but it cannot build; it may disintegrate, but it can not fashion; it may crush, but it is powerless to create."

That matter is a *condition* of vitality may well be admitted, but it is not therefore necessary to admit that matter is the *cause* of life. We live in a material world; we inhabit material bodies; and we can not become cognisant of the existence of any

force except through the medium of matter. In other words, force can only manifest itself to our senses through the intervention of matter. Nothing, however, could be a more unwarrantable deduction from this admitted and undeniable fact than is contained in the assertion that force has no *existence* save as a form of matter. So far as mental force, at any rate, is concerned, we possess the internal conviction, not to be destroyed by any process of argumentation, that the brain is merely a condition of thought and not its cause, that we possess a force which is independent of and can control the mere physical forces, which will not cease to exist when separated from its material instrument, and which can in no sense be regarded as a mere "aspect" of matter.

To say, as Prof. Frankland has said, that "an animal, however high its organization, can no more generate (that is, actually create) an amount of force capable of moving a grain of sand, than a stone can fall upwards, or a locomotive drive a train without fuel," is undoubtedly true. The mistake is in supposing that such an hypothesis is in any way part of the doctrines of the vitalists. No one says or supposes that man, or any other animal, can *create* force. All that is necessary for the spiritualistic view of life is to believe that living beings are the seat of some power in virtue of which they can subdue, regulate, and combine the physical forces of the universe. Man can not create the force necessary to drive a locomotive; but he can *make* the locomotive, and when it is made, he can make the sun-force stored up in coal or wood *drive* it. What conceivable arrangement, modification, or transformation of the physical forces can do the like? When will sun-force make an Atlantic cable for us, not to say make man himself, as the physicists practically ask us to believe?

The truth seems to be that the advocates of the material nature of life have confounded the *conditions* of life and vital activity with its cause. All vital actions, from the contraction of a muscle to the conception of a poem, are accompanied by movements of the molecules or minute particles of which our frames are composed. The movement of a muscle is accompanied by movement of its molecules. The birth of a thought is accompanied by molecular movements of the particles of brain-tissue. It may be that there is nothing concerned in muscular contraction but mere molecular movement. It may be that there is nothing but such movement of material particles at the bottom of thought. Assuredly, however, this can not be proved in the present state of our knowledge, and should not be dogmatically asserted to be a fact. All that we can say is that thought is generally, though not always, associated with molecular movements of the "gray matter" of the brain. To assert, however, that thought *is* nothing more than the motion of nervous particles is logically to confound the accompaniment of a given phenomenon with the phenomenon itself. It is to assert that because a given man never shows himself to his fellow-men except in the company of his dog, therefore the dog is the man. Similarly, as regards vitality, we may admit that vital energy is always associated with a particular form of matter, but we are not bound to admit that this matter is the cause of life. Science has done much, and will doubtless do more, but the mystery of vitality is still a mystery, and it may be doubted if we are much nearer its solution than we were a hundred years ago.

ARTIFICIAL MEMORY.

BY DR. D. CLARK, PRINCETON, ONT.

Memory may be abused by using it as stilts to prop up some of the other faculties of the mind. Some are born with a wonderful aptitude and capacity in this respect, and trust to it instead of cultivating the powers and aids of synthesis and analysis. Such are like a sponge. They imbibe readily material gathered by antecedent laborers in the harvest field of knowledge and wisdom, but they neither sow nor reap. To cull, glean and appropriate, is their *forte* and comfort. Others cultivate memory under the delusion that it is easier to filch ideas and modes of expression than to create them. Of course, all of us, to a greater or less extent, only lay a few additional atoms on the beautiful temple, whose foundations have been laid by master builders before us, yet, if by induction we contribute *new* material and *new* forms of thought, we do not become slavish copyists nor ideal plagiarists. I know a gold medalist of one of our Universities who can recite, almost *verbatim*, whole pages of Fowne's Chemistry, including the intricate formulæ of organic chemistry. Text-books on anatomy and physiology are veritable playthings to him, yet he is a stupid when he is asked to give a synopsis of the ideas of these authors in his own words. He swallows the triple extract of another's mentality, but he cannot assimilate it into new forms more progressive and more elaborate for others to profit thereby. He is an ultra representative of a class whose examinations would be found to consist of marvellous models of exactitude. Such have no originality, and are only saved from imbecility by having, to a large extent, the creditable powers of a parrot, or of a monkey, viz.: good memory and faithful imitation. This is not so much a fault as a misfortune, and dwarfs, for want of exercise, nearly all the other faculties of the mind. At the same time, a poor memory is inconvenient and needs cultivating, and a good memory, if balanced by the other active powers of the mind, is desirable. Exercising any faculty will give it enlarged capacity and increase its tenacity and power, but a little leverage to a weak memory is not to be despised, even if artificially constructed. Some scout all "helps" and say such tend to laziness in the exercise of the memory and deteriorate the fibre of the mind. As well rail at the few pounds of power only needed to set the steam-engine going on the rail or on the ocean steamer. Why not use muscle, lest physical strength becomes impaired from want of exercise? What we want in both cases is the most work at the least expense of power. At the best, we are taxed to the utmost, and there is no danger of either body or mind becoming rusted or cobwebbed for want of use. High pressure and a rapid race is the order of the day, and in our extremity we all grasp at supports and are glad to find them near at hand. For example, many of us are often puzzled, for the moment, to remember how many days there are in any particular month until we repeat:

"Thirty days hath September,
April, June and November,
All the rest have thirty-one,
But February twenty-eight, in leap years twenty-nine."

In the same way the classical scholar rhymes in doggerel memoranda of the Roman divisions of the month:

"The Kalends on the first day fall
The Nones on the fifth; not all,
For March, May, July and October;
Put off the Nones for two days longer,
Nine days after come the Ides;
The ensuing Kalends claim all besides."

Sometimes we catch hold of adventitious circumstances almost intuitively. Association and comparison help us in this respect.

Mr. Septimus Octavo Yerkins is introduced to us. We will remember his name, for we had a dear friend of that Patronymic. Here is a duality not easily sundered. Mr. Morrell Lock Reid sends in a letter of introduction. Three celebrated philosophers rolled into one. A tripartite appellation like this is stowed away in some nook or cranny of the mind, and by reason of the comparison is not easily forgotten. The "open sesame" is at our command. The seven hills of ancient Rome were called such names as that. *Pacique* indicates the initial letter of each. The seven wise men of Greece were Thales, Bios, Cleobilus, Chilo, Pittacus, Poilander and Solon. The capital letters are the consonants in *tobacco pipes*. In my schoolboy days the three largest countries in Europe, and the smallest one, were Russia, Austria, Turkey and Switzerland. The initial letters make *rats*. In the same way the nine muses could be remembered. The capital letters in the names make three words, viz.: *cet, met, cup*. The kings of Troy were Dardanus, Erecthonius, Tros, called Troy, Ilus, whence Ilium, Leomedon and Priam. The first letters are *Detilp*. We all know that if treacherous memory will only furnish us with the initial letter half the battle is won, for it is the fulcrum of the memory in proper names, and we often trot out on parade the whole alphabet and call the roll in order to catch the deserter and make him do lawful duty. It will be perceived, however, that these, and such like, are accidental oddities which can have no general application. A substratum of general principles is required, especially for dates, because figures are so similar in all their changes that no ordinary memory can retain them for any length of time. Numerous helps have been invented but I have seen none so generally applicable, so compact, and so unique as that of Grey's *Memoria Technica*, long since out of print. Grey invented a table, arbitrary in nature, but suited to the purpose. He takes the ten numbers and applies to each of them a vowel and consonant, because it is necessary to have both to form a syllable. This table is to be committed to memory, which can be done in a few minutes. The memorial words can be arranged to suit the taste of the learner. They may talk off in all the majesty of *Hexameters*, or be arranged in heroics, or Runic rhyme. The great difference of the construction of the technical words and the hold such must have on even an ordinary memory is the secret of their success and tenacity over figures. The table is arranged thus:

a	e	i	o	u	au	ei	ei	ou	y	g	th	m	
1	2	3	4	5	6	7	8	9	0	100	1000	mil	lion
b	d	t	f	l	s	p	k	n	z				

It will be seen at a glance that *a* and *b* each stand for 1; *u* and *l* for 5; *o* and *f* for 4; *au* and *s* for 6. The dipthongs are mostly formed from the other vowels, thus, *u* stands for 5; *a* for 1; = 6 = *au*; then *o* stands for 4; *u* stands for 5; = 9 = *ou*. In the same way *b* and *d* are the first two consonants, *t f s* and *n* are the initials to the several words, *l* is probably chosen, because it stands for 50 in Roman numerals; *p* stands for 7, as the emphatic letter in Septum, seven; *k* stands for 8, as the pivot letter in *okto*, eight, *ei* is the first part of eight; *y* and *s* both stand for the cipher, *g* for 100—the *th* for 1000, and *m* for million. Let us now observe how this table is applied. I may take a slice out of English history, say from the time of William the Conqueror, downward. The names are contracted and the lines can be scanned by dividing into dactyls and spondees; then, if there happens to be music in the soul of the reader, he can chant the *euphonious* lines, as a chant, a lyric, or a lullaby.

Wil-con. *sau*; Ruf. *K-oi*; Henr. *as*; Steph. *bil*; Hen-sec *buf*; Ric. *bein*; I. *ann*, He-th. *das*; Ed. *doid*.

The memorial lines are in italics, and in English history, to prevent forming a clumsy word 1000 is added to the date furnished, by the dates. The first word is *sau*. *S* stands for 6, *au* stands for 6 also = 66 add 1000 and we have the time William the Conqueror came to the throne of England. The next is *koi*, *k* stands for 8, *oi* stands for 7 = 87, add 1000 and we have the time of William Rufus. The memorial word for John is *ann*, *a* stands for 1, two *ns* stand for 99 = 199 = 1199 by adding the 1000. Thus the lines go down to Victoria; subtract the larger sum from the smaller, and you have the duration of each reign. Take another example from Roman history, say the twelve Cæsars and apply in the same way. Juli. *os*, August *cl*, Tiber. *bu*, Caligul. *ik*. Cl. *od* Ner. *ul*, Galb-Otho. *sou* Vit. Vesp. *oiz*, Tit. *pou*, Domit. *ka*. I have constructed memorial lines of all important events in genealogical order, from the deluge, to the Canadian Confederation, and so indelibly fixed are these doggerel lines upon my memory, that they can never be forgotten. Some are very peculiar, for example, Cæsar crossed the Rubic(on). The two last letters happen accidentally to be the date, by this table. Troy was burned by the Greeks B. C. 1184. We have Troja *baco*. The *baking* process was very thorough. Cromwell was of a *sly* disposition; well, Crom. *sli* = 1653. The confirmation of the Magna Charta was by Henry III. We can have Chart. *cel*—1225. Rome was first *put* into existence B. C. 753—Rom. *put*, and so forth *ad infinitum*. These letters can be arranged to suit the reader's taste, and placed in any way most conducive to their retention in the memory. "The proof of the pudding is the tasting of it." I could not do well without some such system, and on behalf of other obtuse mortals like myself, I contribute this crumb of consolation.

THE SUCCESSFUL TEACHER.

HINTS TO JUNIOR MEMBERS OF THE PROFESSION, BY THE REV. WILLIAM COCHRANE, M. A., BRANTFORD, ONTARIO.

On a visit recently to the Western States, a little incident that casually fell under my notice, forcibly reminded me of the rapid changes which are constantly taking place in the habits and social arrangements of the world. Within a very short distance of each other, the canal boat was slowly and steadily winding its way at the rate of three miles an hour, more or less, according to the physical qualities of the old horse that preceded it, while the locomotive with its train of crowded cars, was flying through the air with the speed of lightning. The former mode of conveyance was not to be despised in the days of our grandfathers. Many long and pleasant journeys were made after such a fashion, and in ignorance of speedier modes of transit, the world moved on happy and contented with its lot. But human ingenuity has almost consigned to the grave of oblivion such mementoes of the past. The age is too fast—life has become too short, and the mind too active—commerce too grasping, and science too daring, to rest contented with the snail-like pace of former generations. In some respects the past, we admit, may have excelled the present, but there can be but one

opinion, that the world and society in general has vastly benefited by the change; for change in one department of society necessitates change in every other. Progress in material comforts indicates the advancement of mind. The substitution of solid stately mansions, erected with an eye to beauty and according to architectural proportion, in room of the rough log cabins of a former age, proves not only the growing wealth of a country, but a corresponding progress in taste and refinement, and all those cultivated elements of civilization which advance the race. Such changes, affecting, as they do more or less, every class in the community, demand proportionate qualifications in those whose primary and *special duty*—it is to *educate the nation*, and carry it forward in its career of usefulness and honor. No profession can afford to stand still in the present age; least of all the members of that profession to whom is committed the formation of character and principles destined to govern the world at no distant date. In speaking thus, I do not unduly magnify the office of the teacher. In the ranks of professional life, there is none more honorable, as there is none more arduous—none which presents a wider field for the exercise of patient and progressive scholarship, and none which crowns with more solid rewards. And just in proportion as the teacher has exalted views of the vast importance of his calling, will be his influence on the community, and his efforts to merit the respect and gratitude of intelligent minds. It has been too much the case in by-gone years to regard the teacher as the most dependent member of society; as a creature under infinite obligation; as a class to be tolerated for *what they do*, not to be honored for *what they are*. The profession itself has been somewhat to blame for the wrong it has sustained. It has not claimed from society the dignity and respect which are its due. Occasionally, too, there have been found within its ranks persons utterly disqualified to discharge the duties of the office or merit the esteem of those whose commendation is desirable. For here, as in every other calling in life, it holds good, that self respect commands the respect of others, and if the teachers of Canada are ever to attain that elevated position which they so worthily merit, it must be by united efforts to elevate the standard of scholarship among themselves, and oppose every outside movement that directly or indirectly degrades their status. Associations of teachers—County and Provincial—meeting at stated intervals throughout the year, are admirably adapted to secure the latter, but to attain the former, we must appeal to the conscience of every individual member of the profession. For a thoroughly successful teacher is neither the product of Normal Schools nor County Boards of Examiners. These may impart and certify, to a certaim amount of information in the candidate, in virtue of which, after a certain fashion, he is enabled creditably to discharge the duties of his office; but of themselves, they can never impart that enthusiasm and loving consecration to the work which are inseparable from success. If a poet is born, not made, so a teacher must have natural adaptations for the work, independent of acquired knowledge and modes of teaching. In saying so, I do not deny that there have been many useful and successful teachers who have simply regarded the office as an honest means of earning a livelihood, although the peculiar emoluments are, in the majority of cases, so meagre as hardly to induce a choice on this ground alone. Nor do I imagine that what is called "genius" is either so common in this or any of the professions as some would have us believe. But this I do maintain, that without a natural sympathy and love for the work, no teacher can acquire eminence in the profession; and in making such a statement I am ably supported by facts in the early life of our greatest schol-

ars and divines. In the biography of Dr. Thomas Brown, it is stated that when scarcely five years of age, a lady one day found him sitting on the floor of the parlor with a large family Bible on his knee which he was dividing into different parts with one of his hands. She asked him if he was going to preach, as she saw he was looking for a text. No, said he, I am only wishing to see what the Evangelists differ in, for they do not all give the same account of Christ. Here we can discern the first exercise of that wonderful analytic power which, in after days, astonished the world of letters and gave to literature the "Philosophy of the Human Mind." So also in the case of Dr. Chalmers, by far the most effective orator the present century has produced. When but a very little boy, scarcely capable, one would think, of forming a purpose, he declared he would be a minister. Standing upon a chair, with one of his playmates for an audience, we find him preaching most vigorously from the text, "Let brotherly love continue"—a sentiment that through life was the guiding star of that great and good man. And not to weary you with examples, let me mention the name of Dr. Joseph Addison Alexander, one of the most accomplished scholars and teachers the American Republic has produced, who, at the age of ten was conversant with the whole of the dead languages found in the curriculum of study, adding the Oriental languages as a pastime. In such instances of eminent scholars, we see in earliest life the foreshadowings of their future fame. The ardor with which they prosecuted their different departments of literary labor became a passion. Seeking no commonplace work, but the attainment of the highest excellence, they directed thither all the energies of their being, each of them becoming *primus inter pares*. Living, they conferred the richest blessings on mankind—dying, they secured a deathless immortality.

Genius, however, or to be more explicit, that natural talent or aptitude of mind for some especial walk in life, which all men possess in greater or less degree, attains its highest results in the use of means. If a man has true love for his profession he will endeavor to possess himself of those qualifications that insure success. Among other things let me mention the following as essential to the teacher. First, *a well furnished mind*, by which I mean not simply a mastery of the different branches of learning that are entrusted to his care, but a knowledge of collateral subjects bearing upon his profession. Herein lies the difference between the pedant and the scholar. The one rests satisfied with the mere routine duties of the school-room, the other subjects the whole of Nature to his use. The one, in a spirit of egotism, parades on all occasions the superficial knowledge he has acquired. The other modestly draws from his resources only as occasion may demand. The knowledge possessed by the former is only serviceable for a certain formal routine of duties—that of the latter can be applied to almost any position in life. It is readily granted that to be an efficient teacher a man must devote all his time and talent to this end. Equally certain is it that true excellence, in more than one occupation, cannot be obtained; but in order to excel in any one branch of professional life, many fields must be traversed and many subjects studied that only bear indirectly upon the occupation of our life. He who would successfully practice law must not only be acquainted with the elements of jurisprudence and the forms of practice in civil and criminal courts, but must be conversant, more or less, with the whole circle of the sciences—with political economy—with the legal rights of individuals and countries—in a word, with the interests of every thing that affects the interests of his fellow man. Such resources at command constitute the ablest pleaders and advocates at the bar. Their illustrations are drawn from every department of nature,

and their arguments from the universal experience of humanity. Such an education we characterize as *liberal*, in opposition to that special drilling which fits men for nothing out of their own sphere; and of the latter how many crowd every profession at the present day. Clergymen, read, it may be in the common truths of Theology, and to some extent conversant with the original languages of the Scriptures, but who know almost nothing of the natural sciences, or the bearing of these sciences upon revealed religion; who are neither acquainted with the modern forms of rationalistic infidelity nor the means of their refutation. So far as the outer world is concerned, and the great public questions that are constantly agitating the minds of men, they are utterly powerless to instruct or guide. So it is in the department of law, where for every accomplished jurist there are a hundred pettifoggers. So it is in the department of medicine and surgery, where for every skillful practitioner there are scores of pretentious empirics and charlatans, destitute of all but the very simplest elements of the science, and only tolerated because of the unsuspecting credulity of the public mind. I do not say it is so with the teachers of Canada. In virtue of the restrictions imposed upon our common school system, such evils may not exist to as great an extent as in other professions; but even here is it not highly desirable that the standard of scholarship should be raised? What I am now advocating is not to be obtained by mere legal enactment. Presuming that every teacher in the Province is fully competent for his peculiar duties, is it too much to ask that they keep themselves abreast of every important question that for the time occupies the literary world—that while they maintain a respectable standing in their own chosen sphere, of labor, they are not cyphers out of it—"having to be followed in the track of their profession to prove that they are not fools?" This can only be obtained by the discipline and systematical development of all the powers of the mind, and a liberal indulgence in other studies than those embraced in the narrow limits of professional toil.

(TO BE CONTINUED.)

ANOTHER LEAF FROM MY INSPECTOR'S BOOK.

BY A PUBLIC SCHOOL INSPECTOR.

My last trip was on a fine autumn morning, when all nature was redolent with the beauties of a Canadian Indian Summer.—Myself and Ebony enjoyed the drive well. Indeed I find that he is just as impressible as myself in many respects, particularly as regards weather and other comforts peculiar to out door exercise.

Since the visit so minutely described in a previous number of the TEACHER, nature had changed her livery of roseate and green. Stern winter had frowned upon the glories of departing autumn, and with that frown cold, icy winds came down from North, and all the trees of the forest trembled with fear. And what a change! Far as the eye can reach from East to West, not a single trace of autumn's beauty or summer's glory. Instead of the mild breezes that fan the cheek with such soothing softness, or the fresh, exhilarating winds of autumn, the keen, piercing blasts of winter howl dismally around you, sweeping like angry spirits over forest and plain. Where now the tender flowers that, in their modesty, scarce dared to blush even in the twilight? Where the "last rose of summer" that bloomed so gaily, and at length dropped from its stem

amid the tears of its ardent admirers? Where the merry songsters that rendered the groves a grand orchestra of sweetest symphony? Where those brooks that in their merry babbling, trinkled o'er pebbly bed, and shook their mossy sides with the gay laughter of serenest happiness? Where the gay butterfly that flitted carelessly from flower to flower, sporting his brilliant colors and happy in the sunshine of present enjoyment? We ask in vain. No trace in earth or air, or sky, that such things ever existed. But what of that?

There lives and works
A soul in all things and that soul is God.
He marshals all the order of the year
And marks the bounds which winter may not pass,
And blunts his pointed fury; in its case
Russet and rude, folds up the tender germ
Uninjured with inimitable art;
And ere one flowery season fades and dies
Designs the blooming wonders of the next.

But moralize, or *poetize* as we may, it is winter, and the merry jingle of the sleigh bells, with their tintinabulations, invites me forth. Speedily Ebony is prepared, warm buffalo robes, fur cap, home-made mits substantial and warm, coat buttoned to the chin, a good substantial breakfast, constituted the outfit; and sitting in a cutter of latest style and brightest color, we started, *we* meaning Ebony and I. There was little or no interest in the natural scenery, for winter, like a stern despot, had, without fear, favor or affection, laid the same relentless hand on everything. Now skimming over the smooth snow, well-tracked and icy, and again darting past some heavily laden, slow-paced bovines, whose countenances indicated a serene reconciliation to their lot, we made tolerably fair time, and ten minutes after the school bell rang we were at the gate of Section No.——, in Township of L——. Did I say after the *school bell* rang? Certainly, for the Teacher and Trustees of this section were well known as men of good taste, methodical and business-like; men that could never endure the intolerable nuisance of summoning the pupils from their amusements to study by rapping a pointer against a door panel.

This being my second visit to the school I had already formed a tolerably good idea of the conveniences and architectural excellencies of the school house and grounds.—The school house was an oblong red brick building, about 30 x 50, with gothic roof, surmounted by a belfry. The wood work was newly painted, the belfry being recently provided with venetian blinds, and having, on the whole, a very neat appearance.

The grounds were enclosed with a neat, freshly painted fence, in front made of good pickets, well capped, and to all appearance, being both durable and substantial. The rear and sides were enclosed by a plain fence of upright boards six feet high, with a partition running from the school house to the far end of the lot, thus separating the outhouses required by the different sexes from each other. All round, both in front and rear, maples and other trees were planted. This, with woodshed and well, completed the external outfit of the premises.

The entrance to the school house was by two doors, one being for the girls' side of the house, the other for the boys. Whip in hand I stepped to the door, paused a moment; everything seemed still within. I rapped gently, expecting if the order was as good as I anticipated from the well-known reputation of the teacher, that the gentlest rap would be heard. Nor was I disappointed. For almost unheard by me the door was soon opened, and with a pleasant smile I was saluted: "Oh, Mr.——, you have come to visit my school. I'm so glad you're on hand. Come in." And with a cordial shake of the hand I returned the salutation and entered. "Wouldn't you like to have Ebony put up," said the teacher, for he had already known that I held Ebony in high esteem, and he was somewhat of a lover of the buckskin and rein himself. "If it wouldn't be too much trouble," I replied.—

"The weather is a little cold, and we have come some five or six miles this morning." So calling on a couple of lads, Ebony was handed over to their care, and I followed the teacher to his desk. Being anxious to take a few notes of the internal arrangements of the house, as it was by some considered a model, I requested the teacher to go on with the usual work of the morning. The following is a *true copy* of what I observed :—

Ceiling, high, measuring by the eye it seemed not less than fourteen feet, well whitewashed and clean.

Windows, large, about four feet from the floor, hung on weights and pulleys and easily adjusted, with plain cotton blinds, served to keep out the direct rays of the sun.

Blackboard across the whole end of the school house, and on the sides between the windows—made of composition, and lately varnished with patent varnish, furnished for such purposes by the Education Department. As near as I could judge it was about three and a-half feet wide and about the same distance from the floor.

Desks of cherry on iron castings—ink fountains placed in the desk with proper covers—single chairs for each scholar. The desks were so arranged that the seats in one row were opposite the desk on the opposite side of the aisle. The advantage of this was, that when the scholars stepped "out" into the aisle they were at once in file without jostling each other. The aisles were about two feet wide, and the desks forty-four inches long. I observed, also, that there were no desks for single scholars placed against the wall—no doubt the Trustees being aware that they would not only be somewhat cramped, but also uncomfortable in cold weather.

Teacher's Desk, a small walnut stand, with a drawer for Register, Visitors' Book, etc. I further noticed that along the rear end of the school house, a platform about six inches high, and six feet wide, was raised. On this platform stood the Teacher's desk—at each end of the platform was a large press for books, apparatus, collections by the pupils for a museum, etc.

Ante-room, for boys and girls, well laid out with large pigeon holes for baskets, and suitable hooks for cloaks, caps, etc.

Stove placed midway between the two ante-room doors, near the wall, with a suitable wood box—stove-pipe carried along the whole room and entering the wall about four feet from the ceiling,—an evaporating pan made for the purpose, sending up a refreshing column of steam.

The *floor* well swept and clean, no litter of any kind around the desks.

Clock ticking leisurely in its proper place.

Scholars, quiet and attentive. No loud studying, nor passing to and fro. One peculiarity in Mr. W.—'s school struck me.—The scholars made their requests known to the teacher by signs, thus avoiding those interruptions so injurious to the working of a school. If it was absolutely necessary that a scholar should retire, the hand was held up with all the fingers extended: if anything was forgotten or left in the ante-room (which I understood was very seldom) then one finger was held up; if the teacher was otherwise disengaged, and some *special* assistance deemed necessary by any scholar, two fingers were held up; the teacher assenting or refusing by a nod or a shake of the head.

Teacher, sprightly, yet quiet in his manner. Orders given in a gentle, kind tone of voice. No shouting or threatening; no repeating orders three or four times: every word told, and once was enough. I also noticed that the teacher's movements thro' the school house were scarcely audible. He had, before I entered, removed his stogas and substituted a pair of comfortable slippers. His countenance indicated gentleness, combined with firmness and self-reliance. He felt himself *master*, but seemed no way *over* anxious to impress the fact upon his scholars. He was, so far as I

could see, more desirous of securing the affections of his pupils than exciting their fears. Though a teacher for many years, he had none of that careworn, jaded, discontented look peculiar to some teachers. As I could see and *feel* both, he paid great attention to ventilation. He valued fresh air and plenty of it, and frequently during my visit glanced at the thermometer to see if the temperature of the room was kept at the proper standard. From his intercourse with the class, while I was taking notes of himself and surroundings, I noticed that he never worked himself into a passion over the dullness of his scholars, or their apparent negligence and stupidity. If they failed in their allotted tasks they had to bear the consequences. Their punishment was so inflicted, that they seemed to feel they lost a certain part, both of their teacher's and their fellow-pupils' esteem, and by the depressed look of a few "unfortunates," I could see that the punishment was more than they were able, with patience, to bear.

"Well, Mr. W—," I said, "you seem to be getting along comfortably here." "Oh, yes," he replied. "I find plenty to do. Things run somewhat smoothly. I suppose you would like to hear some of my classes recite a lesson."

"Well, yes. But I hardly know what class to ask for. What does your Time Table call for at this hour?"

The teacher looked to the clock. "A quarter past ten—that's the time for my Junior Geography Class."

"That will do," I said. "Call it up and let us see what the little folks can do."

"Without any flurry or excitement, the teacher spoke out "Junior Geography Class, attention." I noticed about a dozen small scholars in front straighten up.—"Stand"—"Out"—"Forward," and without ado, orderly as the Royal Foot Guards, the little battalion marched to the front and toed a red line painted on the floor near the platform. There was no elbowing for places, no leaning of one scholar upon the shoulder of another, but each stood erect, with hands clasped behind the back ready for duty.

"Would you like to question the class, yourself, or shall I?" asked the teacher.

"Yourself, please," I replied. "Just put them through the first lessons you taught them in definitions."

Addressing the class he said, "The Inspector wants me to examine you on definitions. Do you know what a definition means?" Several hands were lifted to shew that they understood the question.—"Thomas, what is your answer?" (I observed the teacher never said Tom or Ned, he always gave the scholars the name in full.) "A definition, sir, is a complete explanation of any word or term." This answer being considered full and satisfactory, he then proceeded to ask the definition of such terms as *island*, *cape*, *isthmus*, *river*, and so on.

While the lesson was going on I endeavored to take a few notes of the method of procedure, and such other features of the work as would enable me afterwards to form an intelligent opinion regarding the style of teaching and the general efficiency of the teacher.

Position of the class—a straight line, scholars erect, hands behind.

Attention excellent, the lesson wholly absorbing every other thought.

Answers grammatically correct, full, uttered in a clear, distinct tone of voice.

The teacher himself *stood* in front of his class, glancing occasionally over the room to see that others, besides those in front of him were properly engaged.

His *questions* were clearly stated, not repeated several times—no intimation given as to who might be expected to answer. No prompting the scholar to help him thro' a difficulty—no half-work.

There was also a free use of the black-

board and crayon. Where it appeared that the definition of a cape or an isthmus, was not clearly understood, the blackboard was made to convey to the eye, that which words could not, apparently, convey to the ear.—The skill with which an interest was maintained throughout the lesson was very pleasing. A few words of comment upon the answer in a quiet vein of humor, a short appropriate story, or perhaps a few simultaneous questions, often brightened up the countenance and quickened the intellect, so as to add fresh interest to what otherwise might be dry and distasteful.—There was also a constant effort made by the teacher to associate the definition with the *thing* defined. To say that a river was a large, long stream of water, was not enough. The question was then asked, "Did you ever see a river? Is it larger than a creek? Could a boat float in it?" The actual existence of these properties in the thing defined was designed to give a living reality to the lesson, and this was the teacher's object in destroying as much of the *abstractness* of the subject as possible.

In order to satisfy myself that the class thoroughly understood the "relative locality," this being the first lesson in Geography, I asked if they could point towards the north. Immediately all hands were pointed in the direction required. The same with other points of the compass. I then asked them to tell in what direction such and such places (naming adjacent villages) lay. Correct answers given. "Could you draw a map of the school yard?" I asked. "I can, sir," said a bright boy of seven or eight summers. Standing on a form, for he was not quite tall enough to reach the blackboard, he took the crayon and gave a pretty fair outline of the yard, school house, well, fences, outhouses, etc. A few questions satisfied me that the class was "well up" in "locality."

The teacher then told me that the class had only, so far, studied the map of the World, and could draw with tolerable accuracy the western hemisphere, and name the principal divisions of both hemispheres.—What I saw quite satisfied me that the teacher did not destroy the mental operations of his pupils by *book work* as is very often, indeed far too often, the case. His class had, as yet, committed no definition to memory from the book. He had trained them to know the *meaning* of the object and then the definition followed in their own words. The *name* always naturally called up before the mind the necessary explanation.

"How long do you generally spend with this class per day," I asked. "Well, about ten minutes is as long as I can, with benefit, depend upon them for undivided attention."

"Do they like to study Geography do you think?"

"They seem to take a great interest in it, so far as I can see."

"Well, that'll do. Dismiss them now, please."

"Attention"—"Right face"—"Go"—and as orderly and quietly as before they marched to their seats, leaving me very favorably impressed with the manner in which they had acquitted themselves.

NOTE.—I will give another leaf in next number, with notes made on the manner in which Mr. W.— conducted some of his other classes.

THE DESIRABILITY OF HAVING MUSIC TAUGHT IN OUR PUBLIC SCHOOLS.

BY JOHN CAMERON, EDITOR "ADVERTISER," LONDON, ONT.

Our public schools should not be too utilitarian in their scope. Those who advocate practical or scientific studies exclusively make a palpable mistake. They forget that as a complete organ has many stops, so the perfectly educated man is he the various sides of whose nature have been developed harmoniously. Where the time of a child at school is necessarily limited, it should doubtless be taken up chiefly with studies calculated to fit it to make its way through life and to procure the means of existence. To meet cases of this sort, it might be well if certain studies were made optional, so that in no case need the rudiments of knowledge be neglected.

Among the studies some would consider ornamental, and which might be left to the option of teachers and pupils, I would not include vocal music. That study, in my opinion, deserves a permament place on the curriculum of studies.

It is hardly worth while to argue what no one denies—namely, the physical advantages of vocal music. I prefer to treat the matter from other stand-points. The general cultivation of music would tend to modify the frantic and absorbing worship at the shrines of mammon too often observed. The feverish search after wealth in many cases eats up all noble sentiments. Men actually come to believe that happiness is to be found in riches. The Apostle was not astray when he set down the golden mean between riches and poverty as the safest and best estate for man. That music does wage successful war with emotions of an entirely sordid character, the experience of many will demonstrate. Who is there that at some time or another has not in hearing some exquisite harmony, some "breathing strains" of a cathedral organ, some gifted daughter of song, been filled with unutterable thoughts and unspeakable aspirations for that which is higher and nobler? And are we not made better by every good aspiration to which we give hospitality, as well as by every good action we are enabled to perform?

The study of music would enliven our schools. An interstice in the series of studies for a hearty chorus would clear the cobwebs from the often overtasked brains of the little searchers after knowledge. Change is rest. A teacher who speaks from experience informs me that he finds it much easier by teaching music to get along comfortably with his pupils.

The homes of Canada would be brighter and happier were there more music in them. One of the best ways of emptying the saloons and billiard rooms is by adding to the attractiveness of the home circle. What is pleasanter on a winter evening—in passing a dwelling through the windows of which gleam light and cheerfulness and coziness—than to hear the voice of song stealing into the air?

How much all our churches need better music! How often is the cultivated ear pained by jangling discords and irregular time! How few take part in the service of song in the House of the Lord, compared with the number who ought to do so! Are flatness and false time in hymns, psalms and chants any proof of superior piety? Is there any ground for the practical assumption on the part of many that the Lord disapproves of correct harmony and accurate time?

But perhaps some one says he approves of good singing in homes and churches, but does not see how it is to be attained. We are now getting at the heart of the matter. To make a Province of abstainers, the most effective plan is to operate on the young; to make a pious nation, the best method is to attend thoroughly to the religious training of the children; to make Ontario resound with melody and harmony, we must teach music to the boys and girls in our Public Schools, and there lay a foundation of knowledge and taste for the future.

The difficulty of obtaining teachers who understand music may be urged as a lion in the path. I reply, this difficulty would be only temporary. The demand would soon create the supply. Teachers would be taught music in the Normal Schools. Pay your teachers well, and you will get men and women competent to teach all ordinary branches, including the fundamentals of music.

SELECTIONS.

OBJECT LESSONS FOR DISTRICT SCHOOLS.

MISS SARAH C. STERLING, IN MICHIGAN TEACHER.

A SYSTEM of object lessons for district schools seems almost an anomaly, and yet it has been thought that this branch of study might be, in a degree, introduced into our common schools with much benefit. That course of object teaching, as pursued in our graded schools, is, or should be, a closely systematized one—the boundary lines of each step and each grade so closely defined that the teacher knows the exact lesson for each day and week, the precise order in which terms and ideas should be developed, the amount of information to be given by the teacher, and that which should be brought out from the experience of the child, and the given amount to be passed over in each year. No such system of objects teaching can, with any advantage, be pursued in our country schools. Even the thought suggests a bare impossibility. But that a course of object lessons somewhat less systematized, more varied in character, broader in scope and design, higher in aim and purpose, may, with an increased modicum of power, be introduced into our ungraded course of instruction, we think is at present conceded by all.

That teacher who, inspirited by a desire for good, and impressed by the commands of our Savior, goes out into the byways and hedges to perform his mission, has an arduous and difficult work, manifold in its details, extensive and laborious in all its undertakings. He has to deal with mind in all forms and phases—the rough and uncultured youth; the big boys who come to school to "cipher," and whose first and best intention is to "whip the teacher," if possible; the "young ladies" of the district, whose principal object in attending the winter school is to "have a good time," write notes to the boys, and fall in love with the schoolmaster, if he is good looking!—a middle class of pupils, some of whom, perhaps, really desire to learn, and the "wee toddling little ones," with fresh, innocent faces, to whom their primers and their teacher are alike an unfathomable mystery. Such is his work; with all this combustible material, ready to ignite and explode at the first jarring chord, with all these human needs and capabilities, and these human souls full of an eternal life and an illimitable humanity, with all the universe in their leaping pulses, reaching out, with eager, grasping hands, into the infinite for life—life in a two-fold acceptation—this ever-present, quickening, pulsing, throbbing dream, and a life terminating only in a Great Beyond, unknown and immeasurable.

It has long been an established principle of education that the work of the teacher does not consist in the communication of knowledge, the imparting of mere facts and principles, the memorizing of terms and statements from a text-book, and the regarding as a standard of excellence mere fluency of speech and accuracy in repeating terms. It does not consist in inserting facts in the pupil's memory, or stowing away in his mind a certain number of ideas per day, or surfeiting him with an immensity of words, phrases, and sentences, as we would throw potatoes into an empty cellar or fuel into a stove on a cold winter night. Not only must we dismiss all these bare mechanical appliances, which liken the mind to an unfilled barn ready for the storage of an abundant harvest, but we must also remember that education does not consist in mere intellectual dexterity, adroitness, and agility of brain, a capacity for solving puzzling riddles and problems, and a facile and ready memory.

Education is the training of the intellectual powers, but it is not confined to this alone. It includes the training of the whole human soul, with all its separate endowments and functions; the training of the sensibilities, which are the springs of action, the feelings, the judgment, the imagination, the creative faculties, the power to know, to ascertain truth, and that truth for the love of truth itself. It is the moulding of human character, the forming and fixing of future aims. In fact, it is the development, not of the mind, but of the MAN. Even of a tree, we do not rear one branch independently of all the others, neither does Nature send her life-giving currents to one part only, leaving the others to droop and die for want of proper nourishment; but all receive alike, each bud, stem, leaf and tendril.

In a word, the work of the teacher, in any worldly as well as a Christian sense, is the training of the man. It is not alone the intellectual powers that must be cultivated, but it is the leading of the whole human soul outward, onward, and upward —out of himself, into a higher range of thought, to grapple with the world and its unfathomable mysteries—onward, to take his place in the broad arena of life, to realize the highest development of human capacity, to become to others a foutain of inspiration, a wise counsellor, an inspiring teacher, a divine philosopher—upward into that inner, higher life, which gives us a greater knowledge of the deeps of the human heart, which makes us more courteous, more charitable, more sympathizing with sorrow, more tender with the erring, and more indignant at wrong. Over the portal at Delphi was written "Know thyself." In the same spirit speaks the Christian poet:

> "Unless above himself he can
> Erect himself, how mean a thing is man!"

How we shall accomplish this ideal of the true educator and how best promote these results, are the ever-recurring questions. The "What" is an easy problem, but the "How" one of more difficult solution. Shall We say that object teaching is the path to these almost inaccessible heights? It is only as a drop in the illimitable ocean; and yet, well understood and rightly conducted, it may become a vast power, a force which shall take the teacher out of himself, away from hackneyed text-books and servile imitators, and make him a *living* teacher—a teacher of *realities*. These principles, which underlie object teaching and which have given it its great success, are of as much practical benefit and can be applied with as great an advantage to an exercise in arithmetic or astronomy as to a lesson upon a potato. The philosophy of questioning—an important part of this science, and one which receives but little attention from our American instructors—the leading of the pupils out of themselves, to study, examine, and classify truth, bears an important part in the discipline of the mind; and thus the teacher who well fortifies himself in this subject will carry these methods and principles into every shade and phase of his work, and they will become such a part of himself that he will be, in every sense of the word, an *Object Teacher*—not a teacher of object lessons. Every branch of science with which he comes in contact will be taught as an active, living reality, and not a dry, abstruse art, which the child is to master, no matter how ponderous, upon the maxim of our mediæval ancestors, that "They will know all about it when they get to be older!" It is these methods, carried into every branch of pedagogy, that constitute the chief success of the so-called "Object Teacher." Every lesson learned will be explained and illustrated by objects around him. An ex-

ercise in geography will not be a mere repetition of senseless words and paragraphs, descriptive of continents, islands, and oceans, while no clear mental conception of these divisions is obtained; but a living picture of mountain, valley, tree, and forest, will be brought before his mind's eye, and it will be seen in all its beauty and distinctness. Trivial incidents will be seized upon to render more lucid some abstruse point in those sciences to the young tyro so mysterious. A thunder-storm, a bright ray of sunshine, so well serve to illustrate those common truths of which a great part of our farming population are in utter ignorance, and which should be, to every school-boy, household words.

What vivid conception may be evolved from a reading lesson descriptive of an irruption on Mount Ætna! Those scenes, enlivened by a faithful imagination, will be surpassed only by the grandeur of the scene itself; and what eager desires and lofty resolves may not be implanted in the mind by one such exercise? How many paths in our own future lives have been marked out by one such awakening of the imagination by a master spirit! How many a Stanley, how many a Livingstone, has been created by similar circumstances! And how such lessons bring out heart-thoughts and feelings! Many a lasting friendship is made by one familiar conversation in school. The pupil feels that he has a wide-awake teacher and that that teacher is his friend. Personal remembrances, warm hand-clasps, heart-sympathies, constitute the chief pleasure of existence. Another way in which these methods of recitation are beneficial is the breaking up of that dreary, never-ending, wearing-out routine that destroys the life of both teacher and pupil. No occupation in life is entirely free from its paralyzing influence, but the vocation of the teacher, more than all others, is exposed to its blighting torpor. We can easily conceive of a school room where the bare amount of necessary instruction is given by a sort of machinery, the children going through the daily formula of recitation like so many mummies playing on a hand organ, and the pedagogue performing his accustomed talk like a saw-horse in a treadmill. But what a spiritless, unmeaning picture is presented to our view! What a desert of blank, expressionless faces! No enthusiasm here. No bright eyes snapping with joy at the solution of some difficult problem, or the answer to some subtle analysis in reasoning—no aspirations, no earnest countenances betokening lofty aims and noble purposes, no heart-yearnings and sympathies. Only a dreary round of daily task-work, the monotony never broken, save by the glad shout of freedom as the ropes and pulleys are laid away for a few hours' release from the heart-sickening torture! To what a bleak degradation does that teacher descend who turns his vocation into such a routine as this! Let everyone upon the threshold of his acceptance of a life-work resolve to be something more than a maker of brick turning out so many blockheads from so much stubble!

CHOICE MISCELLANY.

THE GOLDEN SIDE.

There is many a rest in the road of life,
If we would only stop to take it;
And many a tone from the better land,
If the querulous heart would make it.
To the soul that is full of hope,
And whose beautiful trust ne'er faileth,
The grass is green and the flowers are bright,
Though the winter's storm prevaileth.

Better to hope, though the clouds hang low,
And to keep the eyes still lifted;
For the sweet blue sky will soon peep through,
When the ominous clouds are rifted.
There was never a night without a day,
Or an evening without morning;
And the darkest hour, as the proverb goes,
Is the hour before the dawning.

There is many a gem in the path of life,
Which we pass in our idle pleasure,
That is richer far than the jewelled crown,
Or the miser's hoarded treasure;
It may be the love of a little child,
Or a mother's prayer to Heaven,
Or only a beggar's grateful thanks,
For a cup of water given.

Better to weave in the web of life
A bright and golden filling,
And to do God's will with a cheerful heart,
And hands that are ready and willing.
Than to snap the delicate, minute thread
Of our curious lives asunder,
And than blame Heaven for the tangled ends,
And sit and grieve and wonder.

THE SOUL.—I take it to be true of the intellectual, as of the natural creation, that it profits not a man if he gain the world and lose his own soul. Let not, therefore, philosophy take up our life, so as not to leave us leisure to prepare for death. We may visit Athens, but we must dwell in Jerusalem; we may take some turns on Parnassus, but should more frequent Mount Calvary—and we must never so busy ourselves about the "many things," as to forget the "one thing needful"—the good part which shall not be taken away from us.—*Hon. Robert Boyle.*

HOW TO MAKE A BLACKBOARD—At the request of several subscribers, we produce the famous MICHIGAN TEACHER recipe for making a liquid preparation, which may easily be laid upon a wall or board, and will give a very excellent surface for chalk or crayon: Mix twelve ounces of shellac, three of ivory black, three of lampblack, and five of rotten stone, in one gallon of alcohol—or, for a smaller quanity, in the same proportions. The rotten stone is a new ingredient, which Prof. Goodison, an expert in such matters, says will improve the composition.—*Michigan Teacher.*

THE DIRECTION OF THE YOUTHFUL MIND.—How greatly do parents and preceptors err in mistaking for mischief or wanton idleness, all the little manœuvres of young persons, which are frequently practical inquiries to confirm or refute doubts passing in their minds. When the aunt of James Watt reproved the boy for his idleness, and desired him to take a book, or to employ himself to some purpose usefully, and not to be taking off the lid of the kettle and putting it on again, and holding now a cup and now a silver spoon over the steam, how little was she aware that he was investigating a problem which was to lead to the greatest of human inventions!

RECEIPT FOR MAKING COMPOSITION BLACK-BOARDS ON THE WALLS OF SCHOOL-ROOMS.—For 20 square yards of wall:—take 3 pecks of Mason's Putty; 3 ditto of clean sand; 3 ditto of ground plaster; 3 pounds lampblack, mixed with three gallons of alcohol.—*Note*—The alcohol and lampblack must be mixed before it is put into the plaster. This sort of black-board is in use in the Normal and Model Schools, Toronto, and has in every respect answered the purpose admirably. A cloth or lambskin wiper should be used to clean the black-board. A narrow trough should also be placed below the black-board to receive the chalk and wiper.

EDUCATION OF THE SOUL.—Nothing more clearly reveals the celestial origin of the human soul, than those emotions which none of the inferior animals experience, and seem like an introduction to a more exalted state of existence.—*Madame de Sausure Necker's Progressive Education*, tome ii.-p. 155.

THE AFFECTIONS.—Parental love is the purest of all human affections. Other ties time or distance may wear out, rivalry, jealousy, envy, or interest turn into hatred; but a parent's love can know none of these —it follows its object near or distant unabated, unwavering, through "good and evil report"—through "glory and shame."—*Montgomery.*

"A HAPPIER CONDITION OF SOCIETY is possible than that in which any nation is existing at this time, or has, at any time existed. The sum both of moral and physical evil cannot indeed be removed, unless the nature of man were changed; and that renovation is only to be effected in individuals, and in them, only by the special grace of God. Physical evil must always to a certain degree, be inseparable from mortality."

A PRACTICAL JOKE AND A SOPHISM.—Thelwall thought it very unfair to influence a child's mind by inculcating any opinions before it had come to years of discretion to choose for itself. I showed him my garden and told him it was my botanical garden. "How so," said he, "It is covered with weeds." "Oh!" I replied, "that is because it has not yet come to years of discretion and choice. The weeds, you see, have taken the liberty to grow, and I thought it unfair in me to prejudice the soil towards roses and strawberries."—*Coleridge.*

THE INFLUENCE OF A MOTHER'S LOVE.—Children notice a mother's love. They see her grief at her loss, or her watchfulness in sickness, or her sympathy for others, and their hearts are touched by such manifestations of feeling. Such things sink deep into their young spirits, and all the experiences of after life will not efface them. Was it not such a love that led Paul F. Richter to speak of his poor humble mother with such overflowing tenderness? "Unhappy is the man," said he, "for whom his own mother has not made all other mothers venerable!" And elsewhere he writes, "O thou that hast still a father and a mother, thank God for it in the day when thy soul is full of joyful tears, and needs a bosom wherein to shed them!"—*R. C. Waterson.*

EXPRESSION.—Children should be educated in good habits of *Expression.* They must not only know how a problem is solved, but must be able to state the method clearly and fully. Quite as much is gained by endeavors to communicate knowledge as by solitary study. This habit gives a command of language, which the scholar will hardly otherwise acquire. It shows him the extent of his resources, and where he needs fresh application. It gives him fluency of utterance, and at the same time grammatical propriety. In some schools the teacher is content with guessing out the ideas and meaning of the scholars. They speak by hints, in half-formed sentences, and with a tone and manner so loose, disjointed and slovenly, as to savor of any place rather than a school-room. It is quite as important for the education of a child that we should understand him, as he us. Thus only can we determine, whether he is really acquainted with the subject before him, whether he has just ideas, or is only giving us mouthfuls of words.—*Mr. Muzzey's Lecture before the American Institute of Instruction.*

MAN LIKENED TO A BOOK.—Man is, as it were, a book; his birth the title-page; his baptism, the epistle dedicatory; his groans and cries, the epistle to the reader; his infancy and childhood, the argument or contents of the whole of the ensuing treatise; his life and actions, the subjects; his crimes and errors, the faults escaped, his repentance the connection. Now there are some large volumes, in folio, some little ones in sixteens, some are fairer bound, some plainer, some in strong vellum, some in thin paper, some whose subject is piety and godliness, some (and too many such) pamphlets of wantonness and folly; but in the last page of every one there stands a word which is *finis*, and this is the last word in every book. Such is the life of man; some longer, some shorter, some stronger, some weaker, and some fairer, some coarser, some

holy, some profane; but death comes in like *finis* at the last, to close up the whole; for that is the end of all men.—*Fitz Geoffry, 1620.*

A FACT WITH A MORAL.—A celebrated artist in one of his rambles, met with the most beautiful and interesting child that he had ever seen. "I will paint the portrait of this child, he said, "and keep it for my own, for I may never look upon its like again." He painted it, and when troubles came and evil passions moved his spirit to rebel, he gazed upon the likeness of the boy, and passion fled, and holier thoughts entranced his soul. Years passed away, and at length, within a prison's walls, stretched upon the floor of stone, he sees a man, stained with blood, with glaring eyes and haggard face, and demoniac rage, cursing himself and his fellow-beings, and blaspheming God, as he lay waiting for the moment of his execution. The artist transferred his likeness also to the canvas, and placed it opposite to the child's. How striking, how complete the contrast! The angel boy—the fiendish man! What must have been the feelings of the artist, when, upon inquiry, he ascertained that both portraits he had made were of the same individual! The beautiful, the innocent child, had grown into the hideous, the sinful man!

EDUCATIONAL INTELLIGENCE.

CANADA.

—The East Middlesex Teachers' Association will meet in London, on the 14th inst.

—At the recent session of the Middlesex Co. Council, a resolution was adopted opposing the formation of Township Councils into Township School Trustee Boards.

—We have before us an able and lengthy report for the year 1872, presented at the recent session of the Lanark County Council, by H. L. Slack, Esq., M.A., County Inspector of Schools. Mr. Slack complains of the same difficulty experienced in nearly all parts of the Province, viz:—irregular attendance. The number of children of school age in the County was 7,500, the number entered on the Registers was 1st half-year 5,457, 2nd half-year 4,915: while the average was only 2,756 for the 1st half-year, and 3,620 for the 2nd half-year, or 3,188 for the whole year. Mr. Slack advocates compulsory attendance, and Township Boards of Trustees, and strongly recommends *Competitive Examinations.* At the two examinations for granting certificates to teachers in July and December last, 83 candidates presented themselves, of whom 3 obtained Second Class, and 43 Third Class Certificates. Many of those who obtained Third Class Certificates proved unsuccessful. The county Teachers' Association is in a flourishing condition.

—From the report of J. C. Glashan, Esq., Inspector Division No. 1, Middlesex, we learn that there are in his Division 91 rural, 3 Roman Catholic separate, 4 village and 6 town schools. At the rural schools there was an average attendance for the first half-year of 3,794 and for the second half-year of 3,110, or for the whole year 3,479, making an increase of one per cent. over 1871. He suggests whether it would not be better that owners of land, instead of being compelled to sell land for school sites, should only be compelled to lease it for such time as it is occupied for school purposes. He also points out that while Trustees can be authorized to borrow money, the Township Councils levy the rates, and the amount is not reported, only the amounts raised by the Trustees. He thinks this mode of raising money very complicated. He also points out that in the case of altered or united school sections, while provision is made for the division or appropriation of the school fund and property, there is no provision for the division or appropriation of moneys on hand arising from other sources.

—It is designed by the Legislative Assembly of Ontario to establish a Museum of Geology and Mineralogy in connection with the School of Technology, now established in Toronto. It is also intended to affiliate the latter School with the University, so far as the studies pursued in the two in-

stitutions correspond. There is no doubt but the arrangement to be made will open out a very interesting field of research, and those who have any liking for the study of these interesting sciences, can find an excellent opportunity for extending their investigations and increasing their general knowledge.

COUNTY OF LANARK TEACHERS' ASSOCIATION.—The third quarterly meeting of the above Association was held in Smith's Falls, on Saturday the 18th ult. H. L. Slack, Esq., M.A., County Inspector, the President of the Association, occupied the chair. A very carefully prepared paper on "Education," was read by Mr. Stewart Moag, Head Master of the Smith's Falls Public School; and another on "Etymology" by Mr. James H. Stewart, 1st Ass't Master in the Perth Public School, and Secretary of the Association. Interesting and profitable discussions followed the reading of these papers. The President introduced the subject of Township Competitive Examinations, which being freely discussed, the association deputed him to bring the matter before the County Council at their next session, and to ask pecuniary aid from that body for the purpose of carrying out the project. It was decided that at the next meeting, to be held at Carleton Place, on April 14th, there should be a Public Evening Entertainment, the proceeds of which should be devoted to the purpose of a Teacher's Professional Library. The Association is in a flourishing condition.—COM.

TEACHERS' ASSOCIATION NO. 1, MIDDLESEX.—The fifth meeting of the Association was held in Strathroy, on the 7th & 8th inst. The President, J. C. Glashan, Esq., occupied the Chair. Mr. E. Rowland was appointed Treasurer in place of Mr. D. A. Stewart, who has left the County. Mr. C. G. Anderson gave an Object Lesson, subject "India Rubber." Mr. Wm. Bell conducted a class in Reading. Mr. Wood also gave a lesson on Reading, bringing out various interesting points. A very instructive discussion followed. The subject of the ONTARIO TEACHER was introduced by Mr. McColl, and very favorably received. On the evening of the 7th inst., a very successful literary entertainment, consisting of Readings by Professor A. M. Bell, was given in the Town Hall. The Saturday morning session was occupied chiefly by Mr. Glashan in giving some excellent and instructive hints on "How to Study." The next meeting of the Association will be held on the first Saturday in June. The following is the Programme; "School Discipline," Mr. McKerachar; "Text Books on Arithmetic, General History, and Grammar," Mr. J. B. Shotwell; "How best to teach the Verb," Mr. D. A. Stewart; "School House Plans," Mr. S. Cooper.

UNITED STATES.

— The Louisville Educational Association held an interesting meeting, Jan. 11th.

— Mr. Briggs has succeeded O. Hosford, as State Superintendent of Michigan.

— The Thirteenth Annual Meeting of the National Educational Association will be held in Elmira, New York, on the 5th, 6th, and 7th days of August, 1873.

— The State Teachers' Association met in Nashville, Tennessee, January 22nd and 23rd. The attendance was not large, but the exercises were earnest and important.

— While Harvard University is not yet disposed to throw open its doors to women as students, it has adopted a plan to encourage their higher education. It is proposed to hold annual examinations for women, and to grant those whose attainments reach the required standard, certificates showing their proficiency.

— The meeting of the State Teachers' Association, Kansas, held in Humboldt, Dec. 25th, 26th and 27th, 1872, was not largely attended, owing to the severity of the weather. The Association was welcomed by W. R. Spooner, formerly of Ohio, who congratulated the members upon the educational progress of the past year. State Superintendent McCarty gave an able address on the changes needed in the school system of Kansas.

— The eight State Normal Schools of New York are unusually full this term. The number of students who have declared their intention of teaching in the schools of the State, and have received appointments from the State Superintendent, is as follows:— Albany, 285; Buffalo 164; Fredonia, 160; Oswego, 256; Cortland, 241; Genesee, 145. The number at Pottsdam and Brockport is not reported. This indicates an increasing public appreciation of normal training in the Empire State.

EDITOR'S DRAWER.

THE Toronto *Mail* takes us severely to task for advocating an Elective Council of Public Instruction, and broadly hints that in advocating such a measure we have presumed to speak for the Teachers and Inspectors of the Province. Now while we have no hesitation to speak out on behalf of such a very respectable body of men as the *Mail* refers to, when they enunciate principles we hold in common, we would just simply request the *Mail* to turn over its fyle of August last, and it will find there recorded in its own report of the proceedings of the Ontario Teachers' Association, resolutions, unanimously adopted, embodying the principle of an Elective Council of Public Instruction. A reference to the proceedings of the Convention of Inspectors, held in Toronto in January last, would also inform the *Mail*, that when a resolution to the same effect was proposed, not a single objection was raised, though several Inspectors addressed the Convention. It is therefore quite clear, that while not pretending to speak for either Teachers or Inspectors, both of whom are quite able to speak for themselves, we do represent such views as they have already declared at their respective Conventions.

In opposing the elective principle on the basis which we drafted in the first number of the TEACHER, the *Mail* impugns the honor and moral rectitude of the whole teaching profession, by insinuating that a Council composed of two-thirds Teachers would be prompted by "professional sympathy to make everything as easy and independent for themselves as possible." Does the *Mail* mean to say that the Teachers of Ontario are not fit to be entrusted with a seat at the Council of Public Instruction? Does it mean that they are so selfish and so unprincipled, that in order to prevent their *legislating away* the people's rights, and the blessings of a free education, they must be shut out from any position that would give them a voice practically in school legislation? Or are the teachers of Ontario of such inferior attainments that they possess neither the ability nor the judgment to legislate? By the *Mail's* own logic, however, it would appear that practical experience as a teacher was considered a qualification in the first Council of Public Instruction.

If a Council then, with four practical teachers was such a boon, and has legislated so wisely, and shewn such "sympathy" with the teacher, and evaded the "hostile" criticism of its determined enemies, how much more serviceable would a Council of six be? It is assumed by the *Mail* that the *practical* element is that which is really the most useful. Then the *more* practical the *more* useful.

The *Mail* again asks whether "Boards of Trustees or Municipal Councils would be likely to respect and submit to school regulations made by a body composed of two-thirds teachers." How cynical and supercilious! The *Mail*, in its lofty ideas of what society demands, could not for a moment entertain the deliberations of such despised, obscure, and good-for-nothing men as the teachers of Ontario.—What do they know? this inflated cynic asks. "Who cares for their decisions? Who would submit to them? And thus wrapping itself up in a panoply of arrogance, it looks down with scorn on men, who we venture to say can make themselves felt, whether the *Mail* will hear or forbear.

The *Mail* endeavors to meet our argument in favor of the practical element on the Board of Public Instruction by pointing out that four out of nine of its members were practical teachers. It admits, however, that only five attended the meetings of the Board during the past year. Does not that fact itself furnish an argument for a change? A Board of nine and only five, a bare quorum, taking interest enough in the education of the people to attend its meetings! Were they elected would such be the case? Do representative bodies ever act in this manner?

"But then," says the *Mail*, "look at their regulations!" "Neither Mr. Ross, nor any other impugner of the Council has been able to shew any defect." We reply Mr. Ross has not, either by inuendo, or in any other way, impugned the Council or its venerable head, Dr. Ryerson. We challenge the *Mail* to point it out. Mr. Ross, however, does not fear to assert *principles* of legislation, no matter who may *feel* themselves impugned. His opinions of the usefulness of the Council of Public Instruction, even as now constituted, will not prevent his advocating a change, which, in his opinion, is calculated to make it more useful. No man has spoken or written in higher terms of the ability of our Chief Superintendent, and no one holds him in greater esteem than Mr. Ross does, but that which the Teachers and Inspectors of this country demand, that which conforms to the genius of our institutions, that which is based on the sound legislative principle, "that the party governed should have a voice in appointing the governors," Mr. Ross has no fear of advocating, and no doubt as regards the result.

The *Mail*, in its concluding remarks, endeavors to

make it appear that Mr. Ross, of all other men, is under obligations to the Council of Public Instruction. First by their "Regulations" he was made a first-class teacher; that led to his appointment as Inspector, then followed his political advancement, *ergo* argues the sage editor, Mr. Ross would never be anybody but for the said "Regulations!" Now look at his ingratitude. He wants to destroy the Council. But the *Mail's* logic is weak, and its hypothesis false. "Regulations" cannot make a *first-class* teacher of any man, neither can they make a man a County Inspector, nor can they send a man to Parliament. We know what can do all these things, however, and for the information of the *Mail* we would say that it takes intellect and education to make a first-class teacher; along with these the authority of a County Council will make him an Inspector, and a majority of the electors in a Riding will enable a man to write M. P. after his name.—These are distinctions open for competition to any man in this country, though it is quite evident that "Regulations," no matter by whom passed, would not give fitness to *every one.*

—We again earnestly invite Inspectors and all others to send us items of educational intelligence. So far as Ontario is concerned we must depend on them almost entirely to make this department of the TEACHER interesting.

—We again invite Teachers to send us hints and suggestions of a practical character. They can thus enable us more effectually to carry out our design, and make the TEACHER an all but indispensable aid to the profession in Ontario.

WHAT THEY SAY OF US.

To our brethren of the Press our acknowledgements are due for the very kind and cordial manner in which they have noticed the initial number of the ONTARIO TEACHER. Out of the very numerous and flattering notices which have reached us, we have space for only a few extracts:

Very neatly got up.—*Milbrook Messenger.*

We wish it success.—*Meaford Monitor.*

A new and well got up periodical.—*Toronto Mail.*

Should be in the hands of every teacher and trustee in the land.—*Brantford Expositor.*

Fully bears out the promises of the Prospectus.—*Woodstock Review.*

Ought to secure a good healthy support.—*Morrisburgh Courier.*

We hope the ONTARIO TEACHER may obtain a host of readers.—*Essex Record.*

A neatly got up serial, and promises to be a source of much information.—*Clinton New Era.*

Very well printed and neatly got up. Let every teacher send for a copy.—*Peel Banner.*

Announces a large staff of learned contributors.—*Norfolk Reformer.*

Designed to be pre-eminently the teacher's journal.—*L'Orignal Advertiser.*

An able, liberal, and vigorous advocate of Teachers' rights and claims.—*Walkerton Telescope.*

The selections are excellent, and we have no doubt it will be hailed by the teachers of Ontario as a valuable auxiliary.—*Kingston Daily News.*

Highly creditable to the publishers. * * Very creditable in a literary point of view.—*Orangeville Sun.*

The original matter is spirited, and the selections have been made with great care and judgment.—*Montreal Witness.*

Neatly printed, and contains a number of able articles. Every teacher should subscribe for it.—*Listowell Banner.*

Creditable, and worthy of long life. We commend it to the hearty support of teachers.—*Oshawa Reformer.*

Neatly printed, well got up, and well calculated to serve the interests it advocates.—*Whitby Chronicle.*

Has been established as a thoroughly practical periodical. Creditable to the publishers.—*Toronto Globe.*

Will prove a valuable adjunct to the publications of Canada. Should be in the hands of every trustee and teacher.—*Newmarket Courier.*

Designed to fill an important place in the journalistic field. Will be undoubtedly the Teachers' Magazine.—*Mount Forest Confederate.*

A neatly printed pamphlet. Should be in the hands of every teacher in Ontario.—*Berlin Telegraph.*

Full of interesting matter to teachers. An acceptable addition to the many magazines published.—*South Simcoe News.*

Well printed, and contains a vast amount of information, not only to teachers, but to the community at large.—*Waterford Express.*

The typographical and general appearance are excellent, and the well arranged contents very interesting.—*Ham. Times.*

The paper and printing are good, and the general appearance and style unexceptionable.—*Evangelical Witness.*

An excellent and neatly printed monthly. Every teacher in the country will find it to his advantage to become a subscriber.—*St. Mary's Argus.*

Worthy not only of the patronage of school teachers, but of all interested in the education and welfare of youth.—*Ingersoll Chronicle.*

Fully bears out the expectations we formed as to the useful character of the work. There will be no lack of original matter.—*Sarnia Observer.*

Certainly a most creditable magazine. The "TEACHER" is in first-class hands. The typographical get up is also of a very superior kind.—*St. Catherines Times.*

The publishers are men of much experience and ability, and we have no doubt they will make the TEACHER worthy of a very generous support.—*St. Thomas Home Journal.*

Has a wide field of usefulness before it. We should judge that it will be successful in answering the object for which it is designed.—*Dunville Gazette.*

Decidedly a move in the right direction. The selections are good, and so is the collection of useful hints and facts bearing on the teacher's work.—*London Advertiser.*

Very neatly and tastefully got up, the workmanship being equal to that of any journal published in the Province. The editorials are written with marked ability. We heartily commend it.—*Bothwell Advance.*

The elevated tone of its compilation, and the careful manner in which it is conducted, together with the dignity of its mission combine to anticipate for it a hearty reception from every true friend of education. It can not fail to be an invaluable boon in assisting those engaged in a profession second to none in its importance and usefulness.—*Glencoe Transcript.*

We hail with much satisfaction the advent of this new educational monthly. We are refreshed by the manly ring of its prospectus, and the unofficial quality of its style. Its article on the Council of Public Instruction is well timed, and it conclusively proves to every disinterested reader the urgent necessity of the reconstruction of that body upon a representative basis. If the educationists of Ontario know what is to their exceeding profit, they will liberally sustain their new representative.—*St. Catherines Daily News.*

We have also received a large number of communications from Inspectors and others, containing words of kindness and encouragement, and fully confirming our settled conviction that some such journal as the ONTARIO TEACHER was a felt want among the teachers of Ontario. We take the liberty of making a few extracts:

I must say I am well pleased with it.—*G. D. Platt, Inspector Co. of Prince Edward.*

I am well pleased with the manliness of tone by which your editorial matter is characterized, as well as with the superior mechanical execution of your journal.—*J. H. Hunter, M. A., St. Catherines.*

If each issue throughout the year displays the ability of this pioneer number, it will be an invaluable periodical to the teaching profession.—*Thos. Pearce, Inspector Co. of Waterloo.*

Its appearance is decidedly attractive, and the few pages I have been able to read, are worthy of a place in such a publication.—*R. A. Fyfe, D. D., Woodstock.*

I am happy to welcome your journal as something we, teachers, have long been anxiously looking for, and I am confident your success is placed beyond the least doubt.—*Will. Henry Gane, Ingersoll.*

It was with much pleasure that I received the first number of your interesting paper. I already brought the matter before our association here, and it was very favorably received.—*H. L. Slack, M. A., Inspector Co. of Lanark.*

Such an undertaking ought to meet with liberal encouragement, and if it be supported and sustained by the profession as it deserves to be, will undoubtedly greatly aid the cause of education in our Province.—*J. A. McLellan, M. A., Inspector of High Schools.*