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Editorial Notes.

IN Mr. Wallis's article in last issue on "Our Over-crowded Profession," the words "first-class or second-class certificates" should be read after the words "a sufficient number of teachers holding," in first column.

WE congratulate both our readers and ourselves on the increasing amount of original matter we are being enabled to give them, in the different departments. We are always especially glad to receive anything in the shape of good hints and methods for schoolroom work. Those who are conscious of success in their special modes of teaching certain subjects should be generous in letting others have the benefit of their study and experience.

DO not fail to read the excellent article on "The Bearing of Psychology on Teaching," on our "Special Article" page in this number. Our thanks and those of our readers are due to D. J. Goggin, Esq., Principal of the Manitoba Normal School, for his kindness in securing a copy of the paper and forwarding it for the benefit of our columns. We have not in a long time seen so forcible a plea for the study of Psychology by the teacher. We commend it to every reader.

IS not an undue proportion of the time of the teachers in the High Schools and Collegiate Institutes taken up with those preparing for University matriculation, or for teaching and other professions; to the detriment of the great majority whose school education ends with those schools? We ask for information. If such is the fact, it is the fault, we know, not of the teachers, but of the code. We should like to hear from some of the High school masters upon the subject.

IT is encouraging to note on every hand indications that a larger place is henceforth to be given to English in the programmes of institutions of learning of all grades. The following recommendation submitted by Principal Grant, at a recent meeting of the Governors of Queen's College, Kingston, is a move in the right direction:—

That the present chair of English and history be divided into two: Prof. Ferguson being appointed professor of history—ancient, modern, and constitutional; and a professor of English language and literature advertised for in Canada and Great Britain.

THERE is force in the contention of Mr. Gibson in the Legislature that those who are seeking higher education receive more advantages in the schools than those who are obliged to content themselves with what the public schools can give. Not less for the higher institutions but more for the lower, is probably what is needed. What about the agriculture that was to be taught in the public schools? How much is being done to cultivate in boys and girls a taste for agricultural pursuits, and an ambition to bring high intelligence and full scientific knowledge to bear upon them?

THE friends of the Mimico Industrial School complain of the meagre aid (\$1,000) given to it by the Government and Legislature. We do not know a worse kind of institution upon which to practice economy than the industrial school. We should like to see an efficient one in the neighborhood of every city and large town in the Dominion, well supported, if necessary, by provincial funds. It is more than doubtful if any other kind of educational institution would pay better dividends in the shape of promoting the real welfare of the country. The accounts of every such school, if it be efficiently conducted, would show in the long run two large items to credit, viz: saving in expense of detecting and punishing crime, and earnings of industrious citizens manufactured out of material which would otherwise have been worse than wasted.

THERE are, it is said, several Canadian competitors for the new chair of Political Science in the University of Toronto. If among the number can be found one thoroughly qualified to handle the complicated and difficult subjects included in the department, it will be gratifying to all concerned, the Minister of Education, the University, and the Canadian public. Judging from comments that have appeared some have the idea that Political Economy is the main or only subject to come within the purview of the new chair. This is, we believe, by no means the fact. Constitutional History, International Law, and Comparative Politics, will also come within its scope, and the first named, at least, can be second to no other in the demands it must make upon the time and energies of Professor and students. In order to explore successfully this wide and important field the new professor will need to add a strong and healthy physique to his other qualifications.

Candidates at the non-professional examinations who propose taking Botany as one of their optional subjects will do well to observe the following notice from the Education Department:—

"As already intimated, all Candidates will be required to describe some plant (including root, leaves, etc.) to be submitted to them by the Presiding Examiner. The same plant shall be submitted to each candidate at an examination centre, and the Presiding Examiner shall see that *one* sample thereof is sent to the Department with the answer papers in Botany. The plants should belong to one of the orders prescribed for the course; but, if others be submitted, due allowance will be made by the examiners. The Presiding Examiner shall also see that the plants submitted to the candidates are not amongst those fully described in Spotton's Botany, Part I. In the case of the I. Class C. (or Honor) examinations, the plants for examination will be sent from Toronto to the different centres. Each candidate at the different examinations is required to provide himself with a hand lens and a sharp knife."

"I HAVE seen little children wearily wending their way to the heated and fetid schoolroom, each with a bag of nearly a dozen books—in fact, about as much weight as one of them was physically able to carry." So says Mr. Allen Pringle in a letter to the *Mail*. We have lately seen it asserted, on what purported, we think, to be medical authority, that a considerable percentage of the children of the United States have one shoulder lower than the other, or something of that kind, in consequence of carrying heavy loads of school books. We would like to ask our readers, the teachers of Canada, whether the above is a true picture of the average small child on his way to a Canadian school. We do not believe it is. But if it is, a radical reform is needed at once. The bag of books must signify a long list of lessons to be prepared at home. That means wrong notions of education and downright cruelty to children. Do the children "wearily wend" their way to the schoolroom and enter it with reluctance and dread? They should go bounding to it as to a palace of delight. How is it with *your* school?

SOME of the papers are discussing the teacher who sneers. We wonder if he is to be found in Canadian Schools—the man, or woman, we mean, who takes advantage of a position of superiority to launch jeers and jibes at the defenceless pupil. The latter of course cannot retort. To do so would be insubordination. We can think of few meaner little cruelties. And yet we fear most of us have been guilty of it in moments of irritation. Even that we should hold inexcusable at the bar of conscience. It is ungenerous, contemptible. But what shall we say of the teacher who uses this weapon habitually? There are too many such. They do incalculable mischief. Many a promising pupil has been driven from school and college, deprived of his birthright of education, through dread of them. In many another case the shaft

of ridicule has rankled in the sensitive breast until the whole spirit has become poisoned. The teacher who would be respected and beloved by his pupils, or who would influence them for their good in all the future must be careful to save his taunts and sarcasms for those who stand on an even footing and may retort in kind.

WE commence in this number a Science Department to be edited monthly by Mr. C. Fessender, B.A. We are not of the number of those who think science, according to modern methods, the be-all and end-all of education. But on the other hand, we cannot but think the absence of anything deserving the name of scientific instruction in our public schools a strange and serious defect. Owing to this fact we have never been able to give to science in the JOURNAL the prominence to which its real educational importance entitles it. It is a great reproach to our school system that boys and girls, even in the country, should be going out of our public schools by thousands, after having been in them for years, without knowing the simplest scientific facts about the trees, plants, birds, insects, etc., which abound in their own localities. Many of them we fear, like ourselves when we left school a score or two of years ago, can scarcely distinguish half a dozen kinds of trees in the neighbouring woods. The great loss is, of course, not so much in the lack of the knowledge, as in the lack of training of the perceptive faculties, and deprivation of all the sources of enjoyment and of profit which are the result of the power and habit of close observation.

WHILE "man's inhumanity to man makes countless thousands mourn," man's inhumanity to beasts and birds fills the animal world with suffering. One of the most pleasing proofs of the gradual elevation of our race is the growth of the humane spirit in the treatment of the lower animals. The efforts that are being put forth for their protection from wanton cruelty are worthy of all praise. We have before us the report of the eleventh meeting of the American Humane Association, held at Rochester in October last. It shows that an excellent work is being done by the friends of mercy in the United States and Canada. "Everywhere," says the president, "there is a marked change in feeling and in methods." Professor Swing, of Chicago, says, "One of the most impressive scenes in our age is that of the rational creature man hurrying to the rescue of the dumb brute. The cruelty which was once thought a small matter has revealed its hideousness and become a sin." But though much has been done still more remains to be done. Canadian legislation, if not Canadian sentiment, is still behind in this matter. To inculcate feelings of tenderness and pity for the inferior animals, is to educate the noblest sentiments of humanity, and is a work which should enlist the sympathies and aid of every teacher. The next annual meeting of the Humane Society is to be held in Toronto, September 19, 20 and 21.

Educational Thought.

"CURIOSITY is as much the parent of attention as attention is of memory. To teach one who has no curiosity to learn, is to sow a field without ploughing it."—*Whately*.

MY ideal of an educational institution is that it should be a home for the development of character quite as much as if not more than, a school of learning or a place for original research. The longer I live the more profoundly am I convinced that the highest type of character can only be formed on a religious basis.—*Rev. Principal Grant*.

"THERE is no office higher than that of a teacher of youth, for there is nothing on earth so precious as the mind, soul, character of the child. * * No language can express the cruelty or folly of that economy, which, to leave a fortune to a child, starves his intellect, impoverishes his heart. There should be no economy in education. Money should never be weighed against the soul of the child."—*Channing*.

I HAVE found that to make my pupils work heartily with me, and feel that our interests are one, is to treat them with uniform courtesy and respect. It takes time and patience before the good results are seen, and I suffer many discouragements and heart-aches, but I do think that little by little it cultivates in them a self-respect, a kindness of feeling, and habits of courtesy toward others which gives a happier atmosphere to the room and stimulates them to better work.—*Anon*.

WELL would it be for both teachers and taught, if all teachers were inspired by Plato's ideal of the cultured man, "A lover, not of a part of wisdom, but of the whole; who has a taste for every sort of knowledge and is curious to learn, and is never satisfied; who has magnificence of mind, and is the spectator of all time and all existence; who is harmoniously constituted; of well-proportioned and gracious mind, whose own nature will move spontaneously towards the true being of every thing; who has a good memory, and is quick to learn, noble, gracious, the friend of truth, justice, courage, temperance."—*Page*.

"AND it is a pity that commonly more care is had, yea, and that among very wise men, to find out rather a cunning man for their horse, than a cunning man for their children. For to the one they will gladly give a stipend of two hundred crowns by the year, and loth to offer the other two hundred shillings. God, that sitteth in heaven, laugheth their choice to scorn, and rewardeth their liberality as it should. For he suffereth them to have tame and well-ordered horses, but wild and unfortunate children, and therefore in the end they find more pleasure in their horse than comfort in children."—*Roger Ascham*.

THE very basis of fitness for teaching, so far as it can be gained from study, is a broad and accurate scholarship. To be a teacher, one must first of all be a scholar. So much stress is now placed on method, and the theory of teaching, that there is great danger of forgetting the supreme importance of scholarship and culture. For these there is no substitute; and any scheme of professional study that is pursued at the expense of scholarship and culture, is essentially bad. To be open-minded, and magnanimous; to have a love for the scholarly vocation, and a wide and easy range of intellectual vision, are of infinitely greater worth to the teacher than any authorized set of technical rules and principles.—*Page*.

THE self-made man is badly made who is not ready to confess that other men might have made him better than he made himself, and especially that institutions which gather and treasure up the wisdom of the past, and are complicated instruments perfected by ages, are likely to educate better than an individual mind, however vigorous, or an individual will, however resolute, or a personal aspiration left to itself, however persistent. Who would not rather have, as his ruler, his doctor, his preacher, his attorney, or his judge, the pupil of the best that the world has thought and learned, than the pupil of a master who is master and pupil at the same time, and who, therefore, at any given moment, has an uneducated mind for his educator?—*Bishop Huntingdon; in The Forum*.

Special Papers.

THE BEARING OF PSYCHOLOGY ON TEACHING.*

BY MR. SCHOFIELD, PRINCIPAL OF THE ARGYLE SCHOOL, WINNIPEG.

SUPPOSE yourselves in an art gallery, standing before a statue—e.g. Monteverde's Columbus. So real is this boy of twelve, with his head slightly raised and thrown forward, with the wistful, wondering expression on his face, and the far-away look in his eyes as he tries to see the end of some long, long thought, that you step lightly lest you disturb him and half resolve to speak to him when he resumes his reading.

What does this or any sculpture imply in the sculptor? What does any work of art presuppose on the part of the artist? First, he must have had a clear ideal, created by the imagination and possessing in the harmony of its parts the elements of beauty; secondly, a strong impulse to give, as perfectly as possible, this ideal form and permanence in some material substance; thirdly, a knowledge of the properties of this material; and fourthly, a knowledge of the methods by which his ideal can best be embodied in it, and a practical knowledge of the tools to be used in the process.

The teacher is an artist: ay, if he be a true teacher, he is the highest of artists—almost a creator. And if what has been stated above be required of the sculptor, the painter, or the architect, much more should that higher artist, the teacher, possess equally correct ideals and equally good knowledge of material, methods, and tools.

First, as to *ideals*. What are teachers aiming to do? We can imagine Dr. Arnold replying, "We aim to make each individual a perfect type of full and rounded manhood or womanhood." Herbert Spencer says, "We aim to prepare the pupil to live completely—to rightly rule conduct in all directions and under all circumstances." One educational writer says, "We should aim at the complete and harmonious development of the pupil so that all his faculties shall be brought into the fullest vitality and none of his intellectual or moral resources shall be wasted." Another says that we aim at producing good citizens. But all these statements are at bottom nearly or quite identical: For the type of full and rounded manhood or womanhood will live completely; and complete living is the outcome of correct willing; and willing, to be correct, must have had its source in correct feeling, and must have been submitted to, and endorsed by correct thinking and a good conscience. This certainly implies the full and harmonious development of all the intellectual and moral faculties. That such an individual will be a good citizen goes without saying. And here we come face to face with our subject. What constitutes this harmonious development of all the faculties, intellectual and moral? What is the proper correlation between volition, and thought, and feeling? How does one depend on the others, and how should each influence the others? These are psychological problems, and in psychology alone can we find their solution.

It is no easy task which the teacher undertakes. His ideals are more complex and difficult to realize than those of the artist. The latter strives to represent some one phase of thought, or feeling, or character, or action. The Apollo Belvidere, in its exact and symmetrical development of muscle and limb, in its grace and dignity of pose, is the ideal of physique; there is in the Laocoon the most intense feeling; unconquered and unconquerable will is shown in the Dying Gladiator; Monteverde has made his Columbus the representation of deep and concentrated thought. In these master-pieces the sculptors had to embody ideals which were one-sided. But the teacher's ideal is many-sided. He strives to realize in each individual the perfection of thought, and feeling, and will, and physique.

Secondly, as to *material*. High ideals are not enough; they must be supplemented by practical knowledge. Could Michael Angelo have reared the dome of St. Peter's, had he known nothing of marble; or Guido have painted the Crucifixion, knowing nothing of colours; or Bartholdi have wrought out a Goddess of Liberty, had he no know-

ledge of bronze? Can the carpenter, or the smith, or the shoemaker, knowing nothing of wood, or iron, or leather, produce good articles for our daily use? If a knowledge of the properties of the material he works on is so important to the artist and the artisan, is it of less value to the teacher? No, a hundred times, no! For not only are the teacher's ideals higher and more complex than those of the artist, but his material is also more delicate and difficult to mould. For he deals, not with gross, dead matter, but with a living human soul. It is ever changing even while he works upon it. It is not quite the same to-day that it was yesterday or that it will be to-morrow. It is not quite the same in steady John, that it is in impetuous Harry or gentle Mary.

In infancy the mental life of the child is occupied mainly in the accumulation of percepts; soon he begins to form concepts; and later, to compare these in the operations of judgment and reasoning. All the while he has been acquiring new percepts, forming new concepts, recalling previous thoughts and impressions by memory, and forming new images in imagination. With the childish mind ever engaged in these complex mental processes the teacher has to deal, and only because it is so engaged is he able to mould and train it. Surely then it is not necessary to say that he should know something of the operations of sense-perception; that he should understand the manner in which abstract ideas and generalizations are formed; that he should be familiar with those laws of thought which underlie the processes of inductive and deductive reasoning; or that he should have mastered the principles which govern the association of ideas as shown in the operations of memory and the imagination? A knowledge of these facts and laws of our mental life must be sought in intellectual science.

But the teacher has to deal with more than the intellect; he should aim to purify and elevate the emotional nature. He should strive to promote right feeling no less than correct thinking;

"That mind and soul, according well,
May make one music."

This cultivation of feeling is an indirect process, and, so far as the teacher can carry it on, must be accomplished chiefly through the medium of the imagination. What then are the relations between these two faculties? How can one be influenced through the other? Psychology must again give the answers to our questions.

But the mind does more than think and feel, it wills. And while correct thinking is *good*, and right feeling *better*, the proper outcome of these two, right willing, is *best*. The will, too, must be trained. But all will training is indirect, effected through the emotions and the intellect. What then is the interdependence of these three faculties? How is the will incited to action by the emotions? How does thought restrain it or give it additional impulse? How can the impulses of the will be best subjected to the dictates of reason and conscience? How can the intellect be prevented from keeping these impulses under consideration so long that the impulse itself vanishes? What is the relative value of motives as incentives to action? What is their moral value? How can good motives be fostered and bad motives repressed? In short, how can the best motives be kept before the mind, and how can the will be made to act from them at all times? Before the teacher can know the material upon which he works well enough to do effectual and systematic will-training, a thousand and one such questions must be asked, and it is to mental science that we must look for their answers. Even it is not sufficient, for it gives general principles only; and these must be supplemented by the results of the most critical introspection and the closest observation of the workings of others' minds. The facts and laws of mental science are meaningless, unless we find them illustrated in our own mental life, the operations of the minds of others can be scientifically interpreted only by aid of some knowledge of mental science as a key.

Thirdly, as to *methods*. It may be laid down as a general principle that all good methods in teaching must be based on and in harmony with the facts and laws of mental activity; and that all methods which cannot be justified on psychological grounds are presumably bad. For since it is only by taking advantage of the natural activity of the child's mind that the teacher is able to educate

him, it is not reasonable to expect success if the methods followed are not in harmony with this mental activity. Spencer says, "Psychology discloses to us a law of supply and demand, to which, if we would not do harm, we must conform." And again, "There is a natural process of mental evolution which is not to be disturbed without injury. We may not force on the unfolding mind our artificial forms." And while a knowledge of mental science is of such vital importance to the teacher in what may be called his positive work, it is certainly not less important to him in what may perhaps be termed his negative work, the rectification of mistakes and the correction of bad habits. For this knowledge helps him, by following the working of the child's mind, to discover the exact point at which the mistake was made, and so enables him to rectify it in the easiest and most effectual way; and in a case of bad habits it enables him to make a mental and moral diagnosis of the case, and so aids him in devising and applying the best remedy for it.

Take a few of the fundamental principles of good methods and see how they are founded on facts disclosed by psychology. "We should proceed from the simple to the complex." Why? Because the child acquires ideas thus. "Our lessons should start in the concrete and end in the abstract." Why? Because the child begins by thinking of the concrete and ends by reaching the abstract. "We should proceed from the empirical to the rational." Why? Because the child first acquires through the senses a stock of ideas which, for convenience, are ultimately arranged and condensed into generalizations. "Children should be led to make their own investigations and draw their own conclusions." Why? Because strength, mental as well as physical, comes only as the result of activity. A child exemplifies this fact from its earliest exhibition of consciousness. The presence in all persons of uneasy sensations only relieved by activity in work or play, the consciousness of power, the desire to exercise it, and the longing to know, all have the *raison d'être* in the same fact. It is for this reason that all spontaneous activity is pleasurable; and therefore that in general school-room work should give pleasure to the pupil.

There has been a radical change in educational methods during the last two or three decades. Compare the methods followed a generation ago with those of the present time. Teaching by rote instead of training the child to observe and investigate for himself; teaching abstract definitions instead of teaching by the concrete; teaching generalizations instead of leading the child to make them; teaching him rules instead of helping him to arrive at principles; long hours and long lessons instead of short hours and frequent changes of work; the forcing process instead of the natural and spontaneous activity of healthy mental life; a total disregard of the natural likes and dislikes of the pupil instead of some attention to that index of healthy activity—pleasure. In brief, there has been an increasing conformity to the methods of nature, a growing perception of the fact that nature's methods—which are God's methods—are wisest and best. As one of the most acute thinkers of our time has said, "In education we are finding that success in teaching is achieved only by rendering our methods subservient to that spontaneous unfolding which all minds go through in their progress to maturity." For this better knowledge of nature's methods we are largely indebted to psychology; and as that science becomes more scientific and more generally studied, we may expect improvement in teaching methods to follow *pari passu*. I do not say that a teacher cannot adopt and follow good methods without a knowledge of psychology; but I do say that he will follow them more intelligently and successfully, if he is acquainted with the facts and principles of the science upon which they are based.

Fourthly, as to the *means* by which the teacher-artist's material is to be moulded to the form of his ideal. This brings up all the questions in regard to studies, discipline, etc. What, apart from its bread-and-butter value, is the *man-making* worth of any study? This must be determined by the answer to a few questions like the following:—What faculty or faculties does the study exercise? Does this boy or girl or this class of boys and girls require that faculty or those faculties to be developed? Is the proposed study the best for the purpose? At what period in the child's school life

*Read before the last meeting of the Winnipeg Teachers' Association.

can it be most effectively pursued? Then there is the whole matter of discipline, the wide subject of the various motives and incentives to which the teacher may appeal to secure hard work and good conduct on the part of the pupil; the effects of orderly desks, pleasant rooms, and pretty surroundings. The multitude of questions on these points which the teacher must meet and settle are mostly problems which can only be solved by psychology. Let me quote Spencer again. "Alike in its order and its methods, education must conform to the process of evolution. There is a natural sequence in which the faculties spontaneously develop, and a certain kind of knowledge required by each during its development. It is for us to ascertain this sequence and supply this knowledge."

And now having heard my sermon from its firstly its fourthly, you find the text placed, contrary to all precedent, at the close. For the central idea of this paper may be condensed into the formula—*The science of teaching is applied psychology.*

I have said that the teacher is an artist. His studio is the school. He aims to send out therefrom men and women. The material he works on is the human mind. His tools are mathematics, history, etc.; the drill of school routine; the games of the playground; the physical surroundings; the social intercourse of pupils; the moral atmosphere of the school. The rules which should guide him in the use of these implements are the principles which lie at the bottom of all good methods in teaching. I have tried to show that psychology, supplemented by introspection and observation, gives this artist a knowledge of his material; that it shows him the different kinds of work to be done with the tools he uses; that it determines the order in which the different kinds of work should be done, and so the order in which the tools should be used; and that it furnishes him with a scientific criterion of his methods of using them. This is no new doctrine. It has been recognized in theory from the time of Pestalozzi; but only recently—and not yet fully—has it been adopted in practice.

And now a final plea. Said Milton, "For I was confirmed in this opinion that he who would not be frustrated in his attempt to write well hereafter, in all laudable things ought himself to be a true poet." With equal truth it may be said that he who would not fail to teach well must, in all laudable things, make his life a true lesson. If we would send out from our schools pupils who as men and women will live completely, we must give them true conceptions of duty and destiny and high views of human life. And since, consciously or unconsciously, the pupil does, to a great extent, adopt the views and ideas of the teacher, the latter should see that his own ideals are lofty and pure. These ideals, which all our deliberate acts are direct or indirect attempts to realize in the actual, are built out of materials gathered from our own and others' past experience, fused and vitalized by that divine afflatus within us, our aspirations, and must be polished and refined by the culture which comes from the study of, and contact with, nature, art, literature, humanity, God. No professional worker needs this many-sided culture so much as the teacher; none can so make all knowledge bear on the particular subject in hand as can he. Hence the necessity for a broad and thorough education before beginning to teach, and the necessity for varied and continuous study ever after. In the laconic utterance of the old Greek oracle, "Know thyself," a primary condition of self-culture is stated. A key to unlock the mysteries of self, a lamp to light up the hidden beauties of literature and art, a Rosetta stone for interpreting human action, a sextant to help us in ascertaining our place in God's universe, will be found in mental science; and, as a potent means of that self-culture which his school will surely reflect, this science should have an important place in the studies of every teacher.

Help them who cannot help again.—*Emerson.*

Kindness to the wronged is never without its reward.—*Whittier.*

PROFESSOR, I am indebted to you for all I know, says a graduate, trying to be pathetic at parting. "Pray don't mention such a trifle," was the rather suggestive reply.

English.

All communications intended for this column should be sent to W. H. Huston, M. A., care of THE EDUCATIONAL JOURNAL, Toronto, not later than the 5th of each month.

ENTRANCE LITERATURE.

LADY CLARE.

BY F. H. SYKES, M.A., STRATHROY COLL. INST.

OUR higher literature is of importance because it contains pictures of beauty, fidelity, heroism, which, when clearly realized in our own minds, touch and tinge them with their own fine nature. The teaching of the higher literature is, then, mainly to be directed towards securing a realization of its spirit in the mind of the pupil. This well done, the teacher may rest assured that the sympathy with lofty action has made the scholar in the very feeling the more capable of lofty action himself. But to secure this realization all the checks and stoppages of an imperfect word-knowledge must be removed, and all the difficulty of carrying in the mind the connected story must be overcome. These things done, the teacher is at liberty to deal with the piece as literature.

Lady Clare is so simple, the imperfections of word-knowledge are of no great account. Short explanations are here given of all words and phrases with which the young scholar is likely to have difficulty. These explanations can be obtained in nearly all cases by questioning the pupil so as to make him use his brain or his dictionary.

1-2. The white lily blooms in July, the tiger lily in July and August. The effect of *warmth* in dispelling or elevating clouds will be seen by the pupil if he is directed to observe the morning skies.

3. The question, *How white?* will secure white as a lily.

4. *Lord* and *lady* are English titles of nobility.

5. *I trow* equals *I believe, I think.*

6. In ordinary English, *engaged.*

23. A filling-in of the ellipsis will result in, "As certainly as God's above."

25. *Died* at an age when it was held *at my breast*; that is, *died a babe.*

28. In her place or instead of her.

29-30. Compare lines 9-10.

35-36. Note the difference in the meaning of *you.*

45-46. What faith can you expect in him? He will insist on having the property that is rightly his.

59. Went through the valleys and over the plains.

61-62. Substitute *it* and *its* several times in reading to the class, and the clear meaning will come to them.

70. Be sure the class understands the nature of the *riddle*—the poor dress and strange words of the lady. *To read* is here to *interpret, make out, (as rædan, to discern.)*

84. Next to whom in blood? Next and so heir to the property.

The story should be gone over first orally. The teacher should endeavor to use all descriptive touches in the poem, and get the pupils to add others. The following headings will be found serviceable:—"The Engagement of the Lord and Lady," "The Revelation of the Nurse," "The Self-sacrifice of Lady Clare," "Her Going to Lord Ronald," "The Meeting of the Lovers." As each part is completed orally, the scholars should be called upon to write it in their own words. The whole poem may be treated similarly, and the way is clear for the consideration of the story itself as a picture of lofty action.

Unless the pupils can thoroughly feel that the poem is a picture of *truth* and *faith*, and be led to feel the beauty of the picture, the poem is of no use. The teacher will bear in mind that it is his personal sympathy with the story and its nobility that alone can make them feel this beauty. Consequently, in this part of the teaching his moral enthusiasm must always be awake. Some leading

question, such as, "Why do you like Lady Clare?" would lead up to the discussion of her *truth*, and give a chance for the use of,

"I will speak out, for I dare not lie."

A similar question with regard to Lord Ronald will bring his *faith, fulness*, into prominence. The third stanza could here be used with advantage.

This done, the great work is over. Many other points, however, should be dealt with. The word *ballad* must be explained, as a form of versification for narrative purposes of the nature of Lady Clare, as a form much favored by old popular writers. Writers of to-day, in endeavoring to imitate the ballad writers of past centuries, use *archaic* words and peculiar expressions. These may be easily picked out by the pupil when he has an example given him—the *morrow morn*, or *weds with me*, or *O and proudly* she stood up. The reading of one or two of the ballads from Percy's *Reliques* will fix a good general impression of this kind of composition.

The poem should be memorized.

Hints and Helps.

AUTHORITY NOT CONSTRAINT.

THE late Archbishop Dupanloup was one of the most scholarly of the French clergy and a man who was in thorough sympathy with educational work. Somewhere he says:—"What a teacher does by himself is little; what he induces his pupils to do freely is everything; for authority is not constraint; it ought to be inseparable from respect and devotion. As for me, as long as I have anything to say to education, I will respect human liberty in the smallest child, and that more religiously than in a grown up man, for this latter can defend himself against me, and the child cannot. We must respect the weakness, but also the power. You must win the heart of a child; but to win his heart you must love him. Without love there is no devotion in the master, no affection in the child. Be fathers and not masters to these boys; but even that is not enough—be their mothers."

DON'T FRET.

THE teacher who is continually fretting is simply making a public confession of his weakness. He admits that he cannot measure up to the standard of ability demanded by the present age. The man who was satisfied with the conditions of life forty years back and who regrets the old days simply allows that he cannot meet the increasing demand of the time. He owns that he is a weakling, and laments it. Don't fret. Besides stamping you as one unable to cope with the battles of the day it wears you out. Fretting never did any good. It never changed anything. It never will. If things don't suit you and you can't help them, fretting won't prevent. If you can help them it will not be fretting but by hard work. In any case it is useless and expensive so far as physical wear and tear is concerned. Of all the sorry people to know, to come in contact with, the fretful teacher is the sorriest. We pity little children who have to come under her influence. Cross, irritable, fretful—what adjectives to apply to a teacher! And yet how often are they deserved. If you find yourself getting into this fretting habit stop it before it is too late.—*Central School Journal.*

MINDS DIFFER.

DO not condemn a child as dull or stupid until you have given his case thoughtful attention. Minds differ, and if one acts more slowly than another, it by no means follows that the possessor is stupid. Many minds grasp subjects slowly but deeply, and it is wrong to characterize a child as dull who does not evince immediate intelligence upon a topic. It is the teacher's business to discriminate between the pupil who is a genuine dullard and the one whose mental processes, while slow, are none the less accurate and logical than the bright pupil's. Sweeping classifications indicate the superficial teacher, the poor student of human nature. A boy may be an absolute fool in an Algebra class, and yet in field work in Botany or Zoology may show the minutest observation and

the keenest perception, and the pupil who is apparently hopelessly dull in Rhetoric or Literature will often prove astonishingly bright in Mathematics. No one doubts that Newton and Chopin were both men of genius, yet we imagine that Newton would have appeared to us as great disadvantage with the chords and octaves of which Chopin was master, as the musician would in the manipulation of formulæ and logarithms.—*Central School Journal.*

HOW MUCH SHOULD WE TEACH IN GEOGRAPHY?

WELL, indeed, here I want light. In my own opinion, we attempt (I do not say *teach*) quite too much in this subject. We who live in Pennsylvania are presenting the state of California to our classes, and it may be, we require the mtobe able to draw from memory a map on the board, and locate half a dozen leading cities, rivers, and mountains. We want them to be able to discuss the location of boundaries, soil, surface, climate (and what affects it), products (mineral, natural, and cultivated), industries, etc.

It appears to me that this is largely all wrong. I say *we attempt too much*. I am one of the guilty ones. I have had pupils go to the board, and draw from memory, and without aid of rule, a fine map of any state or country, in a very few minutes. They could trace water routes, carry goods by railway routes, discuss commerce, etc. This I was wont to call good work, but I think now it was too much.

I want information.

And now, if I say I would not teach more than fifty towns in the entire world, and perhaps half so many rivers—teach mountains only as they affect climate, and the larger inlets only as they are active in commerce—if I do this am I teaching enough?—*C. H. Albert in the N. Y. School Journal.*

SUGGESTIONS BY EXPERIENCED TEACHERS.

SUPERVISE the studies of pupils.

Dictating errors is not correcting them.

Do not answer questions in asking them.

Fasten every principle by frequent repetition.

Endeavor to improve your methods of teaching.

Give instruction frequently in morals and manners.

Never attend to extraneous business in school hours.

Govern yourselves; refrain from moroseness, peevishness, or scolding. Have a clear idea of what you are going to do. Teach pupils how to study, how to get out of the text book what is there, and to put it into their own language. Do not be noisy: govern as far as possible by quiet signals.

In hearing recitations, be interested yourself—be enthusiastic. Have no pet pupils. Govern without monitors. Do not send pupils for every little thing to the Principal, Superintendent, or Director.

Have a programme and adhere to it. Don't get into the habit of suspecting certain pupils of doing all the bad things in school. Do not allow pupils to report each other. Cultivate in pupils self-respect and self-government.

Never attempt to ferret out mischief without being successful. Do not lower yourself to the level of your pupils, but aim to draw them up to your level. Maintain a quiet, cheerful dignity. If you have under teachers, give them due credit for their efforts, and let them know how you appreciate them.

MY PUPIL.

BY ESTHER CONVERSE.

I HAVE seen him to-day. He lies in a darkened room. The little restless feet are restless no longer. The brown hands that seemed ever in mischief are folded. The bright eyes that looked so roguishly into my own, or that filled with tears of penitence or pain, are closed. The tangled hair is brushed smoothly away from the broad forehead. I had not noticed the well-shaped head in the school-room. Even the hands looked strangely unfamiliar. They were rough, grimy little hands,—

the hands I knew,—and when I dealt them sharp, stinging blows they struggled in my own.

How could I, a strong woman, strike a child? What a confession of weakness! I, an educated, disciplined woman, have used brute force to gain obedience from a motherless child. The tender flesh must have quivered with pain; the sensitive child-spirit must have been wounded to the quick.

I knew he had no mother. There was no one to give the good-night kiss; no one to listen to his childish complaints; no one to wipe away tears of grief or anger.

I remember now that he was not a naughty child; he was thoughtless and roguish, but he was neither sly or ill-tempered. He never attempted to deceive; he frankly acknowledged his little faults.

Was it his fault that he had no love for his lessons? I punished him when his spelling-lesson was unlearned, yet it failed to make him love his spelling-book. I did not explain the difficult words in his reading-lesson, but I held him up to ridicule when he stumbled and mis-called them. I remember the flush that crept to the tangled hair, and the sudden burst of tears. Poor little Johnny! it is not strange that he disliked school. But he was certainly a very trying child; there is some excuse for me. He was never for a moment quiet. He was often the cause of disorder in the room and raised many a laugh among the children. He was an inveterate whisperer; punishment availed nothing in his case. I am sure no teacher would have been patient under such provocation. There was always a hum in his corner of the room.

Well, the little lips are silent now. I would like to hear them whisper, "Teacher, I love you; you have been kind to me." I would like to see the blue eyes open and the roguish look come back to them while he said "I'm just making believe. I'm doing it for fun." I would like to see him spring from the bed and come back to life and light.

His eyes will open to brighter light; his merry voice will ring out in gentler tones among his angel companions. There will be no more pain for Johnny. His teacher will be gentle and loving; his life will be full of joy. I will not mourn for him, but I may, I must grieve that I am so unfitted for my work. May patience, wisdom, and strength be mine.

When I hear the ill-timed laugh or the thoughtless whisper, let me remember Johnny's sealed lips, and by gentle means try to accomplish the desired end. When I take again the stained, roughened hand in my own, let it not be to inflict pain, but that I may lead an undisciplined child in kindness and love.

When the restless feet chafe my tired nerves or torture my aching head, let me remember the little feet that hastened from my room one day never to return, and let patience have her perfect work. Johnny's school life was not successful, but his companions shall profit by it.

I have seen my pupil to-day alone in a darkened room.—*The American Teacher.*

NO SURRENDER.

EVER constant, ever true,

Let the word be—No surrender!

Boldly dare and greatly do,

This shall bring us bravely through;

No surrender! No surrender!

And though future smiles be few,

Hope is always springing new,

Still inspiring me and you

With the magic—No surrender!

Constant and courageous still,

Mind the word is—No surrender!

Battle, though it be up hill,

Stagger not at seeming ill;

No surrender! No surrender!

Hope, and thus our hope fulfil;

There's a way where there's a will;

And the way all care to kill

Is to give them—No surrender!

BE not simply good; be good for something.—*Thoreau.*

JAILS and state prisons are the complements of schools; as many less as you have of the latter, so many more you must have of the former.—*Horace Mann.*

For Friday Afternoon.

WE LITTLE BOYS.

If older boys can make a speech,
We little boys can, too,
And, though we may not say so much,
Yet we've a word for you.

This world is large and full of room,
There is a place for all,—
The rich, the poor, the wise, the good,
The large as well as small.

So give the little ones a chance
To show off what they know,
And shun us not because we're small,
For little boys will grow.

—*Little Poems.*

THE RUMSELLER'S DREAM.

BY L. F. COPELAND.

THE Rumseller dozed in his easy chair
At the close of a busy day;
And before him passed in dreams, as he slept,
A long and sad array,
Of those whose lives had been wrecked by rum,
'Till scorched by its fiery breath,—
They had gone to their graves in untimely haste,
Or worse—to a living death.

And each, as they passed by, one by one,
To the Rumseller gave such a look,
As thrilled his soul with a nameless fear,
'Till his soul with terror shook;
And each, as they passed, told a tale of woe,
And called the Rumseller by name;
Then cursed him with words that burned like fire,
As the cause of their grief and shame.

First came a mother with broken heart,
Bewailing the loss of her boy,
Cut down in his strength by the demon Rum,
Her blessing, her pride and her joy;
And she cried, "Rumseller, where is my son,
That the good God gave to me?
You have killed him and broken my heart," she
said,

"And my curse I give to thee."

Next came a sister sad and pale,
And bemoaning a brother's fate,
A living wreck, through the Rumseller's art,
And fallen from man's estate.
And she wailed, "Oh, Rumseller, where is he,
My brother so noble and true?
Lost and ruined forever," she cried,
"And my curse I leave with you."

The next was a child so ragged and thin,
And by want and hunger pressed,
And her sweet young face like a spectre's seemed,
And she staggered along with the rest;
And she moaned, "Oh, Rumseller, he is dead,
My father, good, and so dear,
Dead because you sold him Rum,"—
And she cursed, while he shivered with fear.

Next came a wife, with a face full of woe,
And a heart full of grief and despair,
And with marks of blows on her wasted form,
Bent over with a weight of care;
And her's was the feeblest curse of all,
And the Rumseller groaned in his sleep,
As she cursed in the name of mother and wife,
The cause of her agony deep.

At last came a drunkard staggering on,
And a pitiful sight was he;
Bloating and ragged and sottish and poor,
And loathsome as loathsome could be;
And he cried, "Rumseller, you've crazed my wife,
And robbed my children of bread,
And sent my soul to perdition for gold."
And he shrieked out a curse on his head.

Then the Rumseller woke with a sudden start,
For his soul in agony seemed,
As torn by the pangs of a fierce remorse,
He recalled that fearful dream;

Then he rose from his chair and made a vow,
To live by a better plan,
And he spilled his Rum in the street that night,
And became a temperance man.

—*The Fountain.*

Examination Papers.

COUNTY OF PEEL PROMOTION EXAMINATIONS.

GEOGRAPHY.

CANDIDATES FOR THIRD AND SECOND-CLASS CERTIFICATES.

Time, One Hour.

1. Outline map of Europe; show principal mountains, lakes and rivers, and locate the capital of each country.

[Note.—Map to be drawn not less than 9x7 inches; capital to be shown by *. No writing or printing.]

2. Define:—Physical geography, mathematical geography, degree, ecliptic, great circle.

3. Describe:—(a) Why the water of the ocean is salt; or,

(b) The principal offices and the source of rivers, and classify the races of mankind.

4. Where, what and for what noted are:—Fellberg, Orsowa, Como, Stromboli, Cannes, Hartlepool, Ferrol, Peschiera, Helsingfors, Neuchatel, Andovia.

5. What special trade is carried on in:—Nantwich, Meissen, Rustchuk, Reikiawik, Reddich, Tula, Cagliari, Aalborg, Douglas, Zante.

6. Name and locate two important places noted for trade in linen, silk (state branch), shelf hardware, cinchona, articles of fashion, firearms, cork, insurance, marble, printing and books.

COMPOSITION.

FIRST TO SECOND CLASS.

Time, One Hour.

1. Make two sentences of the following words:—goes, my, town, eggs, Frank, to, he.

2. Write the names of six things you can buy in a store; and before each a word that tells what kind the thing is.

3. Write the names of six things in this room, and before the name of the thing the owner's name.

4. Place words after the following to tell what they do:—Horses —, birds —, girls —, flowers —, hens —, and water —.

5. Write a letter telling what game you like best to play.

Twelve marks each; 50 to be considered a full paper.

COUNTY OF WELLINGTON PROMOTION EXAMINATIONS.

ENTRANCE TO THIRD CLASS.

GEOGRAPHY.

Time, one hour and five minutes.

Answers to be written on paper.

1. What is a concession? A side road? A school section? A township?

2. Give which of the cardinal points of the compass each side of Minto township is facing. In a strange part of country, how would you tell the north?

3. Give the boundaries of Eramosa township; the rivers of Minto, and three incorporated villages in the county.

4. Name three railroads passing through county.

5. Name three important things that farmers sell in this county. Which is the most important township in county for farming?

6. Name the principal rivers of county, and tell some towns situated on them.

7. Draw a map showing border townships in county. Name townships that do not touch on any other county.

8. What is the earth like in shape? Where does the sun appear first in the morning? What is the earth?

9. Why is Toronto called the capital of Ontario? What is the capital of Canada? On what river is it?

Value, eighty marks.

LITERATURE AND COMPOSITION.

Time, one hour and thirty minutes.

1. What do you understand by a hero? And show how heroism was displayed by "Miner Will."

2. What do you understand by the following words and phrases in the same lesson: Shaft, fuse, vehemently, generously, resigns himself, eagerly, miracle?

3. In the lesson on "No Crown for Me," did Susan tell a lie when she said to her grandmother "I am ready now?" And state you think a lie is.

4. Where is Lapland? Give a short description of the country. Describe the reindeer, and state what use the Laplanders make of it.

Total value, seventy-two marks.

ARITHMETIC.

Time, two hours.

On paper. Full work required.

1. (a) Express 1047, 419 and 1234 in Roman Notation. (b) Express MDV, six hundred thousand and thirty, and DCCCLXXX in Arabic Notation.

2. Define subtrahend and quotient; divide 49876 by 72, using factors.

3. Find the value of $89374 + 499 + 8454 - 9879 - 948$.

4. How many feet have 7 horses, 6 calves, 9 sheep and 8 geese altogether.

5. A builder needs half a million bricks. He has 467429 already. How many loads of 517 bricks each does he require to make up the full number?

6. Five brothers and a sister own a farm of 216 acres. They sell it at \$65 per acre. How much of the money should each receive?

7. Mary picked 15 quarts of berries; George picked 19 quarts; Annie picked 17 quarts; John picked 14 quarts; Alice picked 21 quarts, and James picked 16 quarts. How much more did the girls pick than the boys?

8. A potato field has 78 rows in it, and each row has 96 hills in it, and each hill yields 2 dozen potatoes. How many potatoes will the whole field produce?

9. Out of a salary of \$1400 a year, a man pays \$210 for board, \$165 for clothes, \$90 for books, and \$219 for other expenses. How much can he save in 8 years?

10. Write down all the prime numbers less than 40; also multiply 46789 by 108, using factors.

Total value 125, but 100 marks are to count a full paper.

SPELLING.

Time, thirty minutes.

To be read slowly and distinctly, and the greatest care taken that each pupil understands every word. Each sentence to be first read in full, the pupils simply paying attention, then again slowly, the pupils writing.

1. Gnaws, good-bye, sledges, Arctic, cocoa, conscience.

2. When they are lying quietly on the surface of the water.

3. But a glad or grievous fruitage waits us at the harvest day.

4. O bees! with your bags of sweet nectarine, stay.

5. Playing hide-and-seek so sly.

6. After long and careful boiling, nothing remains but the crystals of sugar.

7. Their feet are padded and cushioned at the bottom.

8. The people passed, all muffled, homeward.

9. If that meddlesome cook had not come in.

10. He continues to protect them from jackals and other enemies.

11. A fair compensation he will surely receive.

12. Tortoise, dandelion, prettily scalloped, tremulous, pollen, banditti, moustache, dungeon.

Value, 100—3 marks to be deducted for each mistake.

This paper is not to be seen by any candidate.

N.B.—Pupils will not have time to write the

dictation on slates, and afterwards copy it on paper.

Writing.—Two or three minutes should be allowed for writing at the close of this paper.

Value, 20. See Reading Paper.

SPELLING.

ENTRANCE TO FOURTH CLASS.

Time—thirty minutes.

To be read slowly and distinctly, and the greatest care taken that each pupil understands every word. Each sentence to be first read in full, the pupils simply paying attention, then again slowly, the pupils writing.

1. Villain, besieging, scythe, capsizes, campaigns, embalm.

2. A farmer's poultry-yard had suffered severely.

3. Her rattling shrouds all sheathed in ice.

4. His is a perfect mystery of mysteries.

5. Go, loose the topsail, mariner, and set the helm a-lee.

6. Meek-faced anemones drooping and sad.

7. The Rapid gambols and leaps on its tortuous way.

8. He remained to watch the manoeuvres of the party.

9. Even in a circular leaf there is one point which is its extremity, and to which the margin from either side approaches by a convexity.

10. The fiends below were ringing his knell.

11. The temple is approached by avenues of colossal grandeur.

12. Celery, spinach, chocolate, chemise, parsing, pheasant, sentence, rebellion, authentic, epoch, prelate, catalogue.

Value, 120—4 marks to be deducted for each mistake.

This paper is not to be seen by any candidate.

N.B.—For writing, etc., see remarks at foot of Dictation paper for Third Class.

ARITHMETIC.

Time, two hours.

1. How many cords are there in a pile of cord-wood 128 feet long by 12 feet high?

2. 42 hr. 56 min. 24 sec. ÷ 9.

3. A sulky wheel, 14 feet 8 in. in circumference, made 7200 revolutions in two hours. What distance did the sulky go during one hour?

4. How many inches is it by railway from Hariston to Toronto, a distance of 95 miles.

5. How much will it cost to gravel a road 80 rods long with a layer 9 feet wide and 6 inches deep, at 30 cents per load?

N.B.—A cubic yard of earth is called a load.

6. Green tea and black tea are mixed as follows: For every 3 ozs. of green there are 7 ozs. of black. How much of each in 5 lbs. of the mixture?

7. The mean height of 5 trees is 91 feet. What must be the height of a sixth tree which brings the average up to 94 feet.

8. Find the cost of wire, at 8 cents per 5 yards for a barbed wire fence, 5 wires high, to enclose a field 36 rods wide and 45 rods long.

9. How many half-pint bottles will be required to hold 8 gallons, 3 quarts of ink?

10. The sum of \$135 was paid as a week's wages to an equal number of men, women, and boys. The men received \$1.25, the women 75 cents, and the boys 50 cents per day. How many were there of each class?

11. How many feet of lumber will be required to plank a play ground 166 feet long, 66 feet wide, with plank two inches thick?

12. How much heavier are 9 barrels of flour than one cubic yard of water?

N.B.—A cubic foot of water weighs 1000 ounces.

Total value 125, but 100 marks are to count a full paper.

A CHEERFUL temper joined with innocence will make beauty attractive, knowledge delightful, and wit good-natured.—Addison.

BUSINESS NOTICES.

WE desire to repeat our request that Inspectors and Secretaries of Associations send us programmes of their forthcoming Conventions as soon as issued. We desire to make announcements of such Conventions, with somewhat fuller particulars than may be found on a departmental list. Moreover, as this list contains only the names of Inspectors in which Teachers' Institutes are held, a great many Conventions of Teachers, not being upon that list, are unknown to us, and unannounced. Give us an opportunity to make your operations known to the whole body of Teachers, all of whom take an interest in what concerns the profession. Also, please send us a summary of proceedings.

WE direct attention to the advertisement, 16th page, of the "Concise Imperial Dictionary." It is our intention to handle this Dictionary in connection with the JOURNAL, and we offer it in the best binding, and the EDUCATIONAL JOURNAL for one year, both for \$5.50, plus 14 cents for postage. Subscribers who are paid in advance may deduct the amount they paid for one year, send the balance, and have the book at once.

Editorial.

TORONTO, APRIL 2, 1888.

THE REASON WHY.

A CORRESPONDENT in another column says, "I am a teacher in an ungraded country school, having a past name not for order, but for disorder. If you have ever taught in such, I cannot see how you so strongly object to corporal punishment." We have taught in such, and so are in a position to understand our correspondent's difficulties. We will try briefly to give some of our reasons for our educational faith.

We object to corporal punishment because:

First. *It is injurious to the moral nature of the child.* As a rule, it either stirs up hateful and revengeful passions, or it begets cringing, coward fear. The demons which are thrust in are worse than the demon that is cast out. Our correspondent says the children are accustomed to it at home. Very good. Observe we do not object to corporal punishment as such. It is generally, perhaps always, necessary in the early years of childhood. We only insist that it should be administered by the proper authority, by those to whom God and nature have given the right, that is, the parents. The true parent punishes in sorrow and love. The heart instinct both justifies and sanctifies the act, an act which represents sacrifice on the part of the parent. The child, too, instinctively recognizes the right of the parent to inflict the punishment. He does not so recognize the right of the teacher to do it. As a rule he sees, or thinks he sees, only impatience, anger, and superior brute force in the teacher. We know, of course, that very many parents—alas, that it should be so!—beat their children in anger, and so become the minis-

ters of evil, not of good, to their offspring. We know, too, that one teacher in a hundred, or a thousand, is able to put himself in the place of a parent so far as to chastise in love, and so, perhaps, do good and not evil. But the latter is, as our correspondent must admit, the rare exception. We wish we could believe the former to be exceptional also. We will go further and say that we believe, as the result of both reason and observation, that the wise and good parent will not find it necessary to punish with physical pain, save during the first three or four years of the child's life. The motive of fear is necessary only till reason and conscience can be reached, which is at a much earlier age than most suppose, and till the still mightier power of love can be called into exercise. As a rule, the father or mother who has not gained full ascendancy over the will of the child at the age of three or four years, has so far failed in discipline and in duty. Rarely does corporal punishment inflicted even by a parent upon a child of eight, or ten, or twelve, fail to stir up angry and revengeful passions, and so do positive moral harm. How much more when it is inflicted by the teacher to whom the child is related by no natural tie. To return to the main point, which we wish to make and emphasize. The teacher has not the natural right to punish the child in this way, because he has not the natural relationship and the natural feeling which alone confer that right, and qualify for its exercise.

Second. *Because the tendency of the act is degrading to the teacher.* "Degrading" is a pretty strong word, possibly too strong, but we can think of no other which so well conveys our meaning. The business of a teacher is to teach. For that he is employed. No teacher would like to feel that he was employed and paid for using the birch upon refractory boys and girls—employed as a kind of general lictor, so to speak. What teacher has not felt his blood tingle at the insult, when some poor apology for a parent has asked him, as we remember being more than once asked in good faith, to flog his or her child for some offence committed out of school? But aside from that, if the teacher punishes in anger, he, of course, injures his own moral nature. If he does it in cool blood, and from a simple sense of duty, he still performs an act which almost surely lowers him more or less in the estimation of his pupils. Our correspondent argues that because corporal punishment is administered at home the teacher is compelled to use it. Does he not see that sound logic leads just in the opposite direction? If the parental discipline is judicious and effective, there can be no need of the teacher's resorting to the lash. He can govern the child through the influence of the parents. If, on the other hand, the boy has been ruined, if his moral nature has been hardened, by harsh, unloving, or cruel floggings at home, the teacher can have no hope of doing him good by the same method. On the other hand, such cases often afford excellent subjects for the redeeming power of kindness and love

to act upon, with softening and elevating influence.

"But," we fancy we hear the despairing teacher exclaim, "am I to let my school degenerate into a bedlam while I am vainly striving to reach the higher nature of the children and bring the better motives to bear?" Certainly not. But surely a strong, resolute, educated man or woman can bring mind force, or moral force, or will force to bear, sufficient to conquer a bevy of unruly boys and girls, most of whom are sure to be amenable to right motives and influences. May it not be that the very fact that it is possible and customary to resort to the ready taws, is in itself a temptation to spare one's self the harder but higher effort? The method of the despot is easier, requires a lower order of qualifications, makes, in a word, less demand upon head and heart than that of a constitutional ruler. If the teacher felt himself shut up to mental and moral forces, compelled to conquer with such, or to fail, would a competent man or woman be likely to fail? We appeal to our correspondent's own history. He has conquered, and now rules without the ferule. Does he really think he *flogged* himself into the confidence of the children? Did he not rather gain their confidence in spite of the flogging? How can fear, the kind of fear inspired by the ferule, beget confidence? In the writer's experience it beget hate, which, surely, was not a good education.

"TEACHING AND CRAMMING."

The Week of March 15th has an article under the above heading which contains some good hints for teachers. It is evidently written by an Englishman, and by one who is probably more familiar with the methods of English than of Canadian schools. The writer sets out with the assertion that "something will have to be done" to improve the present system, we should say "systems," of education in England and Canada. He says truthfully that "we are in some danger of preparing men for examinations rather than fitting them for the business of life, of cramming them rather than educating them, of making them sharp rather than thoughtful." But if we do not greatly misread the signs, this danger is already passing away in Canada, if not in England. The progress of reform is slow, but it is fairly commenced and needs only to be hastened.

The writer of the article correctly intimates that the chief difficulty in getting these subjects calmly considered arises from our tendency to self-satisfaction and pride in our system of education. This stage, too, is passing in Ontario.

With regard to examinations, the writer thinks that there are at the present moment "few who will say that our examinations are such as to encourage the best methods of study." He grants that "it is not easy to frame questions for which the examiners cannot prepare by cramming." Even in this respect, if

the writer of the article will take the trouble to enquire, he will, we believe, find that a very marked improvement is taking place in the kind of questions set by Canadian examiners, with a view to correct the evils of which he complains. As a consequence, the methods of teaching, in some subjects, at least, *e.g.*, English, are being rapidly revolutionized. The competitive system of examinations which he so strongly condemns is falling into disrepute, and it may be pretty safely predicted that the stimulus of scholarships and prizes will be very materially reduced, if not wholly done away with, at no distant day.

With regard to the number of subjects taught in the schools, the writer in *The Week* says:—

"What is the principal work of a school teacher? Certainly not to give his pupils some slight knowledge of everything; but first, to teach him such things as will enable him to pursue his studies by himself, and further, to get him into the habit of doing all his work intelligently, carefully, and accurately as far as he goes. A boy or a girl so taught and disciplined would have a thousand times better start for carrying on the serious work of education than one who had got a little smattering of everything. And we fear that the smattering is now the rule. We are afraid to enumerate the various subjects which quite young children are required to attack. And with what result? Among other things a prodigious amount of flippant inaccuracy and boundless conceit. To take one instance, what is to be said of the spelling of the rising generation? We know what ought to be. Reading, spelling, writing, arithmetic, are certainly the foundations of all education. Accuracy in these elementary subjects is a *sine qua non*. When it is not found, we may be pretty sure there will be accuracy in nothing else. A boy who cannot read, and spell, and write and cipher, a little with a considerable degree of accuracy, will blunder in every other subject which he undertakes. What, then, do examiners find in the papers of young men who are examined on science of all kinds, on medical subjects, on philosophy, on theology? Many of them testify that they find the vilest spelling, and that the thing has gone so far that they pay no attention at all to the spelling, but mark good spellers and bad spellers alike. Ought this to be done? Are the fundamental subjects, the bases of education, to go for nothing? Are men to go abroad with B.A., M.A., B.D., M.D. attached to their names, who are ignorant of that which a boy of ten or twelve ought to know perfectly?"

There is, no doubt, much truth in the above. At the same time, if the writer would have the children put during all the years of their public school life to the dreary treadmill of a constant monotonous drill in the three R.'s, supplemented only by long columns of hard words to be spelled and "conned by rote," we should decidedly demur. We have found that by putting a listless, discouraged pupil into some fresh field, where new discoveries arouse ambition and stimulate thought, the teacher can often secure more real mental progress in a month, than would result from a year on the treadmill.

Some good remarks by *The Week* on methods of teaching we reserve for consideration in another number.

TEMPERANCE TEACHING.

At the recent meeting of the Dominion Temperance Alliance the following resolution was adopted:—

"That whereas we learn from various sources that the Temperance Text Book ordered to be taught in our Public schools is from some cause or other not yet generally introduced, and whereas we consider this subject of the greatest importance to the future welfare of our country, we strongly urge the Ontario Government and trustees to introduce this excellent temperance book to all the schools of Ontario, and we urge upon our temperance friends everywhere the necessity of seeing that this law is strictly carried out."

How many of our readers, we wonder, are improving the opportunity now afforded them of giving the young under their instruction correct and truthful information with regard to alcoholic drinks and their effect upon the system? We can well understand how overcrowded the programmes are already with work, and how strong is the temptation to put off the introduction of a new subject as long as possible. But this is one so closely related to the future welfare of the children and of the country that no one who is sincerely desirous of doing good can afford to neglect it. The introduction of a scientific text book, written by a high authority, and dealing with the most important moral reform of the age, is an opportunity for doing good which no teacher should be willing to lose. It is scarcely too much to say that with the teachers of our public schools, more than with any other class of persons outside the home, it rests to mould the national character of the coming Canadian, and especially to determine whether the men and women of the rising generation shall be almost universally temperate, or shall like the present, contain a large percentage of those whose own lives and those of their families are made degraded and wretched through strong drink. Here is a legitimate field for moral training of the most practical kind, by every teacher. No one can, we think, doubt that in impressing upon the minds of the young the demonstrable truth with regard to the poisonous effects of alcohol upon body and brain, and in instilling into their hearts a love of sobriety and a horror of strong drink, he is in the strict line of a teacher's duty, and is rendering his country and his fellowmen the best service. Teachers can do much by calling the attention of trustees to their disregard of the Departmental regulation in neglecting to have the authorized book introduced, to arouse them to the great importance of the matter. No true parent can grudge a small additional outlay in order to have his children furnished with such information as will help to put them on their guard against this most ruinous of vices.

Who seeks the right, to him all good things flow.
—*Stedman*.

Contributors' Department.

THE SUPPLY OF TEACHERS.

BY A TEACHER.

In a late issue of the *JOURNAL*, Mr. Lent has drawn attention to a very marked defect in our school system, the youthfulness of teachers.

I quite agree with Mr. Lent in thinking that the minimum age for teachers should be raised. It is impossible for the weak and susceptible mind of childhood to be successfully trained and moulded by one whose own mind is as yet immature. We do not entrust the construction of our railroads, canals, etc., to mere apprentices. If, then, in our material works we are careful to have the best, is it not much more important that the foundations of character should be laid by experienced hands? A spoiled building may be removed, but a spoiled character ever remains, exerting a pernicious influence on all posterity.

In the early days of Ontario's history the demand for teachers was greater than the supply; now the state of things is reversed, and the Educational Department, if it wished, could easily raise the age for teachers without causing any public inconvenience.

Again, at the time that Ontario was sparsely settled, it was impossible for certain sections to engage a properly qualified teacher without government aid, but now that the country is comparatively well settled, I would suggest that in the older counties, at least, the grant be divided according to the certificate of the teacher. For example, for every four dollars given a first-class teacher, let a second-class receive two, and a third-class one. This would be a standing inducement to trustees to engage the higher class, and at the same time would act as a stimulus to urge teachers to reach the top in their profession.

One other point. Good and useful as our model schools have been, I am not sure that they are the best means of educating and training our young teachers. In every case these model schools are situated in some town or village. The model students see teaching done and teach themselves in graded schools. After their short term of thirteen weeks is over, they take charge not of one class in a graded school, but of five classes in an ungraded school. The young teacher finds himself in deep water. He has no one to help him; his model school notes and text books give him little assistance; he finds that lessons which were allotted half-an-hour in the training school have to be taught in half that time. There is a complete change in his circumstances.

Would it not be better (supposing the age for entering the profession to be fixed at twenty-one), to let the future teacher attend a high school till not less than eighteen years of age, then, having obtained as high a grade of non-professional certificate as his abilities would allow, require him to apprentice himself to some first-class certificated teacher for a certain length of time, and at the end of that time to write for a professional certificate.

Such a course as this, I am sure, would produce teachers of a higher order than we have at present, and it should rid the profession of those who only intend to use it as a stepping stone to something else.

School-Room Methods.

A LESSON IN READING AND WRITING NUMBERS.

TEACHER calls Number Class to the board. Children's ages are from six to seven years. They have been in the Kindergarten four months; in the Primary three. They have been led to find out for themselves, by objects, the combinations of numbers through ten; they have added, subtracted, multiplied and divided with different objects and without objects as high as eleven, but they have not been taught to express this knowledge in figures.

"Robin, if we had seven, how many ones would we have."

"Seven ones."

Teacher writes on board, 7 ones = 7, and the children read, "Seven ones make seven."

"Katie, now the twos."

"Three twos and one make seven."

I will write what Katie says on the board:—

$$2 + 2 + 2 + 1 = 7.$$

Children read:—"Three twos and one make seven;" also, "Two and two and two and one make seven."

"Percy, tell how many threes make seven."

"Two threes and one make seven."

"Eva can tell us about the fours."

"One four and three make seven."

"Maria, how many fives make seven."

"One five and two make seven."

"Now the sixes, Robin."

"One six and one make seven."

"And the sevens, Katie."

"One seven makes seven."

In this way the work is placed on the board by the teacher, as the children give her their answers:—

$$\begin{aligned} 7 \text{ ones} &= 7 \\ 2 + 2 + 2 + 1 &= 7 \\ 3 + 3 + 1 &= 7 \\ 4 + 3 &= 7 \\ 5 + 2 &= 7 \\ 6 + 1 &= 7 \\ 7 &= 7 \end{aligned}$$

"Now, children, I want to see if you can read it all over." (Children read from board):—

Seven ones makes seven.

Three twos and one make seven; or, two and two and two and one make seven.

Two threes and one make seven; or, three and three and one make seven.

One four and one three make seven; or, four and three make seven.

One five and one two make seven.

One six and one one make seven; or, six and one one make seven.

One seven makes seven; or, one seven is seven.

"Yes, you can read it. Now, I want you to go very quietly to your seats and write this on your slates. Do your best, for I want to see you all get a red star."

The children could write, and all went to work to try to make on their slates what they saw (and understood) on the board. The answers were given from memory, and not counting with objects in this lesson. The children gave in their own language the answers. The teacher placed a written language on the board they did not know, and could not have read, if they had not have given her the spoken language.—*Southwestern Journal of Education.*

ENTRANCE LITERATURE.

BY W. K. T. SMELLIE.*

THE literature class presents difficulties even to the experienced teacher which are not to be found perhaps in any other. The tendency, where there is a press of work, as there is in nearly all our schools, is to reduce all the teaching to a system, and to render all the methods of imparting instruction somewhat formal. Furthermore, in most subjects, a definite amount of work can be laid down for home-preparation, and the pound of flesh can be exacted from the pupil. This is not the

case with literature. The literature class cannot be a very formal affair. To make it a success there must be an unbending of the taut-strung bow and the recitation must partake, to a greater degree than elsewhere, of the character of a conversation.

This will be readily seen if we consider what our object in teaching literature should be. We should set before ourselves certain definite aims, always bearing in mind that we are dealing with intellects practically untutored, and that we are forming tastes which will doubtless govern the pursuits and higher pleasures of many of our pupils to the last limit of life.

As I take it, the object of *teaching* literature is one and yet three-fold: First, to assist the pupil to grasp the author's meaning; second, to point out the beauties which the untrained mind might fail to discover; third, to help the child to extract the lesson which the passage may teach; and to do all these in such a way as to develop in the child a love for the beauties to be found in the printed page.

In order to attain these objects, attention must be paid to two points, viz., the selection must be carefully made, and the method of treating it when selected should be such as to present it in a pleasing form to the child.

The selection of a passage in beginning an entrance class should be made with great care, for if a pupil take a dislike to the first piece that he studies it will be far more difficult to interest him in the second. The extract should be easy, so that he may be gradually introduced to difficulties, and it should be of a lively, interesting character, so that the study of it will prove not a task but a pleasure.

Many and various are the methods suggested and adopted to render the teaching of literature effective, and I do not say or wish it to be supposed that the following is put forward as perfect, but simply that I find it more successful than any other that I have tried. The passage should be presented as a whole at first, and afterwards taken up in convenient divisions, so that the child may have always before his mind the fact that any portion that he may be particularly examining is only an integral part of a symmetrical whole.

To this end, I read the whole selection over, in the first place, with the class, so that they are familiar enough with the story or argument to be able to talk about it.

I then direct the attention of the class to the most beautiful or most effective passages, pointing out the sentences or parts of sentences which contain the principal thoughts and show them that the rest of the selection is subordinate to these in one way or another. Very soon after the class have entered upon the study of literature they should be able to do this part of the work themselves.

I next indicate passages throughout the selection requiring examination or special study, and, as far as possible, let the child do this work unaided. Sometimes I give questions for which I encourage the children to seek the answers, not in the grammar, nor in the dictionary, but in the selection itself. The questions should be of a broad, suggestive character, and should, as far as the limited range of the pupils will allow, cause them to think rather than memorize, and to introduce any information they may have gained in reading other passages.

The most beautiful portions of the extract may now be memorized, but these portions should not be made too long, or disgust on the part of the pupil will inevitably be the result.

Lastly, if any characters are introduced, such as Shylock or Bassanio, which are types of classes, their typical character should be made prominent in addition to the explanation of their bearing on the story on hand, which has been attended to before.

After the extract is thoroughly understood, the children ought to be encouraged to deduce from it some lesson for themselves, so that they may feel a personal interest in the teaching of the passage.

I shall be only too well pleased to receive any criticisms on my method or suggestions for its improvement, especially from those who, having used a similar method, may have elaborated it more fully than I have myself.

HOW TO TEACH HISTORY.

THE following which we clip from a very full report of the West Middlesex Teachers' Association, in the *Strathroy Age*, contains many excellent hints which young teachers will do well to study carefully:—

Mr. Parkinson then gave his opinions upon what he thought the best plan of presenting this subject. He believed that it was generally considered an uninviting subject, and yet this should not be so, as history is only a true story of men and women who have lived in the past. Let us endeavor to represent the truths of history as truths—as the true story of what has happened. He considered history teaching could be divided into three parts—(1) When to teach history, (2) What to teach in history, (3) How to teach history. He believed history could be taught to pupils of from twelve to fourteen years of age, if we confine our teaching to the teaching of simple stories. Then as to how to teach it; the teacher must *know* the facts to be taught, and must carefully study the best modes of imparting that knowledge. Referring to the German Gymnasium, he said the first two years' study is strictly biographical in style, under the guidance of specially prepared teachers. The next part would be to present the characters studied as biography in connection with the great events with which they were identified. He would teach the history of our own country first, then that of Britain. He considered that a very great part of the time formally spent in historical study was worse than wasted, as it provides no mental exercise, and serves only to implant a dislike to study. He would get the interest of the pupils by questions given the pupils, answers to which the pupils may obtain by going to good histories used as books of reference. He would dictate eight or ten questions, more or less, according to part to be taught and capacity of class, and then assigning the lesson, which is done by explaining difficult questions and telling what book of reference, and where in such books, the answers may be found. Have your class always expecting written examinations upon the questions set for that day, and very frequently so examine them. He advised that proficiency in the daily work be considered in the making out of the monthly honor roll. These questions should be only important ones, nothing of a useless sort should be allowed to appear in them, and then every pupil should be held responsible for the proper answering of every question given. He illustrated his plan by reference to the question "Sketch the results of the Norman Conquest," and gave a very stinging rebuke to those who would ask pupils to memorize answers either dictated or written out upon the blackboard. A great advantage of the plan he advocated was that, when a pupil is directed where to read up a certain topic, a desire to study more of the same is created and stimulated, and not the memory faculty alone cultivated. The pupil's language faculty is also cultivated, as no answers are given by the teacher and repeated by the pupil, parrot-fashion. He believed that this method was perfectly practicable, as he had tried and seen it tried, and the best schools of America and Germany have used it, and are still using it. But many schools have not a reference library, but both "Knight's History" and "Green's Shorter History of the English People" are published in the Seaside Library form at a cost of less than \$3 a pair, and any teacher or any school can surely afford such a small amount when so well spent.

In answer to a question Mr. Parkinson said that after writing down the questions for the next day's lesson he would explain the meaning of the questions, give no answers, but refer pupils to sources from which to gain any required information. He believed that pupils generally understand the phrasology of text-books if the questions have been made clear.

THE public school population of Ontario in 1886—that is, of boys and girls between the age of five and twenty-one years—was 601,204; the number of pupils registered under five, was 1,273; between five and twenty-one, 485,624; over twenty-one, 599; total registered, 487,496, of whom 257,030 were boys and 230,464 girls. The average attendance of the year numbered 239,044. The percentage of the average attendance to the total number attending school was 49.

* Read before the West Leeds Teachers' Association, January, 1888.

Educational Meetings.

EAST MIDDLESEX TEACHERS' ASSOCIATION.

WE regret that we did not receive a full report of this meeting. The following, however, which we clip from an exchange, will be read with interest:—

The East Middlesex Teachers' Association resumed business at 9.30 a.m. Mr. John Dearnness, inspector of public schools, read a paper on "The Relation of Mind to Body from a Physiological Point of View." He dealt with the idealistic and materialistic conception of the relation by means of diagrams of the nervous systems of various animals and showed the connection between the development of the organism and the size of the brain in each. The average weight of the human brain is about fifty ounces, and other things being equal the power seems to depend upon the size and the number and depth of the convolutions. By means of a model and a specimen he showed the structure of the brain and the connection of the various parts and the state of the present knowledge of the functions of each. The efficient working of the nerve depends upon pressure and temperature and the supply of blood. Teachers should pay attention to these things, as a great deal of the teaching is lost if the brain of a pupil is not working under proper conditions. The blood should be rich in oxygen and if the teacher cannot superintend the food supply, he can do a great deal to furnish a good supply of oxygen. He could not speak strongly enough as to the necessity of good ventilation. Good lighting has a great influence in promoting the activity and vigor of the brain. Nerve decomposition produces carbonic acid and urea, which must be removed from the blood.

Dr. McLeian, inspector of High Schools, then addressed the convention on "The Art of Questioning," which, he said was the art of arts. One of the highest qualifications of a teacher is the art of questioning. Whoever can question well can generally teach well. The first object of questioning is to discover the pupil's knowledge that we may know how to begin to teach, and thus avoid teaching below or above the pupil's present knowledge. Another object is to freshen up the previous knowledge and join it on to the new. Secondly, to fix knowledge. Continuous repetition is necessary to impress the thought on the mind. The oftener the mind cells are moved in a certain way the easier they are to move and the more power there is to move them. Thirdly, to extend knowledge, to change imperfect knowledge to certain or correct knowledge, leading the pupils to correct their own errors. Dr. McLeian closed an interesting and instructive address by an earnest appeal for more sympathy on the part of the teachers with the children in their difficulties.

Papers were also read on "Scientific Temperance" by Prof. Bowman, and on "Commercial Education" by Mr. Westervelt.

The following officers were elected:—President, C. S. Harton; first vice-president, R. A. Farman; second vice-president, Miss A. Davison; secretary, Miss J. Langford; treasurer, Alex. McQueen; librarian, J. McGinnis; executive committee, Messrs. Dearnness, Wyatt and Reynolds.

TEACHERS' INSTITUTE.

COUNTY OF STORMONT.

REGULAR meeting of Teachers' Association was held in the public school building, Cornwall, Feb. 9th and 10th.

After the usual opening and a brief address by the President, Mr. McNaughton, I.P.S., Mr. Tilley introduced the subject of "Grammar." A class of particularly bright looking specimens of juvenile humanity was in the room, with whom Mr. Tilley illustrated, to the unbounded satisfaction and edification of his listeners, his method of teaching English Grammar.

"Arithmetic with special reference to Discount," was next discussed by Mr. Nugent. Using the black-board he rapidly and clearly explained the various phases of percentage, interest, bank and true discount. He emphasized the importance of mental arithmetic and the necessity of frequent drilling in its operations.

"How to Secure and Retain Attention" was the subject of a paper by Mr. Johnston, which teemed with wise suggestions and directions.

The teacher must get attention fixed on some subject of thought; must interest pupils; must teach them to study; must beware of routine; must inculcate quiet in work; must approve when pupils do well; must vary exercises, etc.

The highest encomiums were passed upon Mr. Johnston's paper during the discussion which followed.

An appreciative audience assembled in the Music Hall for the public meeting in the evening. There were recitations and music by local talent, but the feature of the evening was Mr. Tilley's lecture on "Success in Life, with Special Reference to Young Men." The audience were delighted with Mr. Tilley's earnest, eloquent presentation of his subject.

The first practical work of the second day was to dispose of the "Question Drawer." Then came another of Mr. Tilley's very instructive addresses on "The Principles of Education."

Mr. Bisset showed the advantages of a system of drawing by means of paper stencils.

Mr. Tilley's lecture on "Professional Fellowship" could not fail to give teachers a higher ideal of their chosen occupation.

The report of the nominating committee resulted in the election of Mr. McNaughton, president; Miss Cameron, vice-president; Geo. Bigelow, sec.-treas.

Mr. Talbot was elected delegate to the next Provincial Association.

A resolution expressing the highest appreciation of Mr. Tilley's work, and the help he had given during every session of the meeting, was passed.

GEO. BIGELOW, Sec.

Correspondence.

FRIENDLY CRITICISM.

DEAR SIR,—Emboldened by your note in last JOURNAL I take the liberty of adding my quota to the criticisms of the JOURNAL.

I am a teacher in an ungraded country school, having a past name, not for order, but disorder. If you ever taught in such, I cannot see how you so strongly object to corporal punishment. I believe, except in very rare instances, no teacher can manage without. The home training is where the trouble lies. Accustomed to it at home, many obey in school only through fear of it. It is true when the teacher has earned their confidence all this, or nearly all should vanish. But when the new teacher appears and finds the whole banded against him the rod and nothing but the rod is the cure. Let me add my experience (out of thirteen months I have not whipped for the last five) which you will recognize, although in a modified form. The fear of the teacher is the beginning of wisdom. Perfect confidence casts out all fear.

I like your English Department very much. It is just what we need. Any time you want to fill up space you will please a large number of the teachers of this country by filling it with English.

I like your reports of departmental regulations. These are of great advantage to us who do not receive them direct from the department. I would like to see a note on the last one, requiring entrance pupils to learn by rote all the short extracts and two poems for July. I am sir, yours truly,

W. L. MACKENZIE.

TALBOTVILLE, March 6, 1888.

TRY AND.

THIS is a very common substitute for *try to*, in contemporaneous literature and in conversation. "Try and listen to me for a moment." "Begin at the beginning and try and remember every thing." "Let me try and explain away the presumption of such a project."—*Good English.*

"I CAN'T," is a mean little coward;
A boy that is half of a man;
Set on him a plucky wee terrier
That the world knows and honors—"I can."

Educational Notes and News.

HAMILTON will expend about \$70,000 on the erection of new school buildings and improvements of the old ones.

GREEK is no longer a compulsory subject for entrance in Winchester, Harrow, and Marlborough, three of the great English public schools.

THERE has been a large increase in the number of pupils studying drawing in the Ontario schools, the total in 1876 being 2,747, and in 1886, 12,956.

A PARSEE girl, named Sorabji, has just been graduated in the University of Bombay in the "first-class," a distinction won at the same time by but five men.

It is stated that among the applicants for a position worth \$240 per annum, in Leeds County, were some experienced male teachers with second A certificates.

In Brockville all the classes in the public schools are dismissed at 3 p.m. on Fridays, when the teachers meet together and discuss methods of teaching and discipline. The plan is said to be attended with good results.

THE number of High Schools, including Collegiate Institutes, in the Province of Ontario in 1886 was 109, an increase of only four in ten years; the number of teachers 378, against 266 in 1876, and the number of pupils 15,344, against 8,541 in 1876.

THE statement of the Bursar of Upper Canada College for the past year shows that the investments are \$258,744.45, and that an income of \$16,173.83 was derived from them. The income from tuition fees was \$11,896.10. The salaries of the teachers amounted to \$15,404.67.

AN Omaha newspaper has collected nearly \$10,000 for the three teachers—Miss Shattuck, who lost both lower limbs; Miss Boyce, three of whose pupils died in her arms; and Miss Freemon, who succeeded in conveying all of the little ones to a place of safety in the great blizzard of this winter.

THE cost of the public schools of New York State last year was \$14,461,775, an increase of about half a million over the expenditures of any previous year. Of the total \$8,340,118 was expended in the cities. The number of children of school age is 1,763,115, of whom 1,037,812 were enrolled.

THE report of McGill University for 1887, shows that the number of regular lady undergraduates, in the special course for women provided under the Donaldson endowment, has increased to twenty-six, and total number of lady students is 108, showing that these classes are meeting a real educational want.

THE school census just completed shows there are 66,963 children of school age in Detroit, of whom only 18,000 are attending the public schools, 10,325 the sectarian schools, 30,306 not attending any and the remainder temporarily out of school. There are about 3,000 children earning their own living wholly or in part, and these, of course, are out of school.

In 1876, only 3,725 pupils, or 40 per cent. of the whole number of pupils in the High Schools of Ontario studied commercial subjects, such as book-keeping; in 1886 this subject was taken by 12,150, or 80 per cent. of the whole attendance. On the other hand, Latin, in 1876, was studied by 3,789, or by over 40 per cent.; in 1886 the number of pupils in Latin was 4,954, or only a trifle over 20 per cent. of the number in attendance. The number studying Greek has diminished from about 10 per cent. of the whole attendance to about 7 per cent.

DURING the last seventeen years more than twelve millions of dollars have been expended by the London, England, School Board. Of this nine millions have been found by the ratepayers, the remainder representing two millions of Government grants, and one million of fees. They have further contracted an educational debt of nearly seven millions. But for this vast outlay they have got their 360 schoolhouses, their 400,000 children on the register, and their 350,000 in actual attendance, while more than a million scholars belonging to the poorest classes have passed through the schools.

Science.

All communications for this department should be sent to C. Fessenden, B.A., Napanee, Ont.

WHY SCIENCE SHOULD BE MADE A SUBJECT OF STUDY IN OUR NATIONAL SCHOOLS.

IT has been frequently stated, and the truth of the statement is obvious, that our educational system, handed down to us from the middle ages, has systematically ignored science, and that we are only just beginning to consider how it may be made a more essential part of our teaching from the public school to the university. But the value of science as an element in education is not, we think, justly appreciated by many. Most people place too high a value upon what they call "the knowledge of scientific truths," and declare that this knowledge must be supplied to its citizens by a nation which would attain or maintain commercial and industrial supremacy. To us it seems that the value of scientific education depends chiefly upon the habits of mind which it creates, and only in a very inferior degree upon the knowledge which it affords. As far as the mere knowledge is concerned, an acquaintance with scientific facts is not more fruitful than an acquaintance with facts of any other kind. For example a man may be fairly conversant with modern electricity, may have learned pretty well all that is known about it, and may be able to apply his knowledge to diversified uses; but, for all this, he may not be in any degree wiser or more capable than another who, by similar efforts, has acquired an equivalent amount of knowledge of some other kind—say of archæology. From the side of commercial success we may be sure that as many people will learn science as can find profitable occupation in applying it, but a whole nation of such might fail to produce a single philosopher, or to display any of the advantages which scientific training is calculated to confer on those by whom it is really assimilated and made an integral part of their mental constitution.

Regarded from this point of view, the value of science as an element in education is not in the knowledge which it imparts, but in the habits of mind which it should create or confirm. Hence we would dismiss the whole apparatus of what may be called text-book science as a delusion and a snare. Let the books used be such as assist the pupil in studying the *things* with which he has to deal, and not such as merely state conclusions which other men have reached. Instead of making our boys and girls students of books, make them students of nature. In place of the desire to know and remember what other people have said, substitute the desire to ascertain and to establish what is true. A careful study of nature will teach them how all our interpretations of natural fact are more or less imperfect and symbolic, and will make it more and more evident that truth must be sought not among words, but among things. Such study will give the mind experience and grasp of certainty, and train it in the strictness with which all that is offered under the guise of truth should be examined and tested before it is received. It will educate the reasoning faculties in such a direction as will enable the mind to distinguish between those matters on which certainty is attainable and those in which it is necessary to maintain a suspended judgment. It will give one a just appreciation alike of the nature and of the importance of truth, and will warn one that an assertion that outstrips evidence is not only a blunder but a crime.

SCIENCE DEPARTMENT.

WE have been asked to give an answer to the following question:—

G. E. W. = 0.3350 gramme of an organic compound, containing only Carbon, Hydrogen, and Oxygen, gave on combustion 0.6715 gramme CO₂, and 0.2745 gramme of HO, and its vapor density was found to be forty-four times that of Hydrogen. Find its empirical and its molecular formula: and express the latter in the graphic notation.—First C. 1885.

SOLUTION.

Weight of carbon in compound is $\frac{1}{2}$ of 0.6715 gramme = 0.1831 gramme.

Weight of hydrogen in compound is

$$\frac{1}{2} \text{ of } 0.2745 \text{ gramme} = 0.0305 \text{ gramme.}$$

Weight of oxygen in compound is

$$\{ 0.3355 - (0.1831 + 0.0305) \} \text{ gramme} = 0.1219 \text{ gramme.}$$

$$\frac{0.1831}{12} = 0.01525$$

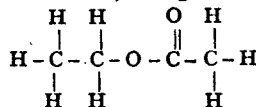
$$\frac{0.0305}{1} = 0.0305$$

$$\frac{0.1219}{16} = 0.00762$$

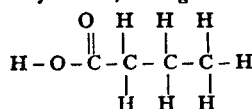
Now these quotients are proportional to the numbers 2, 4, 1, hence the empirical formula of the compound is H₄C₂O. The vapour density shows the molecular weight to be 88, hence the molecular formula is H₈C₄O₂.

The graphic formula, though asked for, cannot be given from the data furnished. The molecule is complex, and many arrangements of its atoms are consistent with the known atomicities of hydrogen, oxygen, and carbon. Only a careful study of the behaviour of the substances in various reactions in which it takes part will enable one to give its graphic formula.

So far as the conditions given are concerned, the substance may be acetic ethio, having the formula



or it may be butyric acid, having the formula



or it may be some other substance.

Educational Notes and News.

AT the close of last session McGill University granted eighty-five degrees in arts, medicine, law, and applied science.

THERE are twenty-five women pursuing courses at the Boston institute of technology, of whom four are graduates of colleges.

THE number of public school teachers in Ontario in 1886 was 7,364, against 6,185 in 1876; of these, 2,727 were males and 4,637 females. The highest salary paid to a male teacher in 1886 was \$1,200 per annum, against \$1,000 in 1876. The average salary paid to male teachers last year was \$425, against \$385 in 1876; the average to female teachers \$290 against \$260.

THE total expenditure on the public schools in 1886 was \$3,457,690. The Legislative grant amounted to \$265,912. It is pointed out in the report that the cost per pupil in the different provinces of the Dominion in 1886 was:—Quebec, \$4.10; New Brunswick, \$5.04; Prince Edward Island, \$6.36; Ontario, \$7.09; Nova Scotia, \$7.42; Manitoba, \$19.53; British Columbia, \$20.16.

THE McGill University lists now show, without counting those removed by death, 1,368 graduates in the courses, viz., 890 in medicine, 376 in law, 102 in applied science, and 36 in arts. The total number of persons holding diplomas of the Normal School is 1,196; the number of students in the several faculties and departments of the university is as follows:—20 in law, 235 in medicine, 280 in arts, and 63 in applied science.†

THE number of school-houses in the Province of Ontario in 1886 was 5,454, of which 5,437 were open, distributed as follows:—5,060 in rural districts, 207 in towns, and 170 in cities. The log school-house, the Minister says, in his last report, is fast disappearing, there being only 607 in 1886, as against 1,466 in 1880. In the same period brick houses have increased from 99 to 1,976. 5,316 school-houses are freehold and 138 rented. The number of maps now used amounts to 40,663. In 1880 there were only 1,814. The expenditure on apparatus and prizes in the last eleven years amounted to \$317,514, and the expenditure on school buildings, \$4,150,029.

THE number of separate schools open in Ontario 1876 was 167; the number of pupils, 19,109; and the number of teachers, 461. In 1886 the number of schools open, 224; number of pupils, 21,173; and the number of teachers 461. Reviewing the vari-

ous sets of figures furnished in the report, the Minister says: "From these tables it will be seen that while the number of separate schools has increased 57 in eleven years, the expenditure increased \$78,237, and the number of teachers 159 during the same period. The number of pupils in the various subjects of the school programme has also proportionately increased. From the reports of the Inspector, which appear elsewhere, it will be seen that the separate schools are steadily prospering, and that, both as regards teachers and pupils, they are becoming more efficient every year."

IN 1860, "Geo. Smith, of Coalville," commenced his "Brickyard Crusade" in London, England. "I came down by the force of circumstances (he remarked in a recent letter) to receive my college training in a brick and tile yard, long years before I was in my teens, and it was while I was working in the brick-yard that I became practically and sorrowfully acquainted with the evils of child life, as seen in canal boats, brick-yards, tents and vans." Moved by the sorrowful knowledge and hearty sympathy thus acquired, he has made it his life-work to care for the waifs and strays who appear to have been overlooked by all besides. For twelve years he labored on amidst opposition and personal abuse. On 1st January, 1872, 20,000 children were sent out of the brick and tile yards to school, and girls under sixteen were prohibited from working therein. His success only spurred him on to further efforts for the neglected, and he took the canal children under his care. He is their spokesman, and strives to rouse the public conscience to a sense of their miserable condition. His career is a remarkable instance of what can be accomplished by single-hearted earnestness and perseverance.

WE grow like what we think of, so let us think of the good, the true, and the beautiful.

WHETHER in a mill-pond or in the swim of life, it is a man's head that must be kept above water if his whole body will be saved from drowning.—*Rev. Dr. Parkhurst, in The Forum.*

INDUSTRIAL ignorance is the mother of idleness, the grandmother of destitution, and the great-grandmother of socialism and nihilistic discontent.—*Rev. Dr. Parkhurst, in The Forum.*

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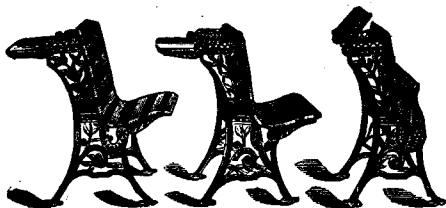
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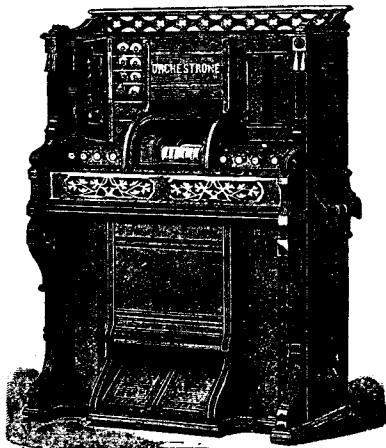


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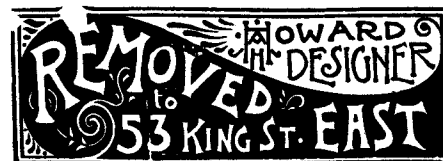
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The presiding Inspector will please give sufficient public notice respecting the Examinations.

The Head Masters of Collegiate Institutes and High Schools will please send the applications of their Candidates to their Local Public School Inspector, and in case of there being more than one Inspector in a County, to the one within whose jurisdiction the School is situated, together with the required fee of Five Dollars from each Candidate, or Ten Dollars if the Candidate applies for the First C. as well as Second Class Examination. A fee of Five Dollars is also required from each Candidate for a First Class Certificate, Grade C, which is to be sent with form of application to the Secretary of the Educational Department.

Where the number of candidates necessitates the use of more rooms than one, those taking the University examination are, in order to prevent confusion, to be seated in the same room.

NON-PROFESSIONAL THIRD AND SECOND CLASSES AND I. C.

| DAYS AND HOURS. | THIRD CLASS SUBJECTS. |
|-----------------------------|---|
| <i>Tuesday, 3rd July.</i> | |
| A.M. 8.40-8.55 | Reading Regulations. |
| 9.00-11.30 | English Poetical Literature. |
| P.M. 2.00-4.30 | History and Geography. |
| <i>Wednesday, 4th July.</i> | |
| A.M. 9.00-11.30 | Arithmetic and Mensuration. |
| P.M. 2.00-4.30 | English Grammar. |
| <i>Thursday, 5th July.</i> | |
| A.M. 9.00-11.30 | Algebra. |
| P.M. 2.00-4.30 | English Composition and Prose Literature. |
| <i>Friday, 6th July.</i> | |
| A.M. 9.00-10.15 | Reading and Orthöpy. |
| 10.20-11.30 | Drawing. |
| P.M. 2.00-3.30 | Bookkeeping. |
| 3.35-5.05 | Precis Writing and Indexing. |
| <i>Saturday, 7th July.</i> | |
| A.M. 9.00-10.30 | Latin Authors. |
| | French do |
| | German do |
| 9.00-11.00 | Physics. |
| P.M. 2.00-4.30 | Latin Composition and Grammar. |
| | French do |
| | German do |
| 2.00-4.00 | Botany. |

Oral Reading to be taken on such days and hours as may best suit the convenience of the Examiners.

SECOND CLASS OR PASS MATRICULATION EXAMINATION.

| DAYS AND HOURS. | SUBJECTS. |
|-----------------------------|--|
| <i>Tuesday, 3rd July.</i> | |
| A.M. 8.40-8.55 | Reading Regulations. |
| 9.00-11.30 | English Poetical Literature |
| P.M. 2.00-4.30 | History and Geography. |
| <i>Wednesday, 4th July.</i> | |
| A.M. 9.00-11.00 | Arithmetic |
| P.M. 2.00-4.30 | English Grammar. |
| <i>Thursday, 5th July.</i> | |
| A.M. 9.00-11.30 | Algebra. |
| P.M. 2.00-4.30 | Chemistry. |
| <i>Friday, 6th July.</i> | |
| A.M. 9.00-11.30 | Euclid. |
| P.M. 2.00-4.00 | Botany. |
| <i>Saturday, 7th July.</i> | |
| A.M. 9.00-11.30 | Physics. |
| P.M. 2.00-3.30 | French Authors. |
| 3.35-5.35 | do Composition and Grammar. |
| <i>Monday, 9th July.</i> | |
| A.M. 9.00-11.00 | Latin Authors. |
| 11.05-12.35 | do Composition and Grammar. |
| P.M. 2.00-3.30 | German Authors. |
| 3.35-5.35 | do Composition and Grammar. |
| <i>Tuesday, 10th July.</i> | |
| A.M. 9.00-11.30 | English Composition and Prose Literature |

FIRST "C" OR HONOR EXAMINATION FOR MATRICULATION.

| DAYS AND HOURS. | SUBJECTS. |
|------------------------------|---|
| <i>Tuesday, 10th July.</i> | |
| A.M. 8.40-8.55 | Reading Regulations. |
| 9.00-11.30 | English Composition and Prose Literature. |
| P.M. 2.00-4.30 | Greek—Pass (for matriculants only). |
| <i>Wednesday, 11th July.</i> | |
| A.M. 9.00-11.30 | Algebra. |
| P.M. 2.00-4.30 | English Poetical Literature. |
| <i>Thursday, 12th July.</i> | |
| A.M. 9.00-11.30 | Euclid. |
| P.M. 2.00-4.30 | History and Geography. |
| <i>Friday, 13th July.</i> | |
| A.M. 9.00-11.30 | Trigonometry. |
| P.M. 2.00-4.30 | English Grammar. |
| <i>Saturday, 14th July.</i> | |
| A.M. 9.00-11.30 | Chemistry. |
| P.M. 2.00-4.30 | Botany. |
| <i>Monday, 16th July.</i> | |
| A.M. 9.00-11.30 | Latin Authors. |
| P.M. 2.00-4.30 | do and Greek Grammar. |
| <i>Tuesday, 17th July.</i> | |
| A.M. 9.00-11.30 | Latin Composition. |
| P.M. 2.00-3.30 | French Authors. |
| 3.35-5.35 | do Composition and Grammar. |
| <i>Wednesday, 18th July.</i> | |
| A.M. 9.00-10.30 | German Authors. |
| 10.35-12.35 | do Composition and Grammar. |
| P.M. 2.00-4.30 | Greek Authors. |

TORONTO, February, 1888.

MEMORANDUM RE FIRST-CLASS EXAMINATIONS.

Candidates for Grade A or B will be examined at the University of Toronto, and candidates for Grade C at the following places:—Guelph, Hamilton, Kingston, London, Ottawa, Toronto, or at such other places as may be desired by any Board of Trustees on notice to the Department on or before the 25th day of May, it being assumed that the Board is willing to bear the extra expense of conducting the examination.

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