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The Educational Journal.

Consolidating "THE EDUCATIONAL WEEKLY" and "THE CANADA SCHOOL JOURNAL."

VOL. I.

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Published Semi-monthly.

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J. E. WELLS, M.A. Editor.
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Editorial Notes.

Will our exchanges please note that the EDUCATIONAL JOURNAL consolidates the *Educational Weekly* and the *Canada School Journal* that were. We are still receiving two copies of several exchanges, of which one is, of course, wasted.

THE students of the Toronto Normal School desire through our columns to express their sincere thanks to Mr. David Boyle, 353 Yonge St., Toronto, for kindness shewn them in many ways, which contributed to make their term in Toronto both pleasant and profitable.

THE annual circular of the Ontario Business College is a neat pamphlet of about fifty pages. This College was founded in 1868. The present circular is that of its eighteenth year and contains full information in regard to the staff of instructors, the course of instruction, and the methods and aims of this well-established Belleville institution.

WE are glad to be able to give our readers in this issue a larger amount than usual of practical matter from Canadian sources. We wish to make such papers a special feature of the JOURNAL. To this end we invite the co-operation of our patrons. We note that at many of the Institutes excellent model lessons, and outlines of methods of teaching specified subjects, are presented. If the authors of these exercises would prepare brief and clear synopses for our columns, they might thereby become helpers to their fellow-workers all over the Dominion.

WE have received the first number of *The Educational Review*, a neat and attractive monthly journal of twenty-four pages. It is issued from the office of Barnes & Co., St. John, N.B., and is intended to meet the wants of educationists in the Atlantic Provinces of Canada. The editors are A. H. McKay, B.A., B.S., for Nova Scotia; G. W. Hay, Ph.B., for New Brunswick; and Principal Anderson for Prince Edward Island—gentlemen whose combined names afford ample guarantee for the excellence of the magazine. We welcome this promising addition to the ranks of educational journals, and wish it and its enterprising publishers every success.

AN exchange well says, "In matters of discipline delay in action is sometimes wise. New facts, new reasons, qualifying explanations, may come to light, which will change the conclusions reached. Sometimes the very obstinate pupil will strangely come to his better self and grace-

fully yield; sometimes the suspected person is cleared of all connection with the disobedience." In any case, the discipline which is slow but sure is tenfold more effective than that which is swift but uncertain. Quietness and deliberation suggest reserved power. It is the man who is afraid of himself, and distrusts his own resources, who becomes excited and over-hasty, and boys and girls are quick to find this out.

THE Jubilee reminiscences of some of the older Canadian settlers will suggest, no doubt, many curious contrasts between the school systems of Canada in 1837 and those of to-day. Speaking, we presume, of "Little York" that was, the *Mail* tells us that in the schools a fee of \$1 a quarter was charged per child, but where there were more than two children in one family attending the same school, the third and following children were entitled to a free education. The dwellers of this locality must have been, it strikes us, exceptionally fortunate, if they could have their children educated on so favorable terms fifty years ago. Not half that time has elapsed since in some parts of Canada at least the school fees amounted to several times that amount per quarter.

ANY parent who fosters either in himself or his child the desire to shine, instead of the desire to be, to do, is catering to one of the lowest motives that moves the human heart, and one that produces in its train selfishness or superficiality, or both.—*The Christian Union*.

The remark is as true in regard to teachers as to parents. The former have it in their power to foster or to counteract the baneful tendency indicated almost equally with the latter. We have known teachers, widely esteemed as good men and true, who thought it no shame to wink very hard while their subordinates were drilling pupils in problems and answers for the coming public examinations, to be answered *impromptu*, of course. What a training was that for the future citizen! But that was years ago. The teachers of to-day have, let us hope, higher views of truth and duty. "STRIVE TO BE—NOT TO SEEM," is a motto worthy to be printed in letters of gold upon the walls of every school-room.

WE are persuaded that there is a vast waste of time in our public schools, arising mainly from the unwieldy size of too many of the classes. Does any intelligent master doubt that many a clever boy and girl might make more real progress in one year, under the direction of a skilful and enthusiastic teacher who had but a half dozen or so under his charge, than is now made in two or three years of the public school

course? Nor is the loss of valuable years the worst feature of the system. The bad habits, both of study and of conduct, too often formed, are a still greater evil. The teacher is not generally to blame for the slow progress made. No man or woman can do real, effective, teaching whose only opportunities of coming into contact with the children's minds are those afforded by meeting them in classes of thirty or forty, for a few minutes two or three times a day. In order to do the best work the teacher needs to know the minds of his pupils individually, and to be able to put himself in the place of each, but this under such circumstances is simply impossible.

GENERAL FRANCIS A. WALKER makes it a charge against existing courses of study in arithmetic that they are largely made up of exercises which are not principally, if at all, exercises in arithmetic, but in logic. He thinks that it may be unhesitatingly asserted that wherever the "statement" which is preliminary to the performance of purely arithmetical operations involves a great deal of trouble, time, and thought, while the mere ciphering which follows is done easily in a minute, as a matter of course, such exercises are not exercises in arithmetic, but in logic, and contends that to smuggle exercises of this character into instruction given in the name of arithmetic is an abuse. It is hardly worth while to quarrel about words. The mental exercise would be as valuable if called "logic," as under the old name, and it is the mental exercise, the cultivation of analytic or thought power which is of educational value. To reduce arithmetic to mere practice in the semi-mechanical processes of addition, subtraction, etc., would be to degrade it below the rank of a true educational process.

THE discussion of "over-pressure" in the schools still goes on. The learned doctors are still discovering or predicting curvature of the spine, anemia, lung disease, nervous derangement and myopia, or shortness of sight, and numerous other physical horrors, as the consequences. We have no doubt that incalculable harm is often done to the bodies and the minds of promising children in the school-room, but we believe the learned doctors are apt to miss the mark in regard to both the cause and cure. We do not believe that brainwork, of itself, is the cause of the trouble, or that the cure is to be found in reducing and diluting the mind-diet and exercise to the last degree. The young mind enjoys mental athletics as well as physical, and both are alike health-giving in themselves. The bad seats, the strained positions, the unnatural stillness, the long hours—these are at the bottom of the mischief. Give the junior pupils proper seats, frequent changes of position, and reduce the school-hours by one-half, and they will do more and better brain-work, and at the same time develop healthy bodies. But with them, as with older students, the motto still should be, "Work while you work, and play while you play."

"FUN and humour are not to be despised. They lighten the gloom of life and, furnish those flashes that make thought clear and striking. But even good things have their limitations. In teaching, free-trade in jokes may so demoralize the infant industries of thought that the imported goods ruin the market." So says an exchange. It is, of course, possible to have too much even of a good thing, and the teacher who is constantly laboring to be witty is pretty sure to keep the market so overstocked with bad jokes that there is not much room left for more valuable goods. And yet we are sure the average teacher is in much greater danger of going to the opposite extreme. The teacher who is quick to know a good joke when he sees it is to be envied by the longfaced and morose. A capacity for seeing the humorous side of things is, within certain limits, a valuable part of a teacher's qualifications. How often have we seen a timely jest, or ludicrous incident, relieve the tension of a situation that was becoming strained, and a hearty peal of laughter burst the cloud of dyspeptic gloom which was lowering over the school-room, clear the atmosphere surcharged with explosive matter, and let in the sunlight for a whole afternoon. Don't grudge the little ones the luxury of a merry laugh.

THE pains that are now taken in many schools to cultivate the perceptive faculties of children, marks a most healthful reform in educational methods. There was and still is in many quarters, crying need of such a reform. The whole tendency of school work under the old regime was often to deaden rather than quicken the power and habit of observation. But is there not reason to fear a serious danger as the outcome of the new-born enthusiasm? It is, no doubt, an excellent thing in itself, and an important part of the true teacher's work, to cultivate the Scientific spirit. But when we hear of children being exhorted by their teachers not only to observe the movements, habits, and beauties of all the living things which swarm in field and wood, but to bring in all kinds of specimens for study and preservation, we feel an inclination to shrink back and shudder at the prospect. The enthusiast of Science will, we dare say, smile at so old-fashioned a prejudice. None the less we can but fear that in stimulating curiosity up to the point reached all too soon, at which it becomes blind to the signs of suffering, and regardless of the sacredness of life, even in its humblest forms, we are in danger of destroying sentiments more noble in themselves than the insatiable curiosity we are stimulating.

WILL it be believed that under the ægis of our much vaunted public school system the antediluvian practice of requiring pupils to con and spell by rote long columns of disconnected and sesquipedalian words still flourishes? Gentle reader, it is even so. We have had the proof of it placed before our own eyes. Boys, high school boys—nay, collegiate institute boys, have

been caught in the act, or as we should perhaps say, *flagrante delicto*. Our pedagogical nervous system was so benumbed by this unexpected draft upon our sympathies, that the subsequent sight of an exercise book in which a young lady attending a fashionable private school had written down, *verbatim et literatim*, with some precision, one of the famous sets of definitions, beginning, "English grammar is the art of speaking and writing the English language, etc., etc.," scarcely produced a shock. True, the dried-up shade of Lennie, whom we had thought buried long years ago too deep for even a ghostly resurrection, flitted for a moment before our inner eyes, the dry bones rattling as of yore. But it would be really interesting to know in how many of the temples of learning in Ontario such dire penances are still imposed upon the presumptuous youths and maidens who dare to cross their forbidding thresholds.

THE Grimsby *Independent* publishes copies of a circular letter from the Secretary of the Grimsby Park Co. to the property owners of the Park, which seems, to say the least, little creditable to the management of the company. Following is a copy of the circular and enclosed card as given in the *Independent* :—

"St. Catharines, June 9, 1887.

"Dear Sir :—

"Grimsby Park Co. and the Township are petitioning the Council of North Grimsby to pass a by-law dissolving the present Union of the corporation of the Township of North Grimsby with the corporation of the village of Grimsby now constituting a High School District, which will relieve us of the High School Tax and the Township will allow the Statute Labor money spent on the grounds.

"I enclose Post Card which please sign and return to me at once.

"& Oblige,

"Yours &c.

"B. C. Fairfield,

"Sec't."

The following is the form of the post card enclosed :—

"This will authorize B. C. Fairfield to sign the North Grimsby Township petition on my behalf.

"Date

(Signature.)"

It is easy to understand how some of the rate-payers of North Grimsby may fail to appreciate the value of a high school education, and wish to economize in a backward direction by saving the slight additional tax it involves. But the manager and members of such a corporation as the Grimsby Park Co. are supposed to be men of intelligence and breadth of view, whose influence should be uniformly on the side of education and progress. Surely the owners of property in the Park will not be influenced by considerations so petty to lend their aid for the destruction of an institution which is doing so good a work as the Grimsby High School. The introduction of the foreign reference to statute labor suggests a lack of straight-forwardness in the movement which is significant if not suspicious.

Current Thought.

A DULL boy's mind is a wise man's problem.—*Thring.*

"THOUGHT is the beginning, thought the middle, and thought the end of a learner's work. Let not the teacher pile in lumber that is not thought."—*Thring.*

A LECTURER lecturing to one is an absurdity. But a teacher teaching one may be perfection. A large audience excites ambition in the lecturer, and gives an artificial glow to the familiar theme. But a large class overwhelms the teacher with despair.—*Thring.*

JUST praise is a debt. To a noble nature there is no stimulus like honest commendation. A kind word at the right moment might have saved many a soul from despair. In reviewing my professional life I regret that I did not more often indulge in generous praise to my subordinate teachers.—*Prof. Payne.*

THE school is primarily a moral gymnasium. From the first moment of discipline, the sole purpose of education is the formation of a complete and full-orbed character, the central and indispensable element of which is a *good will*, which, as Kant maintains, is the only absolutely good thing in the world.—*Ex.*

THERE is more in the voice of the primary teacher than is generally suspected. The ear is the child's first sense, as it is the man's last sense, but it catches sounds that are delicate, rhythmic, and shrinks from overloud tones. A loud report will kill a chick in the egg, and a loud-voiced teacher of little children will destroy many a gentle aspiration, many a hope and purpose. Attend carefully to the voice, if you would lead and develop children in their best thought, feeling, choice.—*American Teacher.*

AT its best, language is inadequate to express thought. Thought is of the spirit, and language is of the body; thought is infinite, language finite. On account of this incapacity of language, our thoughts must be definite before we can express them in words. Language can only be a Delphic oracle for vagueness. In an ideal sentence there is an exact balance between the thought and the expression, so that there are just words enough to express the thought. Writers whose vocabulary is ample, and whose ideas are comprehensive, strive to keep this balance of thought and language. Those whose ideas are vague are apt to be lavish of words. The English rustic relatively makes a greater draft upon his little stock of words to express his dim notions, than did either Shakespeare or Milton to utter their grand ideas. The words of the wise are few and well chosen; every utterance shows that they would rather meditate than speak. Hence their sayings are often oracular, and if they err it is on the side of speaking too little rather than too much.—*The Chautauquan.*

NO man should choose a line of work where there is no opening for promotion. Life must be open to the sky. There must be room upstairs. From the beginning of his life work, he should aim to take an active part in forming, maintaining, and improving the institutions of his country. He has no right to shut himself up in any cloister, or study, where he shall be so cabined that he cannot do the largest work. If a man be really fond of children, if sure of his own temper, and if he can keep it under control in every temptation, let him try the profession of a schoolmaster. This is the best opportunity of studying human nature. Some young men like to see finished and complete works, the tangible and visible result of their labor, and these would make engineers, mechanics, builders, inventors, and architects. As regards a business life, each young man should choose that which he can do best and with the least friction. Earnestness, simplicity, and industry are as sure of success now as they ever were. A shoemaker who makes good shoes will find that his work makes for itself an opening. He who does the best his circumstances will allow, does well, does nobly. Angels could do no more.—*Edward Everett Hale.*

Special Papers.

METHODS IN GEOGRAPHY.

GEOGRAPHY is often considered a dry and dull study, but there is no reason why it may not be made a most interesting subject in our schools. Instead of being disliked by the pupils, it should be heartily enjoyed, and almost any teacher may, I am sure, make the geography recitation the most delightful hour of the day.

The most cultivated woman whom I have the honor of knowing spent many of her evenings, when teaching, in planning her geography lessons to interest her pupils. She probably had very few helps *then*—as her teaching was done years ago—*now* helps are to be found everywhere. In every possible way we should strive to impress upon our pupils the fact that geography has to do with our everyday life, and that, instead of being dropped at the end of our school-days, the study should be continued through life. Teach the children that no place mentioned in any book we may be reading should be passed by without being looked up on a map. Atlases are so cheap now—a fairly good one may be had for twenty-five cents—that few are too poor to possess one.

All schoolrooms should be furnished with a globe and a set of wall-maps; but, besides these, books and pictures are needed. "The books," you say, "are not to be had." Perhaps not as many as you wish, but if you search your districts through you may find several that will be of great service to you. Those of you who are fortunate enough to have access to a public library will find a great many books that will help *you* very much, and many, too, in which you may be able to interest your pupils; for children can be led to read and enjoy books which their elders fancy too old for them. I know a boy who, at the age of eleven, would tell in an entertaining manner the stories from most of Shakespeare's plays; not because he had read Lamb's "Tales from Shakespeare," but because he had read the plays themselves. Pictures may be gathered from illustrated papers and magazines, and, if you enlist the children, you will soon have a fine collection, which may be mounted on large sheets of pasteboard or put into scrap-books.

Written reviews should be begun as soon as possible, being careful not to give more work than can be neatly done in the allotted time. In criticising these papers it is well to give two marks—one for the subject-matter, and the other, which may be called a language-mark, for spelling, punctuation, as far as it has been taught, and the use of capitals, and neatness. In this connection I wish to say that we have never seen so great improvement in spelling as since we have taken the spelling lessons from the arithmetic, geography, history and reading-book, dropping the speller altogether.

As our text-books are usually arranged, we begin with the definition of geography, which may be explained more fully by giving the meaning of the words from which it is derived. In connection with the definition of the earth, a little instruction may be given concerning the other planets, and the sun and moon. One book of much interest to children, on this subject is entitled "Overhead."

In teaching the form of the earth some of the proofs should be given and explained. If there is no globe in your room, you can illustrate this and other points very tolerably by means of a ball. Globes may be had so cheaply, however, that it is hoped all will be provided with them. The rotation and revolution of the earth, the length of the days and nights, the changes of seasons, and the position of the different geographical circles may be made exceedingly interesting by explanation and simple illustrations.

It is hoped that no child will be allowed to remain ignorant of the *reasons* for the location of the tropics and polar circles. The second time I was examined to teach, I was asked the reasons why the tropics were placed twenty-three and a half degrees from the equator, and was obliged to say I did not know. It was never explained to me at school. In connection with these topics, it is well to take up what is given of vegetation and animals in the different zones, whether it is next in order or not. With pupils ten years of age or younger it is, I am sure, much better to omit for the present the

chapter on the "Races of Men," "States of Society," and "Religion."

In teaching the definitions of the different bodies of land and water, illustrate from nature if possible. The teacher cannot be too careful, in all her explanations, to make herself understood, and must question closely to find out whether the children understand the meaning of the *words* used. It does not do, even with children twelve or fourteen years of age, to take much for granted. The other day, in a review lesson, one of my pupils wrote of an "expense of dessert." Some years ago I read of a child who had been studying of the surface of the earth. He was asked whether we live upon the outside or inside of the earth. He replied, "Upon the inside."

In teaching the continents explain as fully as possible the effect of mountain ranges upon temperature and moisture; the advantages of a location near some large body of water; the effect of elevation and of sea-winds.

North America should, of course, receive attention first, and should be most carefully studied. Guyot's description of the physical features of the continent is excellent.

Map-drawing should be begun with North America, and continue through the course. It is an exceedingly useful plan to have the maps based upon the parallels and meridians, instead of following any of the systems given in the text-books. At first the maps should be drawn the size of the one in the book, and after a time larger ones may be required, if it is thought desirable. The teacher should first draw upon the board the framework of the map, enlarging it perhaps four times, and show the pupils how to place the parallels and meridians correctly. Then she should insist upon its being done with accuracy and neatness. It adds much to the appearance of a map if no names are written upon it. Of course the maps should be considered a part of the geography work, and be marked as such. A method has been suggested by one of our teachers, which may be very useful, not as an exercise in map-drawing, but as a help in preparing the lessons in map studies. Each child is furnished with a sheet of *thin* paper and carefully traces upon it the outlines of the map over which it is placed. Then in studying the lesson each question is numbered, and when its answer is found upon the map the child puts it with its number upon *his* map. The teacher is thus enabled to see, almost at a glance, whether the places have been looked out and properly located.—*Education.*

EDUCATION IN MUSIC.

BY H. E. HOLT.

WE have progressed far enough in our study of educational principles and their application in teaching to believe that there is but one true educational method of teaching any subject, and that this true educational method is *applied educational science*. While every teacher should have his own manner, ways, and means of making the application of educational principles in teaching any subject, he is a good or poor teacher to just the extent that his manner, ways, and means, are made to conform to the natural laws which underlie the growth and development of the mind. The person who knows nothing of these mental laws and their application in teaching a subject, can not be considered in any sense a *teacher* of that subject, however learned he may be in it. Children in our primary schools can be taught tones and semitones, major and minor thirds, perfect and augmented fourths, perfect and diminished fifths as *mental objects*, just as readily as they can be taught simple numbers and their combinations. Great improvements have been made in the teaching of all languages in all countries by means of a closer application of educational principles. Music is the "*universal language*," it is more universally taught than any other language. Such is the simplicity of the elements upon which the language of music is based, that the principles in educational science can be more successfully applied to it than to the teaching of any other language. Notwithstanding this fact, there is no language in the teaching of which so little is known about the application of educational principles.—*Popular Educator.*

Hints and Helps.

THE PROVINCIAL ASSOCIATION OF SCHOOL TRUSTEES.

As one of the first and most important subjects likely to be considered by the P.A.S.T. is that of what should qualify a ratepayer for trusteeship, and as it is probable that in the near future all aspirants to that honorable position will require to pass an examination to exemplify their fitness to be trustees in school sections of the first class, paying from \$500.00 to \$1,000 per annum; of the second class, paying from \$300 to \$500 per annum, or of the third class, paying from \$200 to \$300 per annum for the support of education, it may not be inopportune to suggest at least a few questions that every candidate should be required to answer satisfactorily.

The same papers should be set for all candidates, the grade of certificate granted being made to depend upon the percentage of scholastic replies, and on the breadth and liberality, or otherwise, of those given to ethical queries.

Perhaps the following would appropriately cover part of the ground in so far as scholarship is concerned.

GENERAL KNOWLEDGE.

Time—4 hrs., 30 min.

1. Criticise the following as to its orthography and syntax:—

"John smith techer

Cur This is To Notify you that if you doant like To lite The firs evry mornin you Kin leve also Not To lick my jim and kip Him in.

EZRA STORK Trustee

pS my Collegs Thinks The Saim."

2. Supposing the assessed value of real estate in a school section to be \$95,000, how much will it cost (per head, per annum) for a gentleman whose farm is worth \$6,000 to educate five children, two of whom are girls, the teacher's salary being \$310 (paid half-yearly); cost of fuel, \$16.50; cleaning, repairs, maps, etc., \$2?

3. Describe a journey the longest way through your county, noting particularly kind and condition of all the school-houses; size and state of each playground; sex of teacher employed, and salary paid to each.

4. Explain clearly how to call and conduct an annual school meeting, stating whether in your opinion it is advisable for more than three persons to speak at the same time, and whether an amendment to an amendment is in order after the chairman has ruled the main motion out of order on a technicality, in direct violation of the Revised School Law as amended at last session of the Provincial Legislature. Give your reasons, and quote precedents.

5. Write a clear and concise advertisement to appear in your local newspaper, asking teachers to apply for your school, and intimating that all applicants must "state salary required."

N.B.—100 marks allowed for each full answer. First class candidates must take not less than 75 per cent.; second class, 60 per cent., and third class 50 per cent. of the total.

ETHICS.

Time—10 hrs., with noon spell.

1. What do you regard as a fair salary for a competent teacher (a) if he is a male; (b) if she is not; (c) according to age and experience; (d) as to reputation; (e) with regard to grade of certificate; (f) when the number of tenders is large; (g) when the teacher you want to "hire" may board with his parents; and (h) on general principles.

2. Discuss the merits of both sexes as modelites, as permittees and as normalites.

3. Write not fewer than fifty lines on the advantages and disadvantages incident to school-rooms unventilated, unwhitewashed, unscrubbed, badly furnished, and otherwise out of joint. Show how in such circumstances the qualities of the true teacher may be admirably developed.

4. Adduce reasons (a) Scriptural; (b) philosophical; (c) social; (d) educational; (e) economical, and (f) general, why it is inexpedient to remunerate women at a lower rate than is paid to men.

5. State whether you regard it as being conducive to the welfare of a school (a) that the teacher's

salary should be as high or as low as possible; (b) that the parents (in any matter of dispute) should side with their children or with the teacher, and (c) that the whole Bible, or no Bible, or merely selections, be read in the school.

6. In selecting a committee of trustees to take "sweet counsel" with the Minister of Education, when he expresses a desire in this direction, what principles would you lay down?

N.B.—From 100 to 500 marks will be allowed for each answer, as the discretion of the examiner may direct.

Question 3 may be omitted by candidates who have conscientious scruples; but in lieu thereof they must draw either a map of their township, or a comparison between the work of a cheap good teacher and a dear bad one. Another paper might be set on etiquette, with such questions as, Do you deem it necessary or unnecessary to knock at the school door before entering on your official visits, if you ever make any? Is it advisable to assert your dignity by keeping your hat on while in the schoolroom? What will be the probable effect on the pupils should you indulge in a smoke during your visit? and a few others of the like kind, but perhaps this would be going a little too far at the outset; reforms of the radical kind indicated by such questions require time, and no doubt the P.A.S.T. will, in due course, effect many desirable changes.

DAVID BOYLE.

TORONTO, June 18th.

WHY DO WE COME TO SCHOOL?

MR. EDITOR,—The coming Friday amusement hour seemed unprovided for when the thought struck me that to ask for five line answers to the above question might well occupy the time. I find that pupils will stand by their answers. A self-imposed law is regarded. Well, we read and criticized the answers to the question, and the sentiments expressed being so good and so much to the point for junior pupils, I send you them just as written by the pupils.

"We go to school to learn to be honest, industrious, patient, persevering and studious, and to be fitted for our after life. We also go to learn to talk properly, that we may become useful men and women."

MAGGIE.

"We go to school to receive an education to prepare us for higher honors. We learn both wisdom and mischief. We go because we are made go."

ELIZA JANE.

"We come to school to learn our lessons and do what the teacher tells us, and help him in all the ways that we can. We are not to depend on him to do all, but we are to do something ourselves."

WILLIAM JAMES.

"We come to school to improve our time and to study; also to cultivate and extend our knowledge. When we come we should respect our teacher and obey his orders, so that he will promote us in every way for good."

JOHN.

"We come to school to get an education that may fit us for any business we wish to pursue in our after life, and that we may know when we are getting our rights."

WILLIAM.

"We come to school to get a bit of education."

MARY.

"We come to school to learn to read, to write, and to cipher, so that it may be useful to us when we grow up to be men, which we expect to be some time."

SILAS.

"We come to school to learn to obey our teacher and respect him; that he may teach us our lessons and help us in all ways for our good."

SARAH.

"We come to school to learn, and also to have some sport."

ADDIE.

"We come to school to learn how to read and write and be kind to our teacher, so that he may teach us our lessons. We come to have some play as well."

ANNIE.

"We come to school to learn to read and write, and many other things, which will give us an education, and to have some fun besides."

ROBERT.

"We come to school to learn and to receive an education, and to fit us for higher office, so that we may grow up to be honored and respected men; and to be taught good manners, so that we may know more when we grow up."

FREDDIE.

"We go to school to get an education to fit us for after life, also to get manners. We come to learn to be honest and to use good language and be true."

JAMES.

"We go to get taught to learn, to behave, to work and to play."

NOBLE.

"We come to school to learn to behave, to read, to spell, to write, to be honest and to be true."

CHARLES.

"We come to school to be taught, to learn our lessons well, to write, to work, to read and to play."

JAMES.

"We come to learn to read, to use good language, to be honest, to be good, to be true."

ROBERT.

Thanking you for your space, and hoping that this may be of interest to many, I remain, yours truly,

J. S. WILSON.
Jamestown, Huron Co., Ont.

USE THE RIGHT WORD.

MISS LOUISA M. HODGKINS sends to the *Christian Union* the following list of "words, phrases and expressions to be avoided." Most of these errors are current in Canada as well as in New England, and teachers would do well to note them carefully. In the case of two or three, e.g. "had rather," "had better," "some ten days," we are inclined to think the idioms sufficiently well established by good usage, but nearly all are vulgar solecisms.

Guess, for suppose or think.

Fix, for arrange or prepare.

Ride and drive, interchangeable (Americanism). Real, as an adverb, in expressions real good, for really or very good, etc.

Some, or any; in an adverbial sense; e.g. "I have studied some," for somewhat. "I have not studied any," for at all.

Some ten days, for about ten days.

Not as I know, for not that I know.

Storms, for it rains or snows moderately.

Try an experiment, for make an experiment.

Singular subject with contracted plural verb, e.g., "She don't skate well."

Plural pronoun with singular antecedent, "Every man or woman should do their duty;" or "If you look anyone straight in the face they will flinch."

Expect for suspect.

First-rate as an adverb.

Nice, indiscriminately. (Real nice may be doubly faulty.)

Had rather, for would rather.

Had better, for would better.

Right away, for immediately.

Party, for person.

Promise, for assure.

Posted, for informed.

Post-graduate, for graduate.

Depot, for station.

Stopping, for staying.

Try and do, for try to do.

Try and go, for try to go.

Cunning, for smart, dainty.

Cute, for acute.

Funny, for odd or unusual.

Above, for foregoing, more than, or beyond.

Does it look good enough, for well enough.

Somebody else's, for somebody's else.

Like I do, for as I do.

Not as good as, for not so good as.

Feel badly, for feel bad.

Feel good, for feel well.

Between seven, for among seven.

Seldom or ever, for seldom if ever, or seldom or never.

Taste and smell of, when used transitively.

More than you think for, for more than you think.

These kind, for this kind.

Nicely, in response to an inquiry for health.

Healthy, for wholesome.

Just as soon, for just as lief.

Kind of, to indicate a moderate degree.

The matter of, for the matter with.

HAGERSVILLE has a truant officer, who has the authority to arrest all boys and girls between the ages of 8 and 14 found on the streets during school hours, who have no valid reason for being away from school.

School-Room Methods.

LANGUAGE TRAINING.

We clip from the *Southern Counties Journal* the following sketch of a special lesson in language training by Miss E. E. Kenyon. Teachers of experience might render good service to the younger members of the profession by sending such brief outlines of practical class-work for publication in the JOURNAL.

SPECIAL LANGUAGE TRAINING—BY MISS E. E. KENYON.

Teacher provides herself with some bits of stick that may be easily broken. Standing before the class she deliberately breaks one, asking, as she does so:—"What am I doing?" "You are breaking a stick," is the reply. Teacher exacts careful pronunciation of breaking, and proceeds to ask:—"What did I do?" "You broke the stick." "What have I done?" "You have broken the stick." "What had I done when I laid it down?" "You had broken it." Leaving the future tenses to take care of themselves (as they will), teacher changes the person and teaches third singular and first singular together by requiring a pupil to break the next stick. "What are you doing, Charles?" "I am breaking a stick." "What did you do, Charles?" "I broke a stick." "Class?" "He broke a stick." "What have you done, Charles?" "I have broken a stick." "Class?" "He has broken a stick." "Charles, what had you done to the stick when I took it from you?" "I had broken it." "Class?" "He had broken it." The first and third plural may be taught in this manner. Teacher calls two pupils to the front and lets them break a stick between them. By questioning them and the class in turn, she elicits: "We are breaking a stick." "They are breaking a stick." "We broke the stick." "They broke the stick." "We have broken the stick." "They have broken the stick." "We had broken the stick." "They had broken the stick." The passive form is taught by breaking the stick the subject. Teacher holds up one of the broken sticks and exclaims, with mock pity: "Poor stick! tell me about it." "The stick is broken." "Tell me about all these sticks." "They are broken." "By whom was this last one broken?" "It was broken by Willie and John." "Were the sticks broken when you first saw them?" "They were not broken then." Comment:—One of the most important of a teacher's duties is the prevention of bad habits. The mistake of the old-time grammarian lay in permitting his pupils to say, "The stick got broke," every day of his life until the grammar class was entered, and then expecting the daily conjugation of verbs to undo the mischief. Such exercises as the above, systematically conducted very early in the school course, and supplemented by daily watchfulness, will result in correctness and naturalness of expression. Such exercises should deal with the difficulties of the moment—not those that may present themselves later on. For instance, it was well in this lesson to omit the first future tense, because its only variation consists in the choice between shall and will. The contractions—I'll, you'll, they'll, etc.—used in free conversation, obviate the necessity of at present making this distinction.

HINTS FOR COUNTRY TEACHERS.

If the school is large the pupils must be so classified as to make the smallest possible number of classes. Try to keep the little ones employed. Let them draw maps, or put examples on the blackboard for them to solve on their slates after their lessons are prepared. It is a good plan to give them a verse or two in their reading lesson to write on their slates. Praise them if they do their work well. Nothing so encourages a pupil as the approbation of his teacher. Vary the general exercises for the little ones. Children soon get tired of the same thing over and over, no matter how interesting it may be to them at first. You may think that it will take a great deal of time for you to look over and correct all this work. But will it not pay you to have the little ones quiet and employed while you are hearing older pupils? No teacher can do justice to himself or his class while a dozen restless

little forms are demanding his constant attention to keep them out of mischief.

A good way to make grammar interesting to an advanced class is to let them take turns in putting sentences on the board for the class to diagram, parse and analyze. Let them criticize and correct one another. Another very good plan is to assign a topic, such as Case, or The Infinitive, to a pupil. Tell him to study his subject thoroughly and make a diagram or topical analysis on the blackboard. When the time comes for recitation, let him get up before the class and give them a short explanation of the subject, the class criticizing and asking questions. This will teach them to investigate for themselves, and will be remembered much longer than rules and definitions.

To make history interesting to advanced pupils, let one of the pupils write queries on slips of paper for the rest to answer in connection with the lesson. If the class is large a good way to study the review questions is to divide the class into two parts. Then choose the best on each side as leaders or captains. Ask the questions in rotation, and if a question is missed or answered incorrectly, the captain of the other side corrects it and the teacher keeps tally. Of course each side will be anxious to win and every pupil will do his best.

But remember that all cannot succeed with the same method. Where one is successful another may fail. Although you can take hints from others, their plans must be altered to suit the demands of your particular school. Study to make each recitation interesting. Be interested yourself and you will exert a powerful influence on your scholars in the same direction.

Aim at thoroughness. Be more anxious to teach well than to teach much. Try to make things plain to the dullest scholar.—*Nora H., in Ohio Educational Monthly.*

A LESSON IN ARITHMETIC.

I NOTICED once, in a primary school, where the number-work was much too abstract, a little girl who did not seem to get on with her arithmetic as well as she was expected to do. One day some questions of money were brought up as a sort of diversion; she was ready enough at this, and far better than any of the others in the class. I found that she was quite familiar with all the parts of the dollars, and could tell what change to give in almost every case I gave her. I asked her how she learned so much about it, and she told me that her father sometimes let her help him sell in the store. She was learning arithmetic in the store better than at the school.

We will place ten apples before a class that is beginning fractions. We shall suppose that, from the beginning of their instruction in numbers, they have been taught to find $\frac{1}{2}$, $\frac{1}{4}$, etc.

How many apples have we here? "Ten."

How many times can you take two apples out of these ten? "Five times."

Then what is a fifth of ten apples? "Two apples."

Now one of you may give me three fifths of ten apples. How many? "Six apples."

Now put each fifth by itself. I want half of your three fifths; can you give it to me? Some one will discover that one of the groups of the two must be divided to get this, and will give me three apples.

What part of ten apples is one apple? "One tenth." Three apples? "Three tenths."

Now we will write what we have done. Tell me what you did. I gave you half of three fifths, and it was how many apples? "Three apples."

And three apples is—? "Three tenths of ten apples."

Write it all in figures. " $\frac{1}{2}$ of 3-5ths of 10 apples = 3 apples = 3-10ths of 10 apples."

The teacher, who has the room next to mine, has a happy device for slate work. She has bought at a printer's some card-board that is usually designed for tickets of admission to entertainments. This card-board she has cut into pieces; on each she has put several examples. They are numbered and the answers written in a little book. These cards are designed to keep the pupils busy, when their regular lessons are learned. In another book an account is kept of the number of cards each pupil has finished, and a reward is given for good work on these examples.—*Marshall Messenger.*

NAMES OF OCCUPATIONS.

PLACE on the board and require your 1st, 2nd, and 3rd reader pupils to fill the blanks.

- A _____ prepares the meals.
- A _____ cures diseases.
- A _____ prints books and papers.
- An _____ speaks eloquently.
- A _____ makes beautiful pictures.
- An _____ writes books.
- A _____ cultivates the farm.
- An _____ performs on the stage.
- A _____ drives a stage.
- A _____ drives a coach.
- A _____ drives a team.
- A _____ drives a wagon.
- A _____ tends sheep.
- A _____ tends cattle.
- An _____ studies the stars.
- A _____ studies plants.
- A _____ cultivates flowers.
- A _____ builds houses.
- A _____ builds engines.
- A _____ doctors horses.
- An _____ plans buildings.
- A _____ builds mills.
- A _____ makes barrels.
- A _____ measures land.
- A _____ makes artificial teeth.

Extend at pleasure.—*Exchange.*

PREPARING FOR FRIDAY AFTERNOON.

LET the pupil write or tell lists of articles found for sale in groceries. Have this neatly written on the board in full sight of the pupils, as early in the week as Wednesday. Have it understood that on Friday afternoon, with the maps before the school, and with the books of reference near by, time will be spent in talking about these various things—from what countries they come, how they are produced, for what they are used, etc. Let all who can, find pictures to illustrate any of these points. The teacher needs to have a little supply of general knowledge, in order to "chink in" and to direct the talk along certain lines. The tea, coffee, spices, dates, olives, flour, sugar, etc., will bring out many interesting ideas. It will assist this exercise if, as in the Dowagiac schools, a large map of the United States, or of the world, be outlined on a blank floor space. Move off the teacher's desk and make the map on the rostrum. On this map let the various articles be piled as nearly in the locality of their growth as possible. Control the talk and make of it all a language lesson.—*Michigan Moderator.*

A PRACTICAL SPELLING LESSON.

LAY aside for a day the spelling book, and try an exercise like the following:—

Let the pupils take their slates and write their own names in full.

Write the teacher's surname.

Write the name of the county in which they live, the State, their post office address.

Tell where Scotchmen come from.

Tell how old a boy is who was born in 1879.

Write the names of four winter amusements; of four summer amusements.

Write how many days in this month.

Write what we plant to get potatoes.

Write a definition of a druggist.

Write the names of six pieces of furniture.

Write the names of six kinds of tools.

Write the names of seven days.

Write the name of the year, month, and day of the month.

Write a verse of poetry and a verse of Scripture from memory.—*American Journal of Education.*

LAYING AND LYING.

WRITE the sentences given below, supplying in each, one of the words *laying* or *lying*.

I saw six ships _____ at anchor.

The dust is _____ upon the leaves.

The _____ of the Atlantic cable was a success.

The leaves are _____ on the grass.

We are _____ our plans for the summer.

Robbers were _____ in wait for him.

The valley is _____ in shadow.

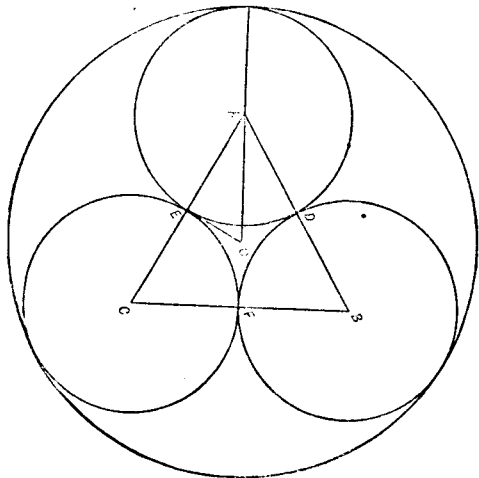
A book is _____ on the table.—*Central School Journal.*

Mathematics.

All communications intended for this column should be sent before the 20th of each month to C. Clarkson, B.A., Seaforth, Ont.

12. GIVEN $a \div b = c \div d$, and a the greatest of the four, to show that $a - b - c + d$ is a positive quantity.
 Since $a \div b = c \div d$, $b \div a = d \div c$. Hence $1 - (b \div a) = 1 - (d \div c)$, or $(a - b) \div a = (c - d) \div c$.
 But $a > c$, $\therefore a - b > c - d$, i.e., $a - b - c + d > 0$.

13. Place three Canadian one-cent coins so as to touch one another on the table. Find (1) the area of the space between them; (2) the radius of the ring that will just go round them; (3) the radius of the ring that will just drop in between them. Given diameter of coin = 1 inch.



Let A, B, C, be the centres of the coins, and let the circles A and B touch at D, B and C at F, C and A at E, so that DEF is the curvilinear space enclosed. Join AB, BC, CA.

Then $DEF = ABC - ADE - BDF - CEF = ABC - 3ADE$.

Now the angle $A = 60^\circ = \frac{1}{3}$ of 360° . $\therefore ADE = \frac{1}{3}$ of the circle A, and $3ADE = \frac{1}{2}$ circle A. Area of circle A = $\pi r^2 = 3.1416 \times (\frac{1}{2})^2 = .7854$.

$\therefore 3ADE = \frac{1}{2}$ of .7854 = .3927.
 Again area of ABC = .433, i.e., $\sqrt{3} \div 4$.
 $\therefore DEF = .433 - .3927 = .0403$ sq. in.

Let O be the centre of the outside circle; O is evidently the central point of DEF. Join OA, and produce it to the point of contact, G. Then $GO = AO + \frac{1}{2}$. To find AO; join OE which is perp. to AC. The angle $AOE = 60^\circ$ and $\sin. \angle AOE = AE \div AO = \frac{1}{2} \div AO = \frac{1}{\sqrt{3} \div 2}$, $\therefore AO = 1 \div \frac{1}{\sqrt{3}} = \sqrt{3} = 1.732$ nearly. Hence area of outer circle = $\pi r^2 = \pi GO^2 = 3.1416 \times (1.577)^2 = 7.8128$ nearly.

Also radius of inner circle = $AO - \frac{1}{2} = .577 - .5 = .077$.
 \therefore area of inner circle $3.1416 \times (.077)^2 = .018627$ nearly.

14. Let ABC be the equilateral triangle; let X be the centre of the square on BC, and Y the centre of that on AC, the point C being at the meeting of the two sides named. Then $XY^2 = XC^2 + YC^2 - 2XC \cdot YC \cos 150^\circ$ (II. 13), since the angle $XCY = 150^\circ$.
 $= 2XC^2(1 - \cos 150^\circ)$, since $XC = YC$
 $= 2BC^2(1 - \cos 150^\circ)$ since $2XC^2 = BC^2$
 $= 2BC^2(1 + \frac{1}{2}\sqrt{3})$, since $\cos 150^\circ = -\frac{1}{2}\sqrt{3}$.
 Now XY and BC are sides of equilateral triangles, which are therefore similar, and have their areas proportional to the squares of their corresponding sides, hence
 Area : area = $(1 + \frac{1}{2}\sqrt{3}) : 1$
 $= 2 + \sqrt{3} : 2$, and this is the ratio sought.

15. Let the inscribed circle touch the sides of the given quadrilateral, AB, BC, CD, DA, in the points E, F, G, H. Then $AE = AH$, $BE = BF$, $CG = CF$, $DG = DH$.
 $\therefore (AE + BE) + (CG + DG) = (AH + DH) + (BF + CF)$
 i.e., $a + c = b + d$, where a, b, c, d, are the sides of the quadrilateral. If $2s = a + b + c + d$, the area of quadrilateral = $\sqrt{\frac{1}{4}(s-a)(s-b)(s-c)(s-d)}$ = $\sqrt{(cdab) - \frac{1}{4}(abcd)}$.
 By drawing lines from the centre of the inscribed circle, we may divide the quadrilateral into four triangles the sum of whose areas = $\frac{1}{2}r(a+b+c+d) = sr$, $\therefore r$, the radius of the inscribed circle, = $\sqrt{(abcd) \div s} = \sqrt{abcd \div (a+c)}$ or by $(b+d)$.

16. Form a series of right-angled triangles with rational sides, having given the hypotenuses 25, 49, 81, 121, 169, etc.

This is equivalent to finding the integral solutions of $x^2 = y^2 + z^2$. Observe that $1 + 3 + 5 + 7 + \text{etc. to } n \text{ terms} = n^2$,

so that sum of 2 terms = 2^2 , of 3 terms = 3^2 , of 4 terms = 4^2 , of 5 terms = 5^2 , etc.
 And also notice that in this series 9, 25, 49, 81, etc., are perfect squares.

So that the sum of 5 terms = sum of 4 terms + 9
 " " " 13 " = " 12 " + 25
 " " " 25 " = " 24 " + 49, etc.
 " " " n " = " (n-1) " + k^2 , in general.

The question then is to find k.
 Now sum of n terms = n^2 , sum of (n-1) terms = $(n-1)^2$.

Hence the equation $n^2 = (n-1)^2 + k^2$
 i.e., $n^2 = n^2 - 2n + 1 + k^2$, $\therefore k^2 = 2n - 1$.
 Therefore put $2n - 1 = 1, 9, 25, 49, 81, 169$, etc.
 $\therefore n = 1, 5, 13, 25, 41, 85; 113, 145, 181, 221, 265, 315, 365$, etc., etc.

From these values of n it is easy to form a series of squares that represent the sides of right-angled triangles; thus:—
 $1^2 = 0^2 + 1^2; 5^2 = 4^2 + 3^2; 13^2 = 12^2 + 5^2; 25^2 = 24^2 + 7^2; 41^2 = 40^2 + 9^2; 61^2 = 60^2 + 11^2; 85^2 = 84^2 + 13^2; 113^2 = 112^2 + 15^2; 145^2 = 144^2 + 17^2; 181^2 = 180^2 + 19^2; 221^2 = 220^2 + 21^2; 265^2 = 264^2 + 23^2$, etc., without limit; hence there required triangles are 5, 4, 3; 13, 12, 5; 25, 24, 7; 41, 40, 9; 61, 60, 11; 85, 84, 13; 113, 112, 15; 145, 144, 17; 181, 180, 19; 221, 220, 21; 265, 264, 23, etc.

NOTE.—It may be of service to teachers of mensuration to observe that from each of these triangles it is easy to derive another series, and thus give pupils sufficient practice; thus, the 5, 4, 3 triangle gives 10, 8, 6; 15, 12, 9; 20, 16, 12, etc.
 The 13, 12, 5, triangle gives 26, 24, 10; 39, 36, 15; 52, 48, 20, etc.
 The 25, 24, 7 triangle gives 50, 48, 14; 75, 72, 21; 100, 96, 28, etc., by merely multiplying the sides by 1, 2, 3, 4, etc.

Thus an inexhaustible supply of right-angled triangles with rational sides, may be supplied for simple problems in mensuration, statics, etc.

17. A race in opposite directions round the sides of a right-angled triangle, starting from C, the right angle. The boys run 13 yards and 11 yards respectively in a given time, and meet first at D, the middle of AB, the hyp., 2nd at E, a point 30 yards from C. Find the area of the field.

In every 24 yards covered by both together, the faster runner gains 2 yards = $\frac{1}{12}$ of whole distance run.
 \therefore 30 yards = $\frac{1}{12}$ perimeter; \therefore perimeter = 360 yds. Now the triangle is right-angled with rational sides, hence find three numbers in the same ratio as some of those found in the last problem. We see that $36 = 9 + 12 + 15$, hence the sides are 90, 120, 150; and the area = $60 \times 90 = 5,400$ sq. yards.

The following problems were proposed in a previous issue:

ARITHMETIC.

1. A sold to B, and B to C, goods which cost A \$1,000 and C \$1,259.71 $\frac{1}{2}$, and each of the three gained the same rate per cent. Find the prices realized by A and B.

Let x equal the gain by each on \$1 cost.
 $\therefore 1000(1+x)^2 = 1259.712 = 10.8^3$
 $\therefore 10(1+x) = 10.8 \quad \therefore 1+x = 1.08$
 \therefore A's price = 1000×1.08 ; B's price = $1000 \times 1.08 \times 1.08$.

2. Two notes, each due in 2 years; total face value = \$1,020. First discounted @ 5% true; second at 5% bank discount; total proceeds = \$923. Find face value of each. Neglect days of grace.

Interest for 2 years at 5% = $\frac{1}{10}$ = bank discount; \therefore true discount = $\frac{1}{11}$.
 Let V_1 and V_2 be the face values,
 $\therefore V_1 + V_2 = 1020$; $\frac{1}{10}V_1 + \frac{1}{11}V_2 = 923$.
 Multiply the first by 9 and the second by 10, and $\frac{1}{11}V_2 = 50$, $\therefore V_2 = 550$, $V_1 = 470$; and the discounts are \$50 and \$47, proceeds, \$923.

3. Sold wheat @ 4% commission, and invested net proceeds at 2% commission, in sugar. Total commission = \$63. Find cost of sugar.

Wheat = sugar + double commission.
 1st com. = 4% wheat = 4% sugar + 4% double com.
 2nd com. = 2% sugar
 \therefore double com. = 6% sugar + 4% double com. (A)
 $\therefore 9\frac{1}{6}$ double com. = 6% sugar = 96% of \$63
 $\therefore 1\frac{1}{6}$ sugar = 16% of \$63 = \$10.98.
 \therefore sugar = \$100.8.
 If we wish to find cost of wheat, resume (A) and add 2% of double com. to both sides, thus
 102% double com. = (6% sugar + 6% double com.) = 6% wheat = 102% of \$63
 $\therefore 1\%$ wheat = 17% of \$63 = \$10.71
 \therefore wheat = \$10.7; and the two commissions are \$42.84 + \$20.16 = \$63.

4. Three numbers lie between 30 and 140, and their H.C.F. = 12 and L.C.M. = 2772. Find the numbers.

Let A, B, C, be the numbers; and let A contain 12 x times; B contain 12 y times; and C z times.
 $\therefore A = 12x$; $B = 12y$; $C = 12z$;
 \therefore L.C.M. of A, B, C = $12xyz = 2772$
 $\therefore xyz = 231 = 3 \times 7 \times 11$.

Since 3, 7, and 11 are primes, $x = 3$, $y = 7$, $z = 11$; and the three numbers are 36, 84, 132. The first condition is not required for the solution.

5. A rents a house for 12 months at \$300; B joins him at the end of 4 months, and C at the end of 8 months. Apportion the rent.

Divide \$300 in the ratio of 12:8:4 i.e., of 3:2:1.
 Ans.—\$150, 100, \$50.

6. On goods sold at a discount of 4% on marked price, 15% profit is still made on cost. Find the marked price of cloth that cost \$2.88.

$\frac{106}{100}$ marked price = $\frac{115}{100}$ cost price.
 \therefore marked price = $\frac{115}{106}$ cost = $\frac{115}{106}$ of \$2.88 = \$3.45.

7. Insure a house worth \$900 @ 2% premium, so that in case of destruction owner may be recouped for house, premium, and \$80 paid for taxes. Find face of policy.

Face = $900 + 80 + \text{premium} = 980 + \text{premium}$; and premium = $\frac{2}{100}$ face.
 $\therefore \frac{2}{100}$ face = 980; face = $\frac{50}{2} \times 980 = 50 \times 20 = \$1,000$.

CORRESPONDENCE.

MR. CHARLES M. FRENCH, Walter's Falls, solved correctly Nos. 1, 2 and 4.

MR. W. B. HARPER, Epsom, solved Nos. 1, 2, 4 and 9. "ARCHER," Lanes, asks for solution of third class algebra paper, 1886.

J. L. V., Velverton, asks—"Would you teach fractions before reduction?" Yes, and then only the most commonly useful parts of reduction. The greater part of reduction as exhibited in most text-books is "a mass of clogged nonsense."

W. P. V. thinks the data of problem 10, p. 131, McLellan's Exam. Papers, conflict. We think so also, for a Napoleon = 20 francs, and is given = 138d.; it is also stated that 240d. = 25.2 francs; so that in one case 1 franc = 9.4d., and 9.52d. in the other case.

J. A. A. Corson's Siding, asks for a solution of No. 4, paper III., p. 217, H. Smith's Arithmetic.

M.M., Tamworth, wishes to see solutions of No. 12, p. 164; No. 4, p. 165; No. 7, p. 166; No. 1, p. 117, paper IX. in the same book.

"ALIQUIS," Kingsford, asks for No. 319, p. 290, in Smith's Arithmetic.

IRA S. KENNEDY, Ross, asks for solution of problem—"The product of four consecutive numbers = 73440, find them."

CHARLIE, N.B., gives an interesting clock question, and one on the solidity of a box.

NOTE.—All these letters are valuable to the editor, as they point out the real wants of our readers. We regret that want of space compels us to pass them with acknowledgment and thanks. Perhaps some of our energetic friends will find time to give hints to a few of the enquirers after mathematical truth. c.c.

THERE is no power in the school-room equal to that of simple, unostentatious goodness. A heart full of charity, sympathy and kindness, is a far better endowment for a teacher than a head that is a cold, accurate, logical machine.—Prof. Payne (Univ. of Mich.).

The following, from an address before the National Union of Elementary Teachers in England, by its President, is suggestive of possibilities from which Canadian teachers may well pray to be long delivered:—"We claim that teachers whose honor is unstained, whose morals are irreproachable, whose work in school is efficient, who possess the confidence of parents and children, should not be dismissed from their places because their religious opinions differ from the majority of a new Board, or because they do not deal at the shop of a Board member; or because they object to be horse-whipped; because the clergyman's wife does not like the wife of the master; because they will not rejoin the church choir after they have been asked to withdraw; or because they have had a Roman Catholic lodger; or because of many other things foreign to their work in school."

Literature and Science.

BATTLE OF COPENHAGEN—APRIL 2, 1801.

BY JAMES ASHER, STRATHROY.

YE Britons, rise! shall Dane aid bitter Gaul,
Whose chief Napoleon deems the world his own?
Is your fair country now condemned to fall
And suffer him to mount the British throne?
To Denmark send Lord Nelson brave, your own;
The smiling city on the Baltic shore
Must for her prince's perfidy atone.
Britannia's fleet hath vengeance now in store,
And will full soon attack in murd'rous, thundering
roar.

Upon the shallow Sound the fleet sweeps on
Past blazing cannon from a castle high,
Innocuous flames! a mere salute is done;
The naval host then pass where Tycho Brahe
Erstwhile the starry dome, with careful eye,
Surveyed, on Huen's lovely isle; no tear
O'er worth departed; and they now descry
Fair Copenhagen, for that city steer,
To make the widow wail beside her husband's bier.

Along the crooked strait it next doth pass,
The lordly navy, while its pennons stream,
They are the whips that teach the naval class
That England gained whilom the glorious dream
Of Dutch Van Tromp, who raised a broom, I deem,
To his top-gallant high, in merry joy
That he should sweep your ships from ocean's
stream;

The last great Trump shall blow ere Dutch destroy
The British rule for aye; they dare no more annoy.

Before the capital in dread array
The British war ships stay in battle form,
And Danish people gath'ring for the fray
Are eager, while they view the coming storm
Of iron hail and thunder: dread alarm
They feel not; students, craftsmen, merchants
share

With soldiers, sailors, in the rush to arm
For mighty deeds, resolved to do and dare.
Let mighty foreign foes to strike their home for-
bear.

The piercing bugle sounds! oh awful hour!
Then thrice six hundred cannon dreadful roar;
Vast nitrous clouds from iron mouths o'ertower
Fell slaughter of men; the decks with reeking gore
Are laved: dire shells hurled shrieking to the shore,
Slay dimpled infants in their cradle beds:
The mansion grand, the workman's humble door
Are shattered, burnt, destroyed, but not yet dreads
The Dane his foe, while for his home life's blood
he sheds.

The fiendish work is done, the battle o'er,
And many a scorched and disabled ship
Is wanting mainmast, mizzen, or a fore.
The Danish wounded, on the gory strand,
Or reddened decks, yet bleed; no surgeon's hand
Has staunch'd their wounds; they calmly pass
away.

The dead to shore friends bear; their tunics strip
Not off: all place in one vast tomb of clay,
Companions meet, ye brave, rest till the judgment
day!

HOLY GEORGE HERBERT.

BY OLIVER WENDELL HOLMES.

THE name of Herbert, which we have met in the cathedral, and which belongs to the Earls of Pembroke, presents itself to us once more in a very beautiful aspect. Between Salisbury and Wilton, three miles and a half distant, is the little village of Bemerton, where "holy George Herbert" lived and died, and where he lies buried. Many Americans who knew little else of him recall the lines borrowed from him by Irving in the "Sketch-Book" and by Emerson in "Nature." The "Sketch-Book" gives the lines thus:—

"Sweet day, so pure, so calm, so bright,
The bridal of the earth and sky."

In other versions the fourth word is *cool* instead of *pure*, and *cool* is, I believe, the correct reading.

The day when we visited Bemerton was, according to A——'s diary, "perfect." I was struck with the beauty of the scene around us, the fresh greenness of all growing things, and the stillness of the river which mirrored the heavens above it. It must have been this reflection in the *water* which the poet was thinking of when he spoke of the bridal of the *earth* and sky. The river is the Wiltshire Avon; not Shakespeare's Avon, but the southern stream of the same name, which empties into the British Channel.

So much of George Herbert's intellectual and moral character show themselves in Emerson that if I believed in metempsychosis I should think that the English saint had reappeared in the American philosopher. Their features have a certain resemblance, but the type, though an exceptional and fine one, is not so very rare. I found a portrait in the National Gallery which was a good specimen of it; the bust of a near friend, more intimate with him than almost any other person, is often taken for that of Emerson. I see something of it in the portrait of Sir Philip Sidney, and I doubt not that traces of the same mental resemblance ran through the whole group, with individual characteristics which were in some respects quite different. I will take a single verse of Herbert's from Emerson's "Nature,"—one of the five which he quotes:—

"Nothing hath got so far
But man hath caught and kept it as his prey;
His eyes dismount the highest star:
He is in little all the sphere.
Herbs gladly cure our flesh because that they
Find their acquaintance there."

Emerson himself fully recognizes his obligations to "the beautiful psalmist of the seventeenth century," as he calls George Herbert. There are many passages in his writings which sound as if they were paraphrases from the elder poet. From him it is that Emerson gets a word he is fond of, and of which his imitators are too fond:—

"Who sweeps a room as for thy laws
Makes that and the action *fine*."

The little chapel in which Herbert officiated is perhaps half as long again as the room in which I am writing, but it is four or five feet narrower—and I do not live in a palace. Here this humble servant of God preached and prayed, and here by his faithful and loving service he so endeared himself to all around him that he has been canonized by an epithet no other saint of the English Church has had bestowed upon him. His life as pictured by Izaak Walton is, to borrow one of his own lines,

"A box where sweets compacted lie;"

and I felt, as I left his little chapel and the parsonage which he rebuilt as a free-will offering, as a pilgrim might feel who has just left the holy places at Jerusalem.—*July Atlantic*.

ALASKA.

ALASKA is assuredly a great wonderland, but we doubt whether it will ever become a favorite tourist resort. Its coast scenery, in precipitous and rugged grandeur, is probably not surpassed: bordered by hundreds of picturesque islands, with a mainland often rising abruptly hundreds and thousands of feet, but getting flatter as its broken coast stretches away round by Behring Strait into the Arctic Ocean; the last spurs of the Rockies in the background; some magnificent peaks, like St. Elias, Fairweather, and Wrangel (over 20,000 feet, and probably the loftiest mountain on the North American continent); great pine forests, covering hundreds of miles; glaciers, unrivalled outside Greenland, sweeping their broad way down to the coast like mighty rivers; the Yukon, winding its long way over deserts, among bluffs, and through mountain passes, to pour its waters into Behring Sea through a many-armed delta, and, with its tributaries, spreading itself well over the land; the whole finishing off in that long and tapering line of volcanic islands stretching half-way across to Asia, like the stranded backbone of a great whale. For the sportsman, no doubt, there is sport enough; for the trained glacialist and hardy mountaineer there are enjoyments and work enough; for the geologist, anxious to study extensive glacial action on the spot, no field likely to prove more fruitful in results is to be found

anywhere so accessible. The ordinary tourist, however, is likely to content himself with a flying visit in one of the fine Pacific steamers sailing regularly from San Francisco; but even this will give him impressions not soon to be forgotten. The Switzerland of America, however, Alaska can hardly ever be. The country, even in summer, is too saturated above and below to permit of touring on land being much of a pleasure, though, when the country comes to be better known and opened up, it may be found that a few interesting excursions may be practicable from Sitka. Still, a sail along the many-islanded coast of Alaska, and among the Aleutian Archipelago, with occasional stoppages at the native villages, some of them picturesque, some of them neat and tidy and highly civilized, and many of them only dirty, would be a delightful and instructive change to those who can afford it.

There is considerable diversity of race among the natives of Alaska. In the neighborhood of Sitka and to the north-east of the territory we find tribes that are closely allied to the North American Indians. On the coasts all round the territory and on the islands skirting the mainland we find a people that are undoubtedly Eskimo in physique and language, the difference between them and the Greenlanders being such as would originate in a long separation of the two branches and adaptation to different conditions. The Alaskan Eskimo, or Innuits, are often tall and stalwart men, more Mongolian in the cast of their features than the Greenlanders, and often with a decided mixture of Russian blood, as might be expected. The natives, on the other hand, of the Aleutian Islands are totally different in build and species from all the other Alaskans. They no doubt crossed over from the Asiatic continent, and probably numbered 10,000 when the Russians first made their appearance; now it is estimated they do not exceed 1,500. There is a large admixture of Russian blood in the Aleut people, who are all devoted members of the Greek Church, to the support of which among themselves they largely contribute. The very mixed Aleuts in the Pribyloff Islands are especially well off, under the care of the Alaska Commercial Company, which has the exclusive right to the fur-seals that frequent the islands of St. Paul and St. George. The yearly slaughter is limited to 100,000, and as the natives engaged in the business are allowed 40 cents for each skin, it will be seen that in an average year their earnings must be considerable.—*The Times (London, Eng.)*

LAUGHTER AS A TONIC.

PERHAPS there is not the remotest corner or little inlet of the minute blood vessels of the body, says the *Scientific American*, that does not feel some wavelet from the great convulsions produced by hearty laughter shaking the central man. The blood moves more lively; probably its chemical, electrical, or vital conditions are distinctly modified. It conveys a different impression to all the organs of the body, as it visits them on that particular mystic journey, when a man is laughing, from what it does at other times. And thus it is that a good laugh lengthens a man's life by conveying a distinct and additional stimulus to the vital forces. The time may come when physicians, attending more closely than they do now to the innumerable subtle influences which the soul exerts upon its tenement of clay, shall prescribe to the torpid patient, "so many peals of laughter to be undergone at such a time," just as they do that far more objectionable prescription,—a pill, or an electric or galvanic shock.

THE volume of the sun is about 1,330,000 times that of the earth. To give some idea of this difference, let us make a few comparisons of familiar objects. For instance, let the sun be represented by a man weighing 190 pounds. There are 7,000 grains in a pound avoirdupois, and this multiplied into 190 gives us 1,330,000. Now a grain may be represented by the kernel of wheat, which was in fact the original of the grain weight. So you have on the one hand the sun represented by a large man, and on the other the earth by a grain of wheat.

TORONTO, JULY 1ST, 1887.

Editorial.

THE RYERSON STATUE.

THROUGH the courtesy of Dr. Hodgins we have before us a photograph of the bronze statue which it is proposed to erect in the grounds of the Education Department, as a memorial of the late Dr. Egerton Ryerson, Chief Superintendent of Education for the Province of Ontario from 1844 to 1876. The statue was designed by Mr. Hamilton McCarthy, an English sculptor recently settled in Toronto. The design strikes us as graceful, dignified, and effective in the extreme. It is well described as follows, the description being taken, with slight modification, from a notice of the model of the statue in the *Evening Telegram*, of Toronto:—

The model represents the late doctor standing in the attitude of addressing a public assembly in the cause of Education. The right hand and arm are extended, and foot advanced, the hand slightly turned and the lips a little parted as if speaking, the left hand raised to the side and holding a book. The attitude is singularly dignified and graceful, earnest, yet free from restraint or theatricalism, and possesses a repose essential to a subject of this kind in sculpture. The happy and well arranged lines of the drapery in the Doctor's robe, in which the figure is draped, (as first President of Victoria University), and the small pedestal bearing the arms of the Education Department by his side—the motto of which he suggested (*Religio-Scientia-Libertas*)—add materially to the unity and success of the composition. The statue is to be nine feet high, and will be placed upon a handsome and appropriate pedestal about fourteen feet in height. The features of the late Doctor lend themselves admirably to sculpturesque treatment, and have enabled the artist to impart (as he has done) dignity, vigor, and expression, to his work.

The cost of the statue and pedestal are to be defrayed by subscriptions from the inspectors, masters, teachers and pupils of the public and high schools, etc., supplemented with a grant of \$2,000 from the Legislature. A further sum of from \$750 to \$1,000 is yet required before the statue can be placed in position. It is to be hoped that all who approve of this appropriate recognition of the great service rendered to the cause of education in Ontario by the founder of our Public School System, and who have not yet subscribed to this memorial, will do so forthwith, in order that the statue may be erected with as little delay as possible.

THE EDUCATIONAL ASPECT OF THE JUBILEE.

IN no one respect, perhaps, is the progress of the British Empire during the reign of Victoria more marked and wonderful than in the growth and development of the public educational system. A considerable improvement had indeed taken place during the fifteen or twenty years preceding her accession. At the opening of the century the ignorance of the masses, and, we might truthfully add, of the great majority of the classes, was deplorable. In 1818 Mac-

kenzie tells us there was only one person in seventeen of the population attending school. In 1833 the proportion had risen to one in eleven. It was, we think, in 1832 that the Government and Parliament first practically recognized the responsibility of the State in the matter of public education by a grant of £20,000. This sum was handed over annually for a few years to the British and Foreign School Societies to aid them in their work. In 1839 the sum was increased to £30,000. A little computation will show what a bagatelle this would be in comparison with the needs of millions of illiterate British children, and yet it was with great difficulty that Parliament was induced to sanction this trifling addition, the final vote standing 275 to 273. In 1855 the grants amounted to £396,621. Three years ago they footed up to a grand total of over four and a half million pounds sterling, exclusive of the large sums raised by school rates and those supplied by voluntary contributions.

The results, though yet far from being all that could be desired, have been commensurate with the growing energy and liberality of the Government and Commons. In 1818 but one in seventeen of the whole population was attending school. In 1833 the proportion had risen to one in eleven, and in 1851 to one in eight. We have not the later statistics before us, but may be pretty safe in saying that the present attendance is not less than one in from six to seven. Within the last thirty years the number of illiterates, as shown by the marriage statistics, *i.e.*, the number of those who could not write at the time of their marriage, decreased from 29.5 to 10.7 per cent for men, and from 37.5 to 10.7 per cent for women.

England has not yet adopted the principle of free public schools, but there are indications that the day of this crowning achievement is not far distant. Her public schools are at present to a large extent under the control of the Church of England, which contributes liberally to their support, but yet is largely dependent upon the children's fees. The Church authorities are, naturally enough, very strongly opposed to the establishment of the free school system, for this means, as a matter of course, an undenominational, or, as her advocates believe, an irreligious system. Under the present arrangement, provision is made for the free admission of all children whose parents are unable to pay the fees, but this inability has to be proven before the proper authorities by an inquest, which is humiliating to poor people of spirit, seeming to many of them to brand them as paupers. One result is a good deal of evasion of the compulsory clauses of the Education Act. Various subterfuges are resorted to by those who are unable or unwilling to pay the small fees, in order to escape the necessity of sending their children to school. There can be little doubt, as we have said, that the day of free public schools is drawing near, though possibly its dawning may not come until it is coincident with disestablishment of the National Church.

Contributors' Department.

THE COLLEGE OF PRECEPTORS.

THE question of the formation of a College of Preceptors for Ontario was in every respect the most important considered at the last meeting of the Provincial Teachers' Association. Both the promoters and the opponents of the scheme, arguing on general principles, were at one in reference to the influence that such an organization would exert, the only difference being that some considered that the influence would be beneficial, while to others it appears that it would be injurious to the interests of the profession. It was therefore wise to postpone the decision of the question, and thus give teachers an opportunity to reflect and talk about the matter. But unfortunately it seems that the question will be little better understood at the coming meeting of the association than it was at the last. For although some few of the local associations have passed resolutions in favor of the college, it does not appear that they have committed themselves to any definite scheme, while the majority of teachers throughout the Province have given very little attention to the subject, if we may judge from the absence of discussion in our educational journals. And yet this apparent absence of interest is not at all to be wondered at, seeing that, up to the present time, no definitely outlined scheme has come before the teachers.

With the aim of the promoters of the college—to raise the profession—all teachers are in sympathy, but they have not been informed as to the way in which it is expected this aim will be accomplished. The plan is to form an association or college, but the exact character and the mode of work of this college are unknown to the great body of teachers of the Province.

This being so, it is wrong either to oppose or support the scheme. It is perhaps unwise even to discuss it. But it will probably not be out of place to discuss under what circumstances the organization of a College of Preceptors would, and under what circumstances it would not, be worthy of support.

In the first place, if membership is not to be compulsory—and is in every sense of the word voluntary—no decided objection can be taken to it; for no matter how faulty the object and operation of the college might be in the opinion of any one, he could not possibly reasonably expect that all should share his opinions, though he might feel inclined to question the need of a new organization, and to ask in what respects the present teachers' association is insufficient.

If, however, it is intended to form a close corporation, many will find it difficult and unpleasant to surrender their liberty; while others of sterner stuff might be inclined to ask, though not in Shylock's spirit, "On what compulsion must I? tell me that." Trade-unionism is of course the order of the day, from the chimney-sweep to the skilled artist, and in its moderate voluntary aspects is quite

legitimate, but the iron-clad conditions and arbitrary restrictions of the ordinary "orthodox" union interfere with the liberty of the individual members, and are intended to curtail that of those who are not members. It is to be hoped that such a union of teachers will not be accomplished, nor even attempted. Its only effect would be to create a hostile public feeling which would eventually overthrow the organization, and remove the confidence which at present is placed in the profession, and which seems to be continuously growing stronger. Any attempt of an exclusive association to regulate salaries, except in the most general way, will prove unsatisfactory to the public and unjust to the honest, hard working teacher, who knows his duty and tries to do it. There may be reasons for the examination of candidates for teachers' certificates by examiners appointed directly by the profession, though there would even then be as much dissatisfaction with examination papers as there is now, and it might not be out of place to exact a small fee to cover the expenses of examination; but to make a person's right to teach depend on his connection—by annual fee or otherwise—with an Association, with whose principles he cannot agree, is altogether a different matter.

Moreover it is doubtful whether, even if all the teachers should willingly and freely and spontaneously become members of the College, it would be able to administer the educational affairs of the Province as well as under the present system. The appointment of Inspectors and Head Masters of Provincial Educational institutions is more likely to give satisfaction when taken out of the hands of the teachers themselves. Even if the best qualified persons were always to receive the various offices—which is doubtful—it is only reasonable to suppose that however honorable and well intentioned a man might be he would unconsciously favor in his reports and by his general influence the friend who supported him; while he would be likely to find fault with an opponent.

The fact that there exists a "College of Physicians and Surgeons" and a "Law Society" with powers much the same as those described above does not prove that such a Society should exist amongst teachers any more than the non-existence of the body amongst teachers proves that these two societies should not exist in connection with the medical and the legal profession. Moreover there is a wide difference between these professions and that of teacher; for a man may, if he choose, doctor his own ailments or plead his own cause in the courts, whereas he is by law compelled to send his children to school. Even in these professions the Judges are appointed by Government as are the Physicians in charge of our asylums, jails and other public institutions.

Were these considerations not sufficient to cause hesitation in the formation amongst teachers of a close corporation, or, in plain English, a monopoly, there is one that is of too much importance to be neglected. Teachers are liable to forget that they are the immediate servants of the public, that they are employed and paid by School Boards elected by popular vote and that the Government of this Province is chosen by this same popular vote. Should the provincial Legislature give teachers the power to regulate and control the rates of remuneration,

and any feeling of dissatisfaction arise in the public mind therefrom, it would not be long before the grant of the objectionable powers would be rescinded. What is needed in this Province is a more cordial, trustful, relationship between teacher and people. Teachers will be respected and remunerated in proportion to the strength of this relationship. They must remember that the educational interests of the country were not made for them, but they for the educational interests. There are already signs that the public begin to think that the teachers are having their own way too much, and it is a strange coincidence that so soon after the proposal to form a College of Preceptors, has come the organization of the Provincial Association of School Trustees, with the avowed object of seeing that the people have some organized mode of expressing their views on educational matters.

W. H. HUSTON.

GOVERNMENT SCHOOL GRANTS.

IN the early days of our present school system the Legislature granted moneys for the aid and encouragement of rural schools, these grants being based upon the average half-yearly attendance. These grants are yet continued. For years these grants had a living influence, leading trustees gradually to keep the schools open for longer terms than formerly, until it has now become established as a custom, with but few exceptions, to keep them open the whole teaching year. The grants have, therefore, now come to be looked upon as simply a sum of money received without effort or merit on the part of the trustees, valued just because it lessens their taxes. As these grants have already accomplished, quite fully, all they were intended or expected to do in fostering the schools, it now becomes an important question in statesmanship, how to apportion these moneys to the public schools in such a way that they shall have a direct living influence either in fostering education, or in stimulating the efforts of trustees, teachers, and parents, and in directing these efforts in the best channels for the future welfare of the public, or else in remedying or preventing some of the evils that mar the work of our public schools, and in supplying some of the wants that hinder the best results being attained.

I hold it to be of the greatest importance that all beneficiary grants of public money shall be so expended that they shall have not only an immediate effect but also a lasting one, in rewarding and encouraging meritorious effort in some useful direction, supplying some deeply-felt want, effecting some lasting public good, or preventing or lessening some evil that injures the public weal. To have the appropriations fall short of one or more of these beneficent objects betrays a lack of that far-seeing statesmanship which builds well the foundation and rears thereon a noble structure of public prosperity and liberty.

Some may not be ready to concede that the grants to the public schools have lost their fostering and moulding influence upon the action of trustees; but, were the question asked of each of the inspectors, To what extent does the Legislative grant to public schools influence the efforts of trustees at the present time? the answers would show, in all probability, that where these grants have not already lost all their influence, they are fast losing it.

Even if we grant that they still exert some directing force upon the efforts of trustees, are there no further benefits to be derived, or evils to be modified, by some other mode of distributing these funds? Of what do inspectors and teachers chiefly complain? Of irregularity of

attendance and the want of good school furniture and other requisites. Oh, but the law already provides for compulsory attendance, and also for withholding the grant if trustees do not provide adequately for their school. Yet despite the law and the best interests of the schools, the compulsory clause is a deadletter, and too many schools are but poorly furnished. Now let the public gold be the talisman that shall by its magic influence attract the absent children to well-furnished school-houses. Were not one cent of these grants given for the attendance of any child of the age prescribed for compulsory attendance, falling short of the requisite hundred days for the year, nor one cent of it for the attendance of those above or below the prescribed age, falling short of, say, forty or fifty days, then would it become such an object of financial importance to secure a much greater regularity of attendance, that many trustees would look after the absentees and take steps to bring them within the educational fold without delay.

Then were the wants of each school made a first lien upon the grant to that school on the written order of the inspector, scarce three years would elapse before every rural school would be fully equipped with suitable blackboards, maps, globe, numeral-frame, tablets, dictionary and gazetteer now required by law, and an improved style of seats and desks where needed, besides curtains, shutters and other furnishings found to be requisite to the advancement of the school in teaching facilities and comfort. And how much better would such a state of things be! Those trustees that have already well furnished their school-houses would not feel the force of such a provision, for it is calculated to touch just where most needed; and in those schools whose trustees do not do their duty in providing for them, the advantages would soon become so manifest that public opinion would approve of it as being just the thing required.

The schools would gain in attractiveness and comfort, the teachers could teach more effectively, the pupils would be enabled to learn faster and become better from their improved surroundings.

With regard to the municipal grants that supplement the legislative, it might be a move in the right direction were they considerably increased, and apportioned on an entirely new basis from that of average attendance, and with a view to the equalization of the rate of taxation in the different school sections in each township—either in direct ratio to the amount of the teachers' salaries, or to the amount expended in full for school purposes, or else in an inverse ratio to the rate of taxation in each section, or upon some other basis that might be deemed expedient upon a further consideration of this part of the subject.

Something should be done to improve upon the present profitless plan of distributing these grants, and it can only be brought about by attracting attention to it and by active and appropriate discussions.

Should these suggestions not meet with approval, will not some one else propose some other plan of apportioning our public school grants in such a way that they shall exert a stronger influence in directing the efforts of trustees, in improving the condition of our school-houses, in moulding the character of the rural schools, and in increasing the attendance of the pupils.

I would be pleased to receive suggestions on this subject from those who can give the time and attention to write, and from any one who could send me any papers containing something touching this subject.

WM. S. HOWELL.

SOMBRA.

Teachers' Meetings.

WEST BRUCE TEACHERS' ASSOCIATION.

THE annual meeting of the West Bruce Teachers Association was held in Kincardine on May 26th and 27th. The president, Mr. N. D. McKinnon, of Underwood, presided at all the sessions. Thursday morning was occupied mainly with routine matters.

The afternoon session opened with seventy-one teachers in attendance. A reading by Miss Jessie McLean, entitled "Are These God's Children?" was well received. Miss Lillie Evans recited, "Sister and I." The voice was well managed and interest well sustained.

W. Houston, M.A., spoke on "The Proper Methods of Teaching English Composition." In dealing with this subject, and, in fact, all assigned to him on the programme, Mr. Houston acted as a teacher and questioned those in attendance, and allowed them to question him as often as they chose. This plan had the effect of making the subjects treated interesting and instructive.

A song, "Nelson's Tomb," sung by Prof. Jones, was received with great applause.

The president then introduced to the Association Mr. G. H. Hogarth, B.A., Mathematical Master in the Kincardine High School, who gave an address on "Short Methods in Multiplication of Algebra."

In dealing with the subject of multiplication, the long methods, he said, should be taken up first as they apply in all cases and enable the pupil, directed by the teacher, to discover the short and special methods for himself. A great many examples were put on the board and their modes of treatment fully explained. The whole management of the subject by Mr. Hogarth was clear, concise, rapid, and accurate. He was evidently master of the subject in hand.

H. A. Steward read an essay on "Labor and Industry." The essay traced the early condition of man, pointed out that labor leads to pleasure and progress, and is necessary in the contest going on between man and nature. The advantages of labor and industry to the individual and the race were well illustrated by examples from biography and history. The essay was closed by directing the attention of teachers to the importance of laboring constantly and earnestly to restrain the bad and foster the good, and thereby mould character.

Mr. Houston then dealt with "English Grammar," confining himself chiefly to syntax, as he regarded that part of by far the greatest importance. A reading, "The Hindoo Mother," was very well rendered by Miss Bella Stewart.

A public meeting in the town hall in the evening opened with beautiful kindergarten songs, given by thirty little girls dressed in white.

"The Ride of Jennie McNeill" was recited in genuine spirit and truthfulness by Miss L. Evans.

Mr. Houston then gave his address upon "The School and the State."

On Friday morning business matters first claimed attention. A committee which had been appointed to consider the subject of Uniform Promotion Examinations reported in favor of continuing these examinations, giving reasons, and offering certain recommendations in regard to them. The report was adopted with a slight emendation.

Mr. Houston dealt with the subject of "English Philology."

In the afternoon Mr. N. D. McKinnon drew the map of Bruce on the board, and illustrated his method of testing pupils in location by placing figures instead of names on the several parts of the map and then requiring the pupils to name the parts numbered. He showed also that his method could be used with the maps of the hemispheres and the continents, and also in locating places on blank globes.

Inspector Campbell then took up "Phonics," with class in attendance. Phonics he regarded as slow pronunciation. The pupils should be taught a few small words before they are introduced to phonics. In the first work on the board, the words should be printed by the teacher, and pictures should be used frequently. The pupils should be taught to use only script on their slates. The sounds of letters should be learned from the words. The mode of teaching phonics was well illustrated

by practical lessons on the board to the pupils in attendance.

Mr. Houston addressed the Institute on "English Literature," dealing with this, as with the other topics discussed, in his bold, iconoclastic style. His ideas are quite modern, and in some instances even radical. But they are stated with such ease, freedom, and honesty, that even those who occasionally differ from him in opinion confess that his views are exceedingly well put, and usually well founded. There was a general feeling among the teachers that his talks were full of good, practical common sense.

SOUTH GREY TEACHERS' ASSOCIATION.

THE annual meeting of this Association was held at Flesherton on the 2nd and 3rd of June, the President, Mr. Ramage, in the chair.

The attendance was above the average, especially on the first day, and the exercises were interesting and successful throughout. Much of the success was due to the presence and assistance of Mr. Tilley, Director of Teachers' Institutes; Mr. Merchant, Prin. of Owen Sound Coll. Institute, and Mr. David Boyle of Toronto. Mr. Campbell, the new inspector, seems to have the confidence of the teachers, and will, no doubt, make his influence felt for good upon the schools of the Inspectorate.

The president read a very carefully prepared opening address. The points referred to were Local Associations, Educational Journals, Instability of Teachers' Position, Relations of Teachers and Parents, and Competitive Examinations.

Mr. J. F. Hunter followed with a paper on "The Teachers' Influence."

Mr. R. J. Ball criticised the new Public School History, pointing out the unsuitability of the work for pupils in the third class. Mr. Wherry criticised the criticism of Mr. Ball, and favored the new History. Inspector Campbell considered the book the most suitable he had ever used.

Miss Taylor illustrated the method of teaching an object lesson, taking as her object "The Bell."

Mr. Tilley read a very elaborate criticism on Fitch's Chapter on Discipline. He pointed out that this chapter was suited to boarding and private schools, but had to be materially modified to the circumstances of our public schools. The paper dealt in a very practical way with the whole question of discipline in the different departments of our public schools.

Mr. Oxenham referred to the difficulty of enforcing discipline where the parents opposed the teacher. Mr. Boyle, of Toronto, advocated as little keeping in as possible, but approved of dismissing a little earlier those who acquitted themselves well. A little talk with the parent often accomplishes more than detention or other punishment, but no specific rule can be laid down to suit every school. The teacher must be guided by sound common sense. Inspector Campbell found it useful to make the whole school responsible for the conduct of two or three.

Question—Would you allow whispering in school, if so, under what conditions? Mr. Wherry thought it advisable to have absolute silence during recitation, but would allow in some cases a few minutes between classes for necessary conversation.

Mr. Wherry, Principal of the Durham Model School, read a practical paper on examinations, dealing with his subject in a very thorough and satisfactory manner.

Inspector Campbell introduced the subject of "Temperance in the Schools."

In the afternoon Mr. Boyle spoke for some time on the "Educational Society."

After a few minutes recess, Mr. Tilley took up his subject of "Grammar" with a class. After a few questions and some discussion, Mr. Merchant, M.A., Prin. of O. S. Coll. Institute, spoke on "The College of Preceptors," a purely professional address on a proposed professional institution which he does not favor. He afterwards gave an interesting address on "Æstheticism in Schools and School Grounds," in which he specially recommended the cultivation of flowers in the windows by the pupils, stating that by a "Floral Society" in his own school great interest had been awakened in this work, producing results in discipline and progress unattainable, he thought, without the softening yet ennobling influence of the silent monitors.

Mr. Dixon followed and illustrated his method of teaching "Map Drawing," and drew on the blackboard a map of Ontario, by way of illustration.

PEEL TEACHERS' ASSOCIATION.

THE annual Convention of Peel Teachers' Association, was held in the Music Hall, Brampton, on the 2nd and 3rd of June. Nearly every teacher in the county was in attendance, which certainly speaks well for the interest they take in their work. William Houston, M.A., conducted the departmental part of the programme. His subjects embraced the whole field of English. His style was conversational, and thought-provoking throughout. In the different departments of English, he insisted on the deductive method. He would present the complex subject, or the whole, first, and then proceed to take it down or apart. Some of his ideas were revolutionary in their character, but were, nevertheless, well received. The inspector will be justified in expecting an improvement in the teaching of our mother-tongue throughout the county. The teachers showed a decided improvement in their capacity to conduct a discussion. The lecture on the evening of the 2nd, on the "School and State," was a thoughtful address. The school should return the state a citizen well trained in body, mind, morals and politics, or the science of human government. Mr. Houston is not an orator, but he is something superior, he is a teacher. During the second session, Miss Marshall read a thoughtful essay on "Morals and Manners," and Miss Wallace gave a recitation in excellent style. Essays from other teachers were omitted for want of time. Rev. Mr. Jeffrey gave a characteristic address on "Know Thyself and the Pupils." He fairly captivated the teachers, and many were the encomiums we heard. Mr. Jessop, president, presided throughout with dignity and ability. Among resolutions brought in by the committee on resolutions, was the following:—*Resolved*, That the Association desires to give formal expression to the very high esteem in which the members hold Mr. Adam Morton, for so many years their fellow-worker, friend, and adviser; one to whom every teacher might look up as an example of unwearied zeal and indefatigable energy in his profession, and who for more than a quarter of a century stood first among his fellows, growing old in years, but remaining young in thought and feeling; in a word he may well be called the Nestor of the teachers of Peel. Gratefully recognizing Mr. Morton's many and great services to the Association as a whole, to many of its members as individuals, and to the work of education in the county at large, the Association would also express a hope that he may long be spared in health and happiness, and that his last days may be the best. *Resolved*, That Mr. Morton be and is hereby made an Honorary Life Member of this Association, and that a copy of these resolutions be engrossed and framed, and presented to Mr. Morton by a committee consisting of the president, vice-president, and secretary. Carried unanimously, we need scarcely add.—*Peel Banner*.

STORMONT TEACHERS' INSTITUTE.

THE annual meeting of this Institute was held on the 2nd and 3rd of June. There was a fair attendance. Inspector McNaughton presided. Mr. Talbot had prepared a series of word exercises carefully written out on the blackboard, in connection with which he gave an exceedingly instructive and practical lecture, showing how to give children a knowledge of words, how to construct them, how to use them, how to form one class of words from another, how to distinguish between words of the same spelling, but different pronunciation, and those of different spelling but same pronunciation. This was followed by questions and expressions of appreciation from a number present.

Dr. McLellan delivered his excellent lecture on English Literature in the Public Schools. Prof. Holmes followed with a lecture on Music. He also illustrated his method of teaching it by the use of the blackboard. He closed by singing, in a most expressive and pleasing manner, an expressive song, entitled "Mr. Lordly and I."

In the evening Doctor McLellan delighted the audience with his eloquent lecture on "This Canada of Ours."

Educational Notes and News.

A YOUNG Indian B.A. addressed the Methodist Conference in Toronto at its recent session.

THERE are in all 4,114 Roman Catholic and 1,028 Protestant schools in the province of Quebec.

MT. ALLISON COLLEGE (N.B.) and Acadia College (N.S.) are preparing to enlarge their respective teaching faculties.

ABOUT forty graduates of the University of Trinity College met a few weeks since and resolved to take steps for reviving Convocation.

THE total number of professors and male and female teachers in the province of Quebec is 5,581 Roman Catholic and 1,512 Protestant.

THE *School Bell*, from which we quoted in last issue, is published by the Dufferin, not the Wellesley school boys, as we inadvertently said.

MR. L. L. LEWIS, school teacher at Wyoming, was tried before Dr. Harvey and S. Casey, J. P.'s., on the 28th, and fined \$5.50 for cruelly whipping a pupil.

KNOX COLLEGE had 52 theological students on its roll last year. The graduating class numbered 18. During the year \$26,907 were paid into the Endowment Fund, for which there is now subscribed \$199,347 and \$153,020 paid in.

THE American Institute of Instruction meets at Burlington, Vt., July 5-8, 1887. The meetings will be held morning and evening, in the fine audience-room of the Howard Opera House. The afternoons will be devoted to excursions.

A MAN was recently summoned before the Mayor of Kincardine, charged with entering the school grounds and plucking the flowers the children had planted. The Mayor held that the defendant was as criminal as though he had committed larceny in a private garden.

THE Cobourg *World* in a recent issue gave the names of eighty graduates of Victoria, who are now occupying posts of distinction and usefulness in Canada, and asks how many of these would have completed a college course if they had been obliged to go to Toronto for it.

THE report of Joseph S. Carson, Esq., Inspector of Schools for West Middlesex, shows that including the towns of Strathroy and Parkhill, there were 76 schools, employing 122 teachers, who give instruction to 7,884 children. These schools have about 325 trustees. The total expenditure during the year was \$68,561.74.

THE Guelph *Mercury* of June 1st says:—"A very handsome sum has been subscribed by former pupils of the late Dr. Tassie throughout Canada and the United States, to procure an annuity for Mrs. Tassie. At a meeting in Toronto on Monday a committee was appointed to co-operate with the Hamilton committee in making arrangements for the presentation."

THE annual commencement of the Oshawa Ladies' College was brought to a close on the 14th of June, by the concert and graduating exercises. This institution, under the energetic management of Rev. A. B. Demill and a very efficient staff of teachers, is increasing in patronage and popularity, and the past year has been a most successful one in attendance and work done.

At the meeting of the faculty of Cornell University on the 2nd of June, Miss Eliza Ritchie, a graduate of Dalhousie College (N.S.), was elected to a fellowship in philosophy for the years 1887-8. The value of the fellowship is \$400 and no duties are required of the incumbent except the prosecution of such advanced studies as she may elect in philosophy. There were 35 applicants for fellowships, of whom only eight were elected, and among these Miss Ritchie had a very high place.

THE public schools of the town of Cobourg gave a concert in the opera house on June 8th. About 1,000 parents and children were present. Six hundred copies of "The Life and Times of Queen Victoria" had been ordered from England by cable, and were distributed to the children. The programme is said by a correspondent to have been one of the best ever given by young people in Cobourg. The public schools of the town are very prosperous and the people seem well pleased with the management of the present principal and his assistants.

WE understand the Minister of Education is about to issue a revised edition of the Scripture Readings. Doubtless the new edition will contain the references, the omission of which was so much criticised. If those to whom it is referred for revision feel it to be their duty to insert some of the passages that were omitted in the previous edition, we hope no objection will be taken. It is still felt by the teaching profession that selected lessons for public and high schools are very convenient, and we are glad the Minister is making an effort to render the second edition, if possible, more useful and helpful than the first.—*The Globe*.

THE Teachers' Convention held in Virden, Man., on the 3rd and 4th June, was thinly attended in consequence of the heavy rains, which made it impossible for teachers to get in from rural districts. The convention was, however, held on the 4th with about fifteen teachers present. Mr. W. Sharp of the Virden school, read an excellent paper on "The object of Geography and how to teach it." A spirited discussion followed the reading of the paper, and many good points were brought out. Afterwards a short discussion took place as to the best method of teaching pupils in the primary classes how to read and write. The remainder of the time was spent in discussing difficulties which had to be encountered by teachers.

THE many friends of Mr. N. W. Campbell, late science master of our Collegiate Institute, will be pleased to read the following complimentary reference to him, which we clip from the *Durham Chronicle*, a journal that was a strong supporter of Mr. Campbell's principal opponent when seeking the Inspectorship of South Grey:—"Mr. Campbell, the newly-appointed school inspector, is winning golden opinions from both teachers and pupils and is doing his work in a thorough, practical, and efficient manner. It is an especial pleasure for us to record his efficiency, for although intimately acquainted with him, a long friendship compelled us to espouse the cause of Mr. De La Matter. Mr. Campbell possesses every qualification for the position and we expect to see the schools improve under his supervision."—*Whitby Chronicle*.

THE Presbyterian College in Manitoba seems to be making good progress. The whole college property and residences are now worth \$60,000 or \$70,000. During the past year the college has had under its care about 100 students, 35 of these being residents in the college buildings. There were 14 students in theology, of whom 5 finished their course. Of these two have devoted themselves to work among our North-West Indians; one goes to China; and two others are engaged in Home Mission work. In arts at the late examinations, 44 passed the various years of the university. Ten students finishing their course received the degree of B.A. at the late convocation. The staff consists of three professors, three tutors, and four lecturers in theology.

THE Congregational Union at its recent session passed the following sensible resolution:—"That the Secretary of the Union respectfully acknowledge the receipt of a communication from the Provincial Episcopal Synod of 1886 asking for co-operation of this body in securing legislative action with a view to religious instruction in the public schools, and that he be authorized to state in reply that 'while we sympathize with the memorialists in their solicitude for the religious instruction of the young, we decline to co-operate as desired for the following reasons:—First, by the present laws the Bible is read in nearly all our common schools and permission is given to ministers of the Gospel to use school buildings for the teaching of religious truth in hours outside of those allotted to secular instruction; and second, we deprecate compulsory religious instruction by the secular power, involving, as it practically does, principles against which we, as Congregationalists, have ever protested, viz., the union of Church and State.'

A NUMBER of Nova Scotia teachers have made arrangements to hold a "Summer School of Science" in Wolfville, where they have secured the use of the Acadia college buildings. Among the instructors are A. H. McKay, principal of Pictou academy, A. J. Pineo, of Kentville, A. J. Lay, school inspector, Amherst, Prof. Eaton and Prof. Smith of the Provincial normal school, and Prof. Caldwell of Acadia college. Each of these has charge of one

department. The session is to last two weeks, and the intention is to spend a great part of the time in outdoor rambles in which mental recreation, physical exercise, and scientific instruction will be judiciously blended. In a somewhat smaller way, certain New Brunswick naturalists propose to give instruction in the same lines. Mr. W. F. Ganong, a graduate in science of the University of New Brunswick, at present a resident fellow at Harvard; Mr. G. F. Matthew, the well-known geologist and leading spirit in the Natural History Society; Mr. Hay, and others are making arrangements for a school of science to meet in St. John on the 1st of July and continue one week. The rooms and museum of the Natural History Society will be at the disposal of the class, and no expenses except for board will be incurred. Here also it is proposed to do as much field work as possible.

AT the recent meeting of the Synod of the English Church for the Toronto diocese, Provost Body, on behalf of the Committee on Religious Instruction, reported as follows:—"The Committee on Religious Instruction in the public schools beg to report that they have held several meetings during the year, and have had under their careful consideration the various objections taken to the Book of Scriptural Selections. The whole book has been thoroughly examined for this purpose. Your committee is of the opinion that the only safe principle upon which such selections can be made is that of retaining, in all cases, the selected passages intact and un mutilated from the Holy Scriptures. And further, that the absence of the Scriptural references from the Book of Selections (most of which were removed after the book left the hands of the Revising Committee) is much to be regretted. They find that, especially in the case of the selections from the poetical and prophetic books, a large number of omissions have been made, such as would not have been possible had the attention of the Revising Committee been called to them by the Scriptural references. Having regard to these considerations and to the fact that the book has failed to commend itself to a large portion of the people, your committee is of opinion that, for the reading of the Bible itself in the public and high schools, enjoined by the regulations of the Education Department, an authorized calendar of reading, selected by a joint committee appointed by the various religious bodies of Ontario, should be issued by the Government." The report was adopted.

THE St. John *Telegraph*, in a vigorous article, deplores the incompleteness of the educational system of the province. It says: "We have in the main a good system of common schools. Our higher institutions of learning are fairly well fitted to carry forward and extend the system in many branches of liberal education. But they fit men for entry into certain lines of professional life chiefly. From our colleges, secular and denominational, there is turned out an abundant supply of material for teachers, preachers, lawyers and doctors. But these professions are already overcrowded. The business colleges, excellent institutions in their way, do much to prepare young men in the theory and practise of various lines of commercial and business life. Yet there is still a great want of the higher practical education. The mass of our people must live by other callings than these just named. For instance, the largest portion of our people in New Brunswick live by farming. There is an enormous waste and loss from the want of scientific knowledge connected with agriculture. Yet nowhere in our province can the education of the young farmer be completed in that direction. The education given by our schools and colleges tends to unfit the young man to be the mere industrious and economical toiler that his father was, without fitting him to be a farmer of the better class, and hence the result that young men will not stay on the farm." The *Telegraph* proceeds to show that, "if the young man chooses civil, mechanical, hydraulic or electrical engineering, callings of more than ordinary promise to certain classes of minds, the education must be obtained elsewhere, and the chances are that the student who has acquired it abroad will become the citizen of another country," and closes with a strong plea for the establishment of a school of agriculture and the mechanic arts in New Brunswick.

Educational Meetings.

CLOSE OF THE TORONTO NORMAL SCHOOL.

THE closing exercises of Toronto Normal School were witnessed by a large and interested audience. The chair was occupied by Principal Kirkland, and on the platform were the Minister of Education and Dr. Carlyle. A number of readings by Miss Knox, B.E., graduate and gold medallist of the Philadelphia School of Oratory, were loudly applauded. Several choruses were also given by the students during the evening.

PROFESSIONAL CERTIFICATES.

The following students obtained professional certificates from the Toronto Normal School, June, 1887:—

Grade B., Ladies—Misses A. Armstrong, S. Bell, S. Brewer, J. Brebner, B. Brown, A. Burger, F. Butterworth, R. Cameron, M. Cameron, Z. Carey, S. Cody, A. Callaghan, M. Dunn, M. Foote, J. Fletcher, J. Fraser, J. Fraser, R. Galbraith, L. Gordon, E. Gordon, M. Gilmurry, J. Hill, M. Hunter, R. Hutton, B. Innes, A. Lawrence, L. Leaming, M. Manning, A. McKenzie, A. Mason, M. Norman, F. Noble, M. Percy, J. Price, F. Sanders, M. Sanderson, C. Slack, A. Stevenson, J. Thompson, M. Thompson, L. Tyson, K. Verth, A. Weber, M. Wideman, J. Williams, J. Yeo, S. A. Armstrong, N. Harris, M. Miller, M. Smithers, A. J. Edwards, F. Wetherell.

Grade B., Gentlemen—Messrs. J. Armstrong, G. Balfour, F. Butchart, D. Forsyth, J. Flemming, N. Gilmor, W. Hacket, M. Murphy, G. Pegg, T. Robinson, F. Smith, M. Smith.

Grade A., Ladies—Misses H. Brown, J. Baker, J. Cox, S. Davis, L. Devlin, E. Drake, J. Fairbairn, M. Flemming, M. Govenlock, F. Goddard, A. Hicks, C. Hodgert, M. C. Hunter, M. Hutley, R. Knott, J. Magladery, J. McKay, J. McKenzie, B. McConnell, M. E. McKay, M. McPhail, C. McDougall, J. Osborne, B. Ptolemy, T. Price, H. Savage, A. Simpson, M. Sitlington, L. E. Smith, L. Thomas, S. Weylie.

Grade A., Gentlemen—Messrs. L. Anderson, W. Coleberry, C. De Rose, J. Graham, J. Hudson, S. Jaffrey, W. Lamb, J. McGregor, Dr. McClenahan, V. McGriffin, R. Scott, W. Simmons, T. Stewart, C. Walden.

Grade A., with Honors, Ladies—Misses F. Bartlett, A. Durdan, N. Ewing, M. Hillen, M. Hanley, L. McKay, M. McMaster, B. Reynolds, M. Scott, A. Stuart, J. Welsh.

Grade A., with Honors, Gentlemen—Messrs. W. Chase, A. Campbell, W. Copeland, G. Johnston, J. Leary, F. E. Malott.

Gold Medallist—F. E. Malott.

In order to obtain Grade B the candidates had to obtain 60 per cent. in practical teaching, and the same percentage at the written examinations. In A the candidates had to obtain 70 per cent. and the same percentage in the written examinations. In Grade A with honors the candidates had to obtain seventy-five per cent. and the same percentage in the written examinations.

The chairman stated that the competition for the gold medal had been very keen, as could be judged from the fact that while Mr. F. E. Malott, the successful competitor, had obtained eighty-three per cent., Mr. A. Campbell, the next candidate on the list, had obtained eighty-two per cent. Principal Kirkland also complimented Miss Reynolds, who obtained an average of 77 per cent. He then called upon the Minister of Education, who, in presenting the medal to Mr. Malott, addressed the students and audience at some length, on the dignity and importance of the teaching profession.

THE average salaries for male teachers in West Middlesex in 1886 was \$435.40 per year; for female teachers \$320.90. West Middlesex has paid a much higher average to men, as high as \$445 in 1884, and the inspector strongly expresses himself as of the opinion that better value was received then than now. The supply of teachers is now in excess of the demand, salaries are consequently lower, and many of those without schools are better teachers than those with schools. The institutes and high schools are crowded with candidates for certificates.

Book Reviews, Notices, Etc.

BOOK REVIEWS.

Interstate Primer Words:

A box containing ten packets of very nicely printed cards, which include all the words contained in the first twenty-one pages of "The Interstate Primer and First Reader."

Spanish Idioms with their English Equivalents, Embracing nearly two thousand phrases, collected by Sarah Cary Becker and Federica Mora. Boston: Ginn & Company.

This work will no doubt prove invaluable to students of the Spanish language and literature.

Perspective and Geometrical Drawing. Adapted to the use of Second and Third Class Teachers' Certificates. By Thos. H. McGuirl, B.A., Collingwood C. I. Toronto: Wm. Briggs. Price 75 cents.

We have much pleasure in introducing this work to those of our readers interested in the subject of which it treats, and especially to those who are engaged in teaching it in our schools. The work is well graded and the pupil is advanced slowly from the first elements to more difficult work, and if all the exercises are carefully done, the student cannot fail to make rapid, as well as solid, progress. Many teachers neglect the dry details of perspective in regard to the point, line, drawing to scale, and consequently are unable to get work well done when it is complicated with all these particulars; this book certainly has not this too frequent fault. The perspective of the circle is well explained—a subject which forms the foundation of architectural perspective in its higher forms. The various problems in geometrical drawing are well explained; we are glad to see that the author gives a note, on page 125, in regard to the drawing of an ellipse by means of circular arcs,—although we think it would have been better to show more evidently the absurdity of the problem. Altogether the conciseness of the work, and its numerous exercises, render it a valuable addition to our teachers' libraries. The publishers also deserve great praise for the clearness and accuracy of the illustrations, a point of very great advantage in a book on this subject.

A Gate of Flowers and Other Poems. By Thomas O'Hagan, M.A. William Briggs, 78 and 80 King Street East, Toronto.

We have looked through this modest little volume with considerable interest. Its author is already known in some measure, we believe, to the Canadian public, as a writer of both prose and verse. To the readers of the JOURNAL his name will now have become somewhat familiar through the series of articles on Elocution, which are still in progress. It would be unreasonable to apply to the simple stanzas in the little book before us the tests of the severer criticism by which the writings of more experienced and more pretentious writers must expect to be judged. The verses are rather unequal, but many of them have both merit and promise. The sentiments in many cases are worthy to be embalmed in song, and the lines in which they are embodied are not destitute of the true poetic ring. Further practice and experience will, no doubt, enable the author to improve in both matter and form. We deem it, in fact, rather complimenting than disparaging the work before us to say it leaves the impression that the writer has capacities of growth which render him capable of one day doing much better work. If we might assume for a moment the role of friendly critic we should urge the writer to observe more carefully in some cases the laws of metre, and to guard most vigilantly against the temptation to allow the demands of either metre or rhyme to betray him into using any word which does not clearly and forcibly express his thought.

The Methods of Theism; An Essay, by the Rev. F. R. Beattie, Ph.D., D.D. Brantford: Watt & Shenston.

This logical and able treatise does credit to Canadian talent and scholarship. It discusses in

separate parts two questions that are quite distinct from each other, though both come appropriately enough under the title adopted. Part I. is a close and careful inquiry into the various methods by which it has been attempted to account for the origin of the idea of God in the human mind. These methods are classified under the four heads of Natural Evolution, Divine Revelation, Ratiocination and Intuition. Part II. deals with the methods of the proof of the existence of God. These are discussed under eight distinct heads. The course followed by the author in the treatment of each sub-division is uniform and excellent. The method in question is briefly but clearly explained, the principal arguments which have been adduced in its support are then set forth fairly and dispassionately, and in most cases with remarkable clearness, and the chapter is closed with critical observations showing the author's view of the strength or weakness of the arguments for the method in question. It was not, of course, to be expected that these two large subjects could be exhaustively discussed within the compass of a small volume, but the author has certainly succeeded in making his book both comprehensive and suggestive. It is not possible in the very limited space we can give to such a notice to enter into a detailed criticism of the work, but we can heartily commend it, not only to teachers in colleges and universities, by whom it will be found most useful as a book of reference, if not as a text-book—and for the latter it is in many respects well adapted—but to all thoughtful readers who wish to keep abreast of the best thought of the present and of the past upon these most interesting and important topics.

LITERARY NOTES.

THE *Atlantic* for July has in its rich table of contents, an article on "The Use of American Classics in Schools," which will be read with interest by members of the teaching profession.

NO. 4 of the "Franklin Square Song Collection," contains two hundred favorite songs and hymns for schools and homes, nursery and fireside, selected by J. P. McCaskey. The selection is an excellent one.

"MENTAL Differences of Men and Women" is the title of an article, by George J. Romanes, to appear in the July *Popular Science Monthly*. It will be read with interest as showing the position on this question now reached by one of the foremost living students of mental science.

Civics, a new quarterly, is the official publication of the American Institute of Civics. It is to be devoted to the discussion, in a non-partisan, scholarly, and popular manner, of questions of vital public concern. The first number, just received, contains a number of able and interesting articles and gives promise of a useful and influential future for the magazine.

THE numbers of *The Living Age* for May 14th and 21st contain "England and Europe," *Nineteenth Century*; "Madame de Maintenon," *National*; "The Call of Savanarola" and "The Imaginative Art of the Renaissance," *Contemporary*; "The Empress Eudocia," *Church Quarterly*; "Persia" and "William Hazlitt," *Macmillan's*; "Pastoral," *Longman's*; "My Niece," "Educational Nurseries" and "A Pauper Training Ship," *St. James'*; "Jewish Pauperism," "The Perina," *Spectator*: with instalments of "Major Lawrence" and "Richard Cable," and poetry.

DR. J. H. VINCENT, Chancellor of the Chautauqua University, telegraphs from London that he has secured the services of Prof. Henry Drummond as a lecturer this season at the Chautauqua and Framingham Assemblies. Professor Drummond, though comparatively a young man, is well known in literature, but chiefly as the author of "Natural Law in the Spiritual World," which has had an almost unprecedented circulation in England and America. Prof. Drummond is an admired lecturer on Science to cultivated audiences, and an earnest helper and a most successful leader in the instruction of workingmen. The dates of Prof. Drummond's lectures will be duly announced.

AND

The price is one dollar and fifty cents (\$1.50) for a Nickel-plated "Light King" Lamp, which gives the most powerful light of any lamp in the world. It is perfectly safe at all times, on account of the patent air chamber with which it is provided. It does not require an air-blast to extinguish it, as the Patent Extinguisher shuts off the flame at a touch of the finger. This lamp cannot be bought at wholesale any cheaper than you can buy a single one for your own use, and can be bought at this price ONLY at our salesrooms, No. 53 RICHMOND STREET EAST, TORONTO, or sent by express for 25 cents extra.

AND

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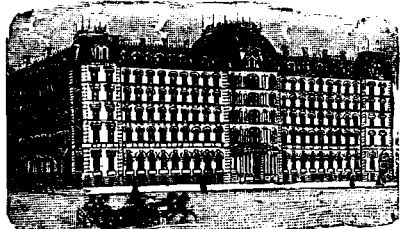
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Time Table of the Examination, July, 1887.

MONDAY, JULY 4TH.		
1.30 to 3.30 P.M.	- - - - -	Literature.
3.40 to 4.10 P.M.	- - - - -	Writing.
TUESDAY, JULY 5TH.		
9.00 to 11.00 A.M.	- - - - -	Composition.
11.15 to 12 noon.	- - - - -	Drawing.
1 to 3 P.M.	- - - - -	Arithmetic.
3.10 to 3.40 P.M.	- - - - -	Dictation.
WEDNESDAY, JULY 6TH.		
9.00 to 11 A.M.	- - - - -	Grammar.
11.15 A.M. to 12.30 P.M.	- - - - -	Geography.
2.00 to 3.30 P.M.	- - - - -	History.

Reading to be taken on the above days at such hours as may suit the convenience of the Examiners.

EXAMINATION TIME-TABLE, 1887.

It is indispensable that Candidates should notify the presiding Inspector, not later than the 25th May, of their intention to present themselves for examination. All notices to the Department for intending Candidates must be sent through the presiding Inspector.

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

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

NON-PROFESSIONAL SECOND AND THIRD CLASSES.

DAYS AND HOURS.	SECOND CLASS SUBJECTS.
<i>Monday, 4th July.</i>	
A.M. 9.00-9.15.....	Reading Regulations.
9.20-11.20.....	English Literature (Poetry).
11.25-12.55.....	Geography.
P.M. 2.00-4.00.....	History.
4.05-.....	Reading (Oral).
<i>Tuesday, 5th July.</i>	
A.M. 9.00-11.00.....	Arithmetic (Written).
11.05-12.35.....	Reading (Principles of).
P.M. 2.00-4.00.....	English Grammar.
4.05-.....	Reading (Oral).
<i>Wednesday, 6th July.</i>	
A.M. 9.00-11.00.....	Chemistry.
11.05-12.35.....	Drawing.
P.M. 2.00-4.00.....	English Composition.
4.05-.....	Reading (Oral).
<i>Thursday, 7th July.</i>	
A.M. 9.00-9.30.....	Arithmetic (Mental).
9.35-11.35.....	Algebra.
P.M. 1.00-1.30.....	Writing. (As for III. Class.)*
1.30-3.00.....	Book-keeping. (As for III. Class.)*
3.05-4.35.....	English Literature (Prose).
4.40-5.10.....	Dictation.
<i>Friday, 8th July.</i>	
A.M. 9.00-11.00.....	Latin (Authors).
9.00-9.30.....	Physics.
9.30-11.00.....	Writing.
11.05-12.35.....	Book-keeping.
P.M. 2.00-4.00.....	Latin (Grammar and Composition).
4.05-.....	Botany.
4.05-.....	Indexing and Precise-writing.
4.05-.....	Euclid.
<i>Saturday, 9th July.</i>	
A.M. 9.00-10.30.....	French (Authors).
10.35-12.35.....	French (Grammar and Composition).
P.M. 2.00-3.30.....	German (Authors).
3.35-5.35.....	German (Grammar and Composition).

* Obligatory for all Candidates who do not take the Commercial option.

THIRD CLASS SUBJECTS.

DAYS AND HOURS.	THIRD CLASS SUBJECTS.
<i>Tuesday, 12th July.</i>	
A.M. 9.00-9.15.....	Reading Regulations.
9.20-11.20.....	English Literature (Poetry).
11.25-12.35.....	Geography.
P.M. 2.00-4.00.....	History.
4.05-.....	Reading (Oral).
<i>Wednesday, 13th July.</i>	
A.M. 9.00-11.00.....	Arithmetic (Written).
11.05-12.35.....	Reading (Principles of).
P.M. 2.00-4.00.....	English Grammar.
4.05-.....	Reading (Oral).
<i>Thursday, 14th July.</i>	
A.M. 9.00-10.30.....	English Literature (Prose).
10.35-12.35.....	Drawing.
P.M. 1.30-3.30.....	English Composition.
3.35-4.05.....	Dictation.
<i>Friday, 15th July.</i>	
A.M. 9.00-9.30.....	Arithmetic (Mental).
9.35-11.35.....	Algebra.
P.M. 1.00-1.30.....	Writing.
1.30-3.00.....	Book-keeping.
3.05-5.05.....	Latin (Authors).
5.10-.....	French
5.10-.....	German
5.10-.....	Physics.
5.10-.....	Reading (Oral).
<i>Saturday, 16th July.</i>	
A.M. 9.00-11.00.....	Euclid.
11.05-12.35.....	Latin (Grammar and Composition).
11.05-12.35.....	French
11.05-12.35.....	German
11.05-12.35.....	Botany.

FIRST CLASS SUBJECTS.—GRADE C.

DAYS AND HOURS.	FIRST CLASS SUBJECTS.
<i>Monday, 11th July.</i>	
P.M. 1.00-1.15.....	Reading Regulations.
1.20-4.20.....	English Grammar.
<i>Tuesday, 12th July.</i>	
A.M. 9.00-12.00.....	Algebra.
P.M. 1.30-4.00.....	English Literature (Shakespeare).
4.05-5.05.....	Botany.
<i>Wednesday, 13th July.</i>	
A.M. 9.00-12.00.....	Euclid.
P.M. 1.30-4.00.....	English Literature (Thomson and Southey).
<i>Thursday, 14th July.</i>	
A.M. 9.00-11.00.....	Chemistry.
11.05-12.35.....	English Composition.
P.M. 2.00-4.30.....	Trigonometry.
<i>Friday, 15th July.</i>	
A.M. 9.00-11.00.....	Physics.
11.05-12.35.....	Geography.
P.M. 2.00-4.30.....	History.
SUBJECTS FOR FIRST CLASS GRADES A. & B.	
<i>Tuesday, 19th July.</i>	
A.M. 9.00-11.30.....	English Language, and History of English Literature.
P.M. 1.30-4.00.....	Algebra.
1.30-4.00.....	The Merchant of Venice.
1.30-4.00.....	Trigonometry.
<i>Wednesday, 20th July.</i>	
A.M. 9.00-11.30.....	English and Canadian History.
11.35-1.05 P.M.	Analytical Geometry.
P.M. 1.30-4.00.....	De Quincey and Macaulay.
1.30-4.00.....	Geometrical Optics.
<i>Thursday, 21st July.</i>	
A.M. 9.00-11.00.....	Chaucer, Milton and Pope.
9.00-11.30.....	Statics and Dynamics.
11.05-1.05 P.M.	Ancient History and Geography.
P.M. 2.00-4.30.....	Wordsworth and Tennyson.

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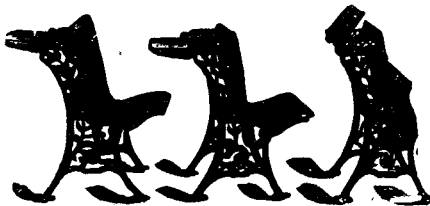
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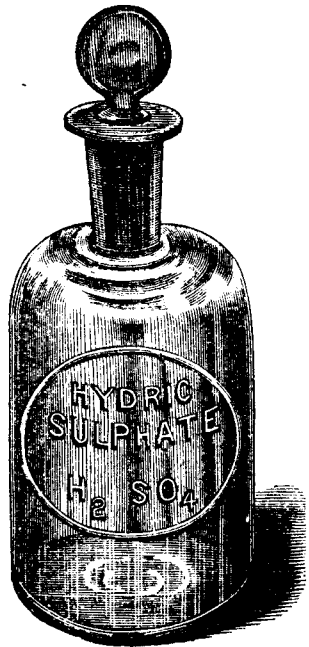
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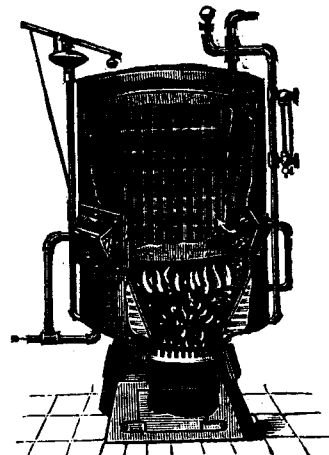
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