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COMPANION AND TEACHER

We Study to Instruct; We Endeavor to Amuse.

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Editorial.

Denominational Schools.

THE STRUGGLE IN MANITOBA.

The question of denominational *versus* undenominational schools is one that has been bitterly fought in nearly every Province in the Canadian Confederation. It has been, and is yet, a subject of warm contention among our neighbors across the lines. The cause of this appears to be in the fact that many Roman Catholics are at variance with the great Protestant majority regarding the objects for which schools are established. The former regard the school, in addition to the objects given below, as a branch of the Church, in fact, call it "the child's Church," and make the teaching of the doctrines of the Roman Catholic Church an integral part of the ordinary work of the school. The latter view the school as an establishment whose chief object is to impart secular instruction, and to develop the intellectual and moral faculties.

In Ontario the Separate School agitation first engaged attention about 1840, and in rather more than the ensuing decade the Legislature adopted as many as five Acts or amendments affecting the Separate Schools. But dissatisfaction still existed, and after a violent controversy the Roman Catholic Separate School Act of 1855 was passed. In the course of a few years, the Act was denounced, and the Bill known as "Scott's amended Separate School Act" was introduced in 1860, pressed with modifications each time, in 1861 and 1862, and finally passed in 1863. Agitation was again resumed in 1865, but it appears to have been chilled by the following published statement of Dr. Rycerson:—

"If, therefore, the present Separate School law is to be maintained as a final settlement of the question, and if the Legislature finds it necessary to legislate on the Separate School question again, I pray that it will abolish the Separate School law altogether; and to this recommendation I am forced, after having long used my best efforts to maintain and give the fullest and most liberal application to successive Separate School Acts, and after twenty years' experience and superintendence of our Common School system."

Since 1865 the question has lain at rest in Ontario. Supporters of R. C. Separate Schools are exempted from taxation for Public School purposes, and they are vested with ample powers for the collection of their own rates.

In the Province of Quebec, after much discussion the law was framed (1860) so that the minority in religion in any municipality may dissent, and establish Dissident Schools, the trustees of such schools having the same powers as the Commissioners have in respect of Common Schools. Religious teaching is acknowledged as a distinctive feature of the Quebec system. In the schools that are not Roman Catholic, Protestant ministers are expected to give the religious teaching.

In New Brunswick and Nova Scotia, the Separate School agitation failed to accomplish as much as in Ontario and Quebec, but a compromise was effected which, if carried out in good faith, should prove satisfactory. In Roman Catholic Sections, legally certificated teachers of the same faith are to be appointed. Religious instruction may be given, but not within legal school hours.

In New Brunswick feeling had run too high to admit easily of giving the law a fair trial. During such seasons unwarrantably strong assertions are apt to be made, and the makers stand by them even at a sacrifice. Winners rancorously press their gains, and losers give unnecessary and sometimes unreasoning opposition. Quite recently Bishop Sweeney permitted the seizure of his carriage to pay the Common School tax assessed on the Catholic Schools in the town of Portland, N. B.

Prince Edward Island was the next to undergo a severe conflict on this question. It was fought last year with great bitterness. The majority carried the undenominational system, but the struggle is hardly over yet, as the School Bill is now before the Legislature.

In Manitoba at the present time, the public question of greatest moment is whether the school system is to be "denominational" or "national." At present there is a Central Board of Education which resolves itself into "two committees, sections, one consisting of the Protestant, the other of the Roman Catholic members thereof, and the matters and things which by law belong to the Council are referred to the said committees respectively." Each committee licenses its own

teachers, and makes regulations for its own schools. There seems to be great dissatisfaction with the arrangement.

The views of the advocates of non-sectarian schools have been set forth in nine resolutions, unanimously adopted by the Winnipeg School Board, of which the following is the gist. -

1st. That the present Act of Education of Manitoba does not meet the requirements of the growth of the Province.

2nd. Experience proves a non-sectarian system better adapted than any other for mixed communities.

3rd. That the conscience plea is fallacious, inasmuch as non-sectarian schools fail to teach religion by defect, and not only do not interpose obstacles to religious instruction out of school hours, but rather prepare the mind for its reception; and that thousands of strict Catholics have been educated in such schools.

4th. The division line made by the Act between Catholic and Protestant should be obliterated, as it is unjust to expend the revenues of the Province in teaching the doctrines of one particular church out of five or six.

5th. That this division line increases expenses.

6th. That the education given under the present system is inferior in character.

7th. That when there are too few Catholic families in a neighborhood to support a school, rather than allow the children to attend a school Protestant in name they are permitted to grow up in ignorance.

8th. Where there are but few Protestant families in a Catholic neighborhood their children are growing up in pitiable ignorance, their parents having to choose between that alternative, and their being taught doctrines which they cannot receive.

9th. That it is a crime for the State to allow the members of its future governing body to come into possession of their rights unfit to use them; that the State is bound to establish such a system of education as will best prepare its citizens for the intelligent use of their franchise; that in a Province where the elements of the population comprise those who speak English, French, German and Icelandic—the establishment of one system of public English schools is the only means of fitting the people for conducting business efficiently, for fulfilling the duties of social life, for preserving the rights of all,—irrespective of class or creed, and for carrying on successfully the affairs of the State.

The present system has been defended vigorously in press and pamphlet within the present year, and as vigorously opposed. Those who defend the system take consolation in the belief that the

change is *ultra vires* the Provincial Legislature, and that only the Imperial authority can give such power. The twenty-second section of the Manitoba Act declares:—

"In and for the Province the said Legislature may exclusively make laws in relation to Education, subject and according to the following provisions:—

(1) Nothing in any such law shall prejudicially affect any right or privilege with respect to denominational schools which any class of persons have by law or practice in the Province at the Union."

This section is the same as that of the British North America Act, which guarantees the protection of the Protestant or Roman Catholic minority in relation to education, except that the B. N. A. Act does not contain the clause "or practice," and consequently is less favorable to the Separate School than the Manitoba Act.

On the other hand it is claimed by the opponents of the present system that at the time of passing the above cited Act, neither Protestant nor Catholic possessed any *right* or *privilege* in a technical sense. This may be the case, but it seems to us a hard position to maintain.

Contributed.

Suggestions on Teaching Arithmetic.

BY M. A. JAMES, HEAD MASTER, BALTIMORE
PUBLIC SCHOOL.

So highly is a knowledge of arithmetic appreciated that comment on the value of the subject is scarcely necessary. Affording, as it does, when properly studied, facilities for disciplining the mental faculties equal to Euclid or any other sciences or classics, it should receive attention commensurate with the importance of the subject.

No doubt there has been great improvement in the treatment of the subject within the last decade; but there is still great room for further improvement.

In examining the papers of candidates trained under different instructors, it is surprising to see the variety of methods employed in solving the same problem. The unitary method is receiving much favor, and deservedly so, being suited to almost every style of problem. It is a great pity we have no work treating on the subject more fully. Allow me to remark here that I am of the opinion that, if the Council of Public Instruction had examined every work on Arithmetic on this continent, they could not have selected one less suited to the wants of our public schools than the present authorized arithmetic. An early change here is very desirable. No doubt Dr. McLellan shares this opinion to some extent as he has recommended teachers and students to get Hamblin Smith's Arithmetic. But I am digressing.

In introducing arithmetic to a class of beginners concrete numbers should invariably be used. A child has no idea of number unless in connection with objects. Fully two-thirds of the time spent

in *teaching* arithmetic to beginners should be given to mental exercises.

The old system of first learning the rule and then "doing the sum" is fast becoming a thing of the past. The rule is best learned by working the question, analyzing the principles, and explaining the reasons.

To require a pupil to learn and understand a rule before he is permitted to see its principles illustrated by simple practical examples, places him somewhat in the position of the boy who was forbidden by his mother to go into the water till he had learned to swim.

In order to teach arithmetic, as well as other subjects, successfully, the teacher should have a thorough knowledge of the subject, a love for the employment, and an aptitude to teach. These are indispensable to success. The subject should be taught in classes; much time is saved by this means. Considerable time should be devoted to oral illustrations in each class. Individual assistance should be seldom given. If the class is engaged at an exercise they should work all the problems they can, marking any they cannot solve. Those difficult problems should be considered at the next recitation—the principle pointed out and indirect assistance given. Should any member of the class be successful in solving it, he should, after sufficient time has elapsed, go to the blackboard and show his work.

The action of mind upon mind is also a powerful stimulant, in a class, to exertion, and will usually create a zest for the study. The mode of analyzing and reasoning, too, of one scholar often suggests new ideas to others in the class.

The class should be composed of pupils of, as nearly as possible, equal capacities and attainments. If any of the class learn more quickly than others, they should take up an extra study, or be given additional examples to solve, so that the whole class may advance together.

The blackboard should be the teacher's slate. Scarcely a recitation should pass without the use of the blackboard. When a principle is to be demonstrated, or an opinion explained, if done upon the blackboard, all can see and will usually understand it at once. Geometrical diagrams should also be used in illustrating squares, cubes, solids, and many other points in arithmetic. No school should be without them.

Two objects, at least, should be aimed at in giving a lesson in arithmetic, viz., that of disciplining the mind, and making a practical application of the principles involved. Many teachers overlook these two objects and therefore are not successful in teaching the subject. Their pupils may be able to do all the question: under the rule in the book, but fail in applying the principle when a practical problem is given.

The attention of the class can easily be secured by throwing life and variety into the exercise. Animation and variety always delight children, while they loathe dullness. Every example should be analyzed, the "why and wherefore" of every step in the solution should be required, till the learner becomes perfectly familiar with the process of reasoning.

The motto of every teacher should be thoroughness. Without it the great ends of the study are defeated. In securing this object, much advantage is derived from frequent reviews. Not a recitation should pass without practical exercises being given besides those assigned for the lesson.

Mental exercises, as I said before, are very useful. They make ready and accurate arithmeticians and afford excellent means to arrest and prevent habits of mechanical cyphering and copying.

The habit of self-reliance is invaluable in study. To acquire this habit the pupil, like a child learning to walk, must be taught to depend upon himself. Therefore, when assistance is required, it should be given indirectly; not by taking the slate and solving the problem for him, but by explaining the meaning of it, or illustrating the principle on which the operation depends, by supposing a familiar case. In this way the pupil will be able to solve the questions himself, and his eye will sparkle with the consciousness of victory.

The pupil should also be expected to solve examples independently of the answers. Without this attainment the pupil receives but little or no discipline from the study, and is unfit to be trusted with business calculations. What though he should come to the class with an occasional wrong answer? It is better to solve one question *understandingly* and alone, than to copy an hundred answers from the book.

Then, to recapitulate: be lively, be thorough, be practical, be vigilant, and success is sure to follow your efforts.

Penmanship in Public Schools.

BY S. G. BEATTY, PRINCIPAL OF ONTARIO BUSINESS COLLEGE, BELLEVILLE.

The importance of Penmanship as a branch of study in our public schools is of late years beginning to be properly appreciated. The question, "Can all children of average ability and a proper use of the muscles of arms and hands, be taught to write a good hand?"—so often asked, is now answered in the affirmative by every qualified, experienced teacher of the subject; but the next question in natural order—"How can this grand result be best and soonest brought about?" has scarcely yet been thought of, except by such teachers as make a specialty of the subject.

A moment's reflection will suffice to convince any one of the importance of this art. Its diffusion is so general among all classes that it may with propriety be styled the universal art. Turn our thoughts which way we will, we find the art of writing intimately connected with all commercial and social relations of life. There is no trade, calling, vocation or profession of which it is not the mouth-piece. It embodies thoughts in a visible language. Under its magic power ideas assume tangible form, and the eye may trace the operations of the mind. As a qualification for business it is of the first importance, and often goes far in the mind of an employer towards making up for other deficiencies. When a young man goes in pursuit of employment, the first thing he is asked to do is to give a sample of his hand-writing. Read the advertisements of business men, for clerks, book-keepers, etc., and it will be observed that they usually require the applicant to apply in his own hand-writing. Let a man in business circles step up to a desk and write some document in a clear, free, bold hand, and he will at once create an impression in his favor. The truth is, there is scarcely any position in which a man may be placed where a good hand-writing will not be of great value. It is always admired and appreciated.

When we reflect, and take into consideration it

importance in all the relations of life, is it not strange that it occupies a place in the *background* in the great majority of our schools? It is submitted in all candor, in view of its importance, if the art of writing should not be placed in the *foreground* of our educational plans. Is not its natural order next to that of reading? Is not its importance second to none but that? But what are the facts in the case? Until very recently it has almost been ignored as a branch of study in our public schools. While we are in advance of the United States in many branches of science, we are far behind them in penmanship. A reform so sadly needed in this country is now being brought about.

In most of our cities and important towns this subject is of late receiving special attention. In many instances, writing-masters who teach this subject *scientifically* and upon principles as clear and satisfactory as that of other branches, have recently been employed, and the results of such teaching convince us that it is only through means of proper and systematic instruction that the *desideratum* of a good hand-writing can be procured by every pupil that comes fairly under the influence of our public school system.

While satisfactory evidences of progress and improvement are now manifesting themselves in our large schools, located in towns and cities and possessing special advantages, country schools, representing by far the largest part of our school population, we find in many instances still enumerated by the ancient methods of instruction followed by our forefathers, viz., *Imitation and Practice*. These terms, in their vaguest sense, seem to have complete possession, not only of the public mind, but also of the minds of the majority of teachers.

The writing exercise is, consequently, in many schools an unmeaning and uninviting ceremony, willingly omitted or laid aside for those of a more interesting, but not more important nature.

While it is indeed true that *Imitation and Practice* are the chief means by which penmanship is acquired, it is all important to the pupil to know how to imitate and how to practice, that the best attainable results may be arrived at in the shortest possible time.

In order to effect this, the chalk and blackboard must be freely used by the teacher in connection with every writing lesson, and the proper mode of practicing the copy fully explained and illustrated.

In early boyhood I attended a number of different public schools, and was instructed therein by no less than ten different teachers. While many of these were well qualified, able, and practical teachers of other subjects, not one of them knew how to teach penmanship properly, or ever attempted the use of the blackboard to illustrate and explain writing lessons.

The course usually pursued by these teachers was to sit at their desk during the time allotted to this subject and write head-lines for imitation, or, in case engraved copies were used, their time was devoted to some of the junior classes, and those engaged at penmanship were allowed to practice in accordance with the dictates of their own fancy. The consequence was that some pupils would be writing one copy and some another; and instead of practicing carefully and critically, the object in most instances would be to see who could get over the greatest space in a given time.

This style of teaching penmanship is still in vogue in many of our public schools. There are still

many teachers engaged in the work who never use the blackboard in connection with their writing lessons, and as a natural result their pupils show far less improvement than those who have been sufficiently fortunate to be under more practical and enthusiastic teachers.

Success in the management of writing classes, whether in public schools or colleges, depends almost entirely upon a proper use of the blackboard.

The live practical teacher will first explain the copy on the board, then call the attention of his class to the errors in formation, slant, shade, spacing, turns, &c., that they are liable to run into; point out the way to avoid them, and by a few pointed and well-timed remarks inspire an interest and enthusiasm in his pupils which will occasion them to practice with that zeal and critical earnestness which ensures success. I venture the assertion that any teacher who understands how to criticize and explain penmanship, even though he be not a good penman himself, and keeps up an interest in his pupils by a free and proper use of blackboard illustrations, will be able to show more improvement in three weeks' time than those adopting the old plan of allowing a class to imitate and practice according to individual fancy can in as many months.

It is often asked, "Which is preferable; engraved or written copies?" My answer is, that engraved copies are decidedly the best in any school or college in which there is not a professional penman, or a teacher who can write sufficiently well that his copies may be used as proper models for imitation. For the following reasons - Copies are the means relied on as the subjects for imitation by learners, until such time as the mind becomes sufficiently impressed with the forms and essentials of good writing to dispense with them. Copies should therefore contain that, and that only, which it is designed shall be imitated, and should be so executed and presented as to develop in the mind of a learner the clearest and most definite *ideal* of form, slant, shade, spacing, and all the other characteristics of good writing. It is not for me to speak disparagingly of the writing of our teachers. I know that there are among them some excellent penmen and many very bad writers. The question is, can the handwriting of all our teachers, required to teach this subject, be presented as proper models for the imitation of pupils?

The difference between success and failure in teaching penmanship lies in a clear conception of the different steps in its acquisition, and a rigid adherence to the Fundamental principles of the Art; and, above all, the ability to stimulate endeavor in the pupil, whether by the teacher's own skill as a penman, or his power to control and direct to successful results by black-board illustrations and criticisms as formerly explained.

It must be recognized that the lesson in Writing is an *active exercise*, in which both teacher and pupil are to participate for the purpose of promoting dexterity in the use of the pen by the pupil, and that the pupil naturally looks to the teacher for his model and guide in his *modus operandi*, as he does to his copy for the matter to be written.

Hence it follows that the teacher must be on the alert, active, wide awake, and attentive to the work in hand, and thus furnish a proper personal example for the pupil's imitation, as well as the precepts which are to guide his performance.

No exercise of the schoolroom calls for more *physical exertion* on the part of the teacher than in-

struction in penmanship. After the explanation is given on the board each pupil should be visited at his seat, and directed in position and movement, and be given free opportunity to watch the teacher's motions in writing an occasional word or copy. His attention should, moreover, be directed to the manner of taking and holding the pen, managing ink and paper, place of starting each letter and manner of forming and combining them in words, as well as arranging them in lines and columns.

HOW TO INSTRUCT PRIMARY CLASSES.

While I am decidedly in favor of teaching the more advanced pupils by *elements, principles, &c.*, I do not believe in introducing them at the outset. The first lesson in writing should be made as simple as possible; should be mere exercises to initiate while learning penholding, position and movement. I do not believe in parading principles, symbols, &c., before beginners, as is done in the elementary copy books of most systems of penmanship; in giving them exact science represented by the Quadrant, with its 90 degrees, enveloping and obscuring the copies with a cloud of sententious instructions, impossible for a child to understand.

Appeals to mature judgment, logical reason, cultivated taste, mathematical knowledge and accumulated skill and experience, are all right in their place, but should not be paraded before the timid youth just beginning penmanship.

The first lessons should be copies of simple letters to be practised on slates; and the plan I have seen successfully adopted is to have the slates all ruled on one side with light permanent lines, properly spaced. The time devoted to each exercise should be about half-an-hour, or not sufficiently long to weary the pupils. The pencils should be of sufficient length to be held like pens, and the manner of holding them should be very carefully taught.

On account of the liability of the pencils in common to break, it is a matter of economy and convenience to use those covered with wood, as they are both cheap and durable, or of the new patent pencil holder lately introduced in our schools.

The copy, as before intimated, should be as nearly perfect as possible in order that proper ideas of form may be impressed on the learner's mind from the beginning. The first lessons must proceed on the same plan as drawing, and indeed, can be termed nothing but pencil drawing of the letters and words used in the copy.

On account of the tendency of young pupils to break slates and lose pencils, it is much better for the teacher to take charge of them. Monitors should be appointed to pass the slates and pencils. Their duties should be arranged in accordance with the seating of the school room, and should be thoroughly understood by them. They may be appointed as a mark of favor for proficiency or good conduct, and taught to look upon the position as a very honorable one.

The plan of conducting the exercise may be something after the following order:—

1.—*Prepare for writing*: when all other work should be laid aside and desks cleared. A given signal should then bring up the monitors to pass slates and pencils.

2.—Write the copy plainly on the board so that the entire class may see it. Let it be a letter, a succession of letters, or a word, according to the proficiency of the class.

3.—Explain how you require it copied, and point

out the mistakes they are likely to run into and explain how they may be avoided.

4. Give the signal to commence writing. The teacher should then pass around among the pupils correcting position at desk, pencil hold, mistakes in formation, &c., until the exercise is about half over, when he should illustrate on the board the principal errors he has observed while passing around, and call on the pupils to name the different mistakes in formation, &c., and tell how they should be corrected. The last five minutes should be devoted to criticism of the writing by the pupils themselves, permitting them to erase and correct any letter with which they are not satisfied.

5.—The monitors should at the close bring up the slates and pencils and deposit them in their proper places, and when an opportunity is afforded they should be carefully examined and marked by the teacher.

A certain number of recognized errors in the exercise may be counted a failure; a less number, imperfect; and no failures in leading features, may constitute a perfect lesson.

A small record book should be kept, into which these marks should be entered; and in order that this may be readily done, the pupils should be numbered, and required to place their numbers conspicuously at the head of the slate, that they may be conveniently arranged with the highest number at the bottom of the pile, and so on up in regular order, for marking the standing, as the slates are examined.

These exercises, if properly carried on, will become very interesting to primary pupils, and they will look forward to the writing hour with pleasure.

The principal difficulty, at first, is drilling them in position, pencil-holding, preparing for the exercise, and closing. About one-half the time during the first week should be spent in drilling on these particulars.

Great care should be taken to explain all the errors for which they are to be held accountable beforehand, with ample illustrations upon the blackboard of correct and incorrect formation.

On the last school day of each week the pupils should be called upon to prepare a line of each copy, word, and figure practiced on the previous day, and from these copies and the merit marks of the week the monitors of the next week may be appointed.

This method may after a time be combined with the spelling exercise, and errors in both writing and orthography noted in the same exercise, using a distinct mark to indicate each.

As soon as they have been taught to form all the letters and combine them into words, short sentences should follow, and the child may thus be taught to write before the pen and ink is introduced at all.

The pupils should early learn to set value upon the neatness and graceful appearance of all the forms they write. Figures, being of equal importance with letters, should also be given special attention.

The objections made to the use of the pen and ink by small children is, that they are apt to blot and deface their books and injure clothing and furniture. I would, however, advise the introduction of the pen and paper as soon as the pupil has made sufficient progress to use them with any degree of proficiency.

To be continued.

Letter from Belgium.

A TEACHERS' CONVENTION.

We have obtained the kind permission of Theo. Girardot, Esq., I. P. S., to publish the following letter literally translated by him from the French for the *Essex Record*. The letter was written by a gentleman who has taught school in Canada, and is now following that profession in Belgium:—

Schaerbeek, Sept. 12, 1876.

DEAR FRIEND,—I would have written sooner, but I was waiting for the convention of the Belgian teachers, which took place at Ghent yesterday and to-day. We numbered about 2,000. Nothing could be more imposing; and you may be sure that I followed, with the deepest interest, the discussions on the different subjects. You have perhaps read an account of it in the *Progress*, therefore, I shall be brief. The question of the maternal tongue was the first on the programme, and the teachers in their debates upon said question, were unanimous in prescribing the teaching of grammar in the elementary classes as a rule. Therefore no more definitions, rules. Nothing but practice. This is my opinion, and it is the reason why you pay so much attention to your grammar in your regard to the senior classes, the assembly was divided. The complete suppression of the "book" was proposed. A professor in the Ghent University opposed the idea strongly, and obtained two-thirds of the votes; but I am satisfied that the other third, of which I was one, composed the most intelligent portion of the assembly. The teachers of both sexes in the country are not sufficiently prepared for this radical change; still it will come, for I consider the grammar as a pest in our schools. The book is never to be used only by the senior classes as but a collection of rules, which can be referred to in any doubtful case. Mechanical analysis is condemned. These sensible ideas which you have on logical analysis developed, and I think it should be the basis of the grammatical instruction. Once the sentence is divided into propositions, it is easy to dissect each one of them into words and indicate the functions of each one of these words; but let us not oblige pupils to parse sentences of the style of those old practitioners, whom you know. I shall say no more on that subject, for I am certain that you understand me. Spelling is condemned; we no longer want it. Dictation must be carefully studied before given out. The pupils must be sufficiently prepared, so as to write a dictation without a fault. This study is effected by reading, observation, &c.

* * * * *

We pretend, and with reason, that a child must see a word before writing it, and it is perfectly useless, if not prejudicial, to make him write words which he does not know. Are you of that opinion? If you are, you have to reform that principle also. Lessons by intuition must be completely transformed; you must no longer make the pupil say that the table has four legs, that it serves to &c. &c.; but you must teach him something new; for example, the board is made of the oak, and the latter springs from an acorn, &c. The child must be initiated to the natural sciences from his earliest age. He loves new things, and not those common to everyone. This is also my opinion. You see, my dear friend, that we are rapidly progressing in Belgium. It is with great joy that I see the old routine put aside, and

I will certainly do my utmost to hasten its defeat. Books having the science as a base, are recommended, and not those containing vulgar expressions and foolery, &c. We should also have for the use of the children, school libraries. As a conclusion we should have a museum in the school in order to teach object lessons with more success. There should be days appointed for walks in the midst of nature and in museums, and visits to monuments for the instruction of history, &c.

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All by intuition. The objects which have been seen by the pupils should be taken note of on the spot, and there should be no more impossible subjects taught, which entirely destroy the originality of the pupil. This is the substance of all that has been said at Ghent on the maternal tongue. The convention also took notice of the means that should be employed in order to develop an artistic taste in the pupils. Walks for all the children were again proposed, as also the observation of nature, that of leaves, of flowers, which are the basis of architecture and drawing; so you see we are determined to have it thus. I am quite sure that such walks as I have above mentioned shall become a part in our educational system. More time for the teaching of drawing has also been asked; the pupils should be required to draw every day. Music must also form a part of the elementary instruction. (Gymnastics were mentioned as useful in promoting a taste for the beautiful. I did not very well see the reciprocity.

A young teacher, in a wise and well written lecture, showed the necessity of having a teacher in each canton (township) who would take the place of those absent or sick.

Such, my dear friend, were the proceedings at our Convention in Ghent, apart from all incidents which generally happen in numerous assemblies. Those conventions do a great deal of good, for when united, the teachers are strong. You need union in Canada, and I am surprised that you do not make a pressing appeal to your "confreres" that they might imitate the Belgian teachers. Owing to these conventions, we have done very much in Belgium. The newspapers take interest in our sittings; they say:—"After all a teacher is somebody." The time for indifference has passed; we have obtained a good law for our pensions; and our enemies dare not show themselves publicly. School corporations now fear ridicule in advertising for teachers at a low salary. School houses are now handsome buildings; each section rivals with the neighboring one, as to which will build the finest school house; the furniture is now healthy and commodious; the walls are covered with maps and card boards. In some schools we already find collections of plants, animals, insects, birds, &c. Since a few years the progress is inconceivable, and we can feel sure that it is owing to our union. I have already told you that you should never count on rapid progress, if you do not unite together. The Laval Normal School Association is already something, but still not enough. I do not wish to abandon the subject before speaking to you of our annual test of school walks. I have undertaken the direction of a course of the kind, to be pursued during the vacations. We have appealed to the parents and have already 30 pupils at 12 francs apiece, (\$3), that is, 450 francs, which sum we spend in visits throughout Belgium. The railways grant us a reduction of 50 per cent. I am delighted with the results. The pupils during the visits conduct themselves like little men;

ling-book, or to get an intelligent conception of the contents of that "horrid" geography etc? How many times?

How often have you had patience enough to hear poor Will plod through that piece of reading for next day's lesson? Did you ever in all your life spend ten minutes in helping these two little heroes to grasp the things that lie behind the mere words in their lessons? This is not a commodity sold by weight and measure, my dear friends; you can not buy and sell education. Fifteen minutes or less each day properly spent in showing your children practically that you consider their education a matter of exceedingly great importance would do more towards exciting in them a laudable desire to be well educated than all your blistering reproaches, or hysterical jeremiads.

How many times have you in the presence of these pupils weakened the influence and authority of their teacher by hostile criticism and unkind remarks? How many times have you fostered that passionate, petulant, fault finding disposition, which is occasionally to be expected from those undergoing the moulding discipline of school life? Have you ever taught your children the exact meaning of prompt, graceful obedience; or has it been too much trouble to be undertaken? How many times have you privately in confidential conversation with your children endeavored to make them comprehend the necessity of struggling for a liberal education at all? Do you think they will strive for what they are not taught to value highly? Have you convinced them of the immense importance of making their mark during these golden unreturning schooldays? Take the advice of Miles Standish—"If you want a thing well done you must do it yourself; you must not leave it to others.

Who are the associates and companions of these pupils? Do they spend their leisure hours with those vulgar little arabs who attend no school, and are preparing for scenes in the grog shop, the gambling hell, and the penitentiary? How do they spend it? Do you know? Are there any Dime Novels intercalated between their school books? How many story books did they ransack last term, exclusive of those crisp little narratives brought home from Sunday School? What motives do you use? Did you practise a reign of yielding indifference? How many hours a week did that all important music lesson occupy? How much interest did you take in the late election of Trustees? Did you vote at all, and for a man who will pursue the sound policy of judicious extravagance and enlightened views on education? Or did you vote for some Judas who will carry the bag for the sake of plunder, and betray the interests of our children for the sake of jobs and contracts, and commissions, and other delicate "casual advantages"? I respectfully request candid straightforward answers, and pause for your replies before I endorse any censure whatever on the teachers.

Biographical Sketches.

BY C. H. ASHDOWN, SANDWICH, ONT.

An outline of the life and writings of those Authors from whose works are taken the selections of the Third, Fourth, and Fifth Readers of our Public Schools.

AKENSIDE, MARK, M. D. Born, 1721; died, 1770.
Selection:—

Extract from his principal poem, "The Pleasures of Imagination," p. 427, Fifth Reader.

Dr. Mark Akenside, the son of a butcher, was born at Newcastle-on-Tyne. His father wishing him to be a Dissenting Minister, sent him to Edinburgh, to be educated for that position, but having a strong liking for medicine, he soon after went to Leyden, and in 1744 took his degree of Doctor of Medicine.

In the same year he published his poem, "The Pleasures of Imagination," "a performance," remarked Dr. Johnson, "which, produced as it was at the age of twenty-three, raised expectations that were not very amply satisfied in after years."

Of this poem upon which Akenside's fame as an author rests—the main fault may be said to consist in many of its passages being too high flown in sentiment and too rhapsodical in diction. This poem was followed by a collection of odes, and during his life he published a number of medical essays and lectures. In the prosecution of his profession he first settled in Northampton, but after a time removed to London, where, practising for years, at last his ability as a medical man was recognised by his being appointed physician to St. Thomas' Hospital, and ultimately to the honorable position of physician to Queen Charlotte, wife of George III., which place he held to the time of his death.

ALBERT THE GOOD. Born, 1819; died, 1861.

Selection:—

From a speech upon "Science," delivered at Birmingham, in 1855, p. 347, Fifth Reader.

Prince Albert was descended from the Ernestine, or elder branch of the great Saxon family, and was the second son of Ernest I. Duke of Saxe-Coburg-and-Gotha, and Louise of Saxe-Gotha-Altenburg. He was born on the 26th of August, 1819, at the Rosenau, a charming summer residence belonging to the Duke, and situated about four miles from Coburg. In 1837 he, with his brother Ernest, were entered as students at the University of Bonn, where he remained until the end of 1838. During his academical course, his tutor, M. Florschütz, writes: "He maintains the early promise of his youth, by the eagerness with which he applied himself to his work, and by the rapid progress which he made, especially in the natural sciences, political economy, and philosophy. Music, also, of which he was passionately fond, was not neglected, and he had already shown considerable talent as a composer." In 1840 Prince Albert was married to his cousin Queen Victoria, daughter of his father's youngest sister, and Edward, Duke of Kent. From the time of his marriage to the day of his death, his one aim was to identify himself with the British people, ever taking the liveliest interest in whatever tended to the nation's welfare, and the amelioration of the condition of the masses. Apart altogether from his position as the Consort of the Ruler of a great Empire—his integrity—his kindness of disposition—his love of learning—his respect for the social relations of husband and father—his veneration, as a Christian man, for things sacred—pre-eminently entitled him to be remembered by us, and those who shall come after, as that—

"Sweet nature gilded by the gracious gleam
Of letters dear to Science, dear to Art,
A Prince indeed,
Beyond all titles, and a household name,
Hereafter, thro' all times, Albert the Good."

Medieval History.

QUESTIONS AND ANSWERS, BY W. R. BIGG, ESQ.

(Q.) 20. When did the Saxon Heptarchy become blended into one kingdom? By what name was it subsequently known? Give the names and dates of its first and of its greatest king under the Saxon period.

(A.) In 827, under Egbert, King of Wessex, a contemporary of Charlemagne; it was subsequently known by the name of England, *i. e.*, the land of the Angles. The greatest of the Saxon monarchs was Alfred, 871, justly honored with the surname of Great.

(Q.) 21. Name the two greatest commercial states of the middle ages.

(A.) Venice and Genoa.

(Q.) 22. Sketch the chief features of the Feudal System.

(A.) About the eighth century, order began to appear in the formation of a number of isolated confederacies, the commencement of feudality, or that system of government which divided society into two classes, lords and dependents.

Charles Martel, son of Pepin, conferred benefices, the holders of which were bound to fidelity and military service. They were called vassals, but had only temporary possession of their fiefs (*fides fe*) from their suzerain or lord paramount. Charles the Bald made these benefices hereditary, 877, when the royal authority became prostrated, the count usurped their governments as sovereignties, their wives taking the appellation of countesses.

Under the extension of the Feudal System the lands were divided into three classes, *viz.* :

1st. The noble lands, *i. e.*, the fiefs, which were divisible into simple fiefs, and the fiefs of dignity or the title lands, such as the duchies, earldoms, counties and baronies.

2nd. The Rotures, or lands enfranchised from the fiefs possessed by Roturiers, liable to feudality and subject to their seigneurs.

3rd. The Allodial lands, which every man possesses in his own right, without owing any rent or service to his superior.

Each vassal was the liegeman of his superior, the great vassals being dependent on the Crown, and the small vassals subordinate to the great for the fiefs, which they held by homage. Their duties were military service, the defence of his lord from the machinations of his enemies, and from attendance in courts of justice, to pay his lords ransom, if he were captured, and to be detained as hostage.

Feudalism was gradually abolished.

1st. By the establishment of Corporations, which ameliorated the condition of the Commons.

2nd. By the destruction of the judicial powers of the seigneurs.

3rd. By depriving the Barons of the power of coining money.

Traces of the Feudal System existed till the French Revolution of 1789.

(Q.) 23. Give the date of the Norman invasion of England, and the name of the battle which decided the fate of the Saxons, with the names of the opposing chiefs.

(A.) Battle of Hastings, 1066. William, Duke of Normandy, a descendant of Rollo's, and Harold II., the last Saxon king.

(Q.) 24. Describe the social condition of England under the Normans.

(A.) The manners of the Anglo-Saxons were rude and semi-barbarous. The higher classes sat

at a round table, to which none of the inferior degree were admitted. Their feasts generally ended in drunken revelry, and even the clergy were not free from excess. The farms were small, but divided into meadow, arable pasture and woodland. The fields were usually enclosed; gardens and orchards were cultivated in favorable spots, while roads and paths united the towns and villages. Wheaten bread was not in general use; the staple article of food was swine's flesh; beef and mutton were dainties, but sea and river fish were largely consumed. The clothing was chiefly linen and woollen; the fleece was spun in winter by the females of every family, whatever might be their rank, the term *spinster* still reminding us of this custom; they also excelled in embroidery and needlework.

If the Normans did not introduce the feudal system into England, they at least brought it to perfection. Commissioners made inventories of every kind of property, and a universal spoliation of the Saxons rewarded the Norman adventurers. The name of Saxon became a term of reproach, and during a century not one individual of this race was elevated to any ecclesiastical or civil dignity.

(Q.) 25. Give a brief account of the Crusades, with the dates, and state by whom the Latin Kingdom was overthrown, and when.

(A.) There were eight Crusades or Wars of the Cross.

Peter the Hermit, a native of Amiens, with the sanction of Pope Urban II., travelled through Italy and France calling on all true believers to fight for the rescue of the Holy Sepulchre from the Infidels. He succeeded in setting fire "to that inflammable mass of enthusiasm which pervaded Europe." The first Crusade dates from the Council of Clermont, in 1095, though it did not set out till the following year. It was headed by Godfrey of Bouillon, and in 1099 Jerusalem was taken, and became known as the Latin Kingdom, the crown of which was conferred on Godfrey. Subsequently the total defeat of the Sultan of Egypt, on the field of Ascalon, completely established the Kingdom till 1187, when it was overthrown by Saladin the Great, Caliph of E. ypt.

The 2nd Crusade was in 1147, when Conrad III. of Germany and Louis VII. of France took the cross. This was a complete failure, the army being wasted away in its march through Asia Minor.

The 3rd Crusade, 1189, was undertaken to recover Jerusalem, which had been re-captured by Saladin. It was led by Frederick Barbarossa, of Germany, Philip Augustus, of France, and Richard I., of England. Acre was taken by Richard, and he advanced within twenty miles of Jerusalem, but was obliged to conclude a truce with Saladin and return to Europe.

The 4th Crusade, 1195, undertaken by Henry VI., of Germany, was marked by the capture of Beirout, and the ignominious flight of the Crusaders from the siege of Thoron.

The 5th Crusade, 1202, was directed not against the Infidels, but against Constantinople, which was easily conquered, the Emperor deposed and the crown conferred on Baldwin, of Flanders, with a fourth part of the Empire, the remainder being divided between Thibaut, of Champagne, Bouface, of Montferrat, and Simon, of Montfort. Blind old Dandolo, Doge of Venice, assisted in the capture, even fighting in person.

The 6th Crusade, 1227, was conducted by Frederick II., of Germany; his successes in Palestine,

however, were rather works of peace than of war, since he secured by treaty the possession of Jerusalem and Bethany, 1229, in exchange for his alliance with the Sultan of Egypt against the Sultan of Damascus.

The seventh Crusade was undertaken by Louis IX. of France, to recover the Holy City, which had again fallen into the hands of the Mohammedans. He invaded Egypt, captured Damietta, was defeated at Mansurah, and obliged to purchase his retreat by a ransom of 400,000 livres and the restoration of Damietta.

The eighth and last Crusade, 1270, was also undertaken by Louis IX., who was cut off by pestilence, and Prince Edward of England, after Edward I., led his Crusaders to the Holy Land, but achieved nothing of consequence. He was the last among Christian princes who dreamt of recovering the Holy Land.

(Q.) 26. Explain the term "Investiture."

(A.) Gregory VII., Hildebrand, desired to free the Church from the temporal authority of laymen; that is, to deprive all princes of the power of investing bishops with the ring and crosier, the symbols by which the Pope and himself conferred the spiritual authority. A Council held in the Lateran Palace, it was declared that no laics should confer ecclesiastical benefices, or clerks receive them from a layman, under pain of excommunication. This was finally settled at the Concordant of Worms, 1122, when Henry V. of Germany renounced the right which he had hitherto claimed, but retained his authority over the temporalities of the several dioceses.

(Q.) 27. By whom was the Society of the Assassins founded? and by what name was he and his successors known?

(A.) By Hassan Sebek, a Mohammedan enthusiast, about the year 1090, among the hills south of the Caspian Sea. Their motto was, "To the faithful nothing is forbidden." Hassan and his successors were known by the name of "The Old Man of the Mountain." The daggers of the assassins were felt in the East and the West; and by them perished Conrad, Marquis of Montferrat, in the streets of Tyre, 1192. Prince Edward of England nearly lost his life also, but throwing himself on the assassin, he killed him with his own weapon. The sect lasted 172 years, and was finally destroyed by the Mongols. The Druses are said to have sprung from the Assassins.

(Q.) 28. Give an account of the Moorish Domination in Spain from its establishment to its final extinction in the Peninsula.

(A.) Tarik, the lieutenant of Emir Musa, crossed the straits of Hercules with an army, and, on the Field of Xeres, defeated Roderick, "the last of the Goths." Musa secured the conquest, and the Moslems established themselves in Cordova, and from that centre Spain, which had resisted the Roman arms two hundred years, was reduced by the Saracens in fifteen months. It obtained the name of the Moorish Kingdom, because the Saracens embarked for the Peninsula from Mauritania (Morocco).

Abdalahman extended the Moslem power in Spain and consolidated the throne. The Great Mosque at Cordova was begun by him. Its length was 600 feet, and its width 250 feet; 100 columns of marble or of jasper formed the interior enclosure of the cupola; by means of 993 others it was divided into 19 naves, all closed by gates of bronze

with sculptures in bas-relief, those of the great gate alone being in massive gold; 4,700 lamps illuminated the interior during the night, and consumed annually 120,000 lbs. of oil.

Abdalahman III., 912, established the first medical school in Europe, and under his wise rule agriculture, manufactures and commerce flourished. The glorious reign of this Caliph was closely followed by the decay of the Mohammedan power. In the year 960 the Christian, Ferdinand Gonzales, founded the Kingdom of Castile, which was united to Leon in 1037, under the sovereignty of Ferdinand I. of Navarre. The Moors at this time still possessed Andalusia, Granada, Murcia, part of New Castile, and all the sea-coast from Barcelona to the mouth of the Tagus. Rodrigo Diaz de Vivar, known as the Cid, conquered Valencia and governed it with the authority of an independent sovereign. Alphonso VI., of Castile, and Alphonso I., of Arragon, succeeded in all their undertakings against the Moors, and Arragon, New Castile and Extremadura were possessed by the Christians.

Cordova fell in 1236, and in 1250 the Moorish dominions had sunk to the single province of Granada. On the accession of Ferdinand and Isabella the long meditated plan of expelling the Moors from Spain was put in execution. Ten years were spent in sanguinary contests before they were enabled to besiege Granada, which they invested with an army of 50,000 men, and after a blockade of nine months, the inhabitants were compelled to surrender, 1492. The Saracens were not, however, finally expelled from Spain till the reign of Philip III., 1610.

(Q.) 29. By whom was the Caliphate overthrown? Mention some of the celebrated Chiefs, and the empires founded by them, with dates.

(A.) By the Turks, a Tartar race. Asia, from the China Sea to the Euxine, was conquered by Genghis Khan, at the head of the Mongol Tartars, 1206. Bagdad was taken 1258, by the Mongols under Hulaku. The conquest of China was completed by Kublai Khan, in 1279. Othman founded the Turkish or Ottoman Empire 1326. The Mogul Empire in Hindostan was established by Tamerlane, in 1398, and consolidated by Baber, in 1525.

(Q.) 30. Give brief particulars of the founder of the House of Hapsburgh, and mention some celebrated traveller who was contemporaneous. Give the dates.

(A.) From 1250 to 1272 Germany was in effect without any ruler, for though there were several, none exercised any real authority. In the midst of the petty wars that ensued between the nominal rulers, the power and influence of the great commercial cities were slowly increasing, and from their alliances for mutual defence arose three confederations, viz., The Hanseatic League, 1241; The Confederation of the Cities of the Rhine, about 1255; and The Gauerbirates, or Treaties of Succession and Mutual Defence. At length all parties being wearied by the long continued anarchy, it was determined to elect an Emperor. The choice fell upon Rodolph of Hapsburg in Switzerland, 1273, who proved himself a wise and just monarch, and he devoted his attention to the internal affairs of Germany. Such was the rise of the House of Austria. It was about this time, 1275, that Marco Polo, a great Venetian traveller, crossed Asia, visiting Kublai Khan in Chinese Tartary, and having passed through China to the Pacific, sailed by Ceylon to the Persian Gulf.

Literary Notices.

NATURAL PHILOSOPHY. *By T. Kirkland, M.A. Adam Miller & Co., 1877.*—Some time ago several Teachers' Associations united in requesting Mr. Kirkland, teacher of Natural Philosophy and Natural Science in the Toronto Normal School, to publish a book on Mechanics, or at least to allow his notes and questions to be printed. While we do not approve of the plan of requesting persons to write *text-books*, or of having them made to order, we know of good reason why the associations alluded to took the action stated. Attending these conventions of teachers were men who had sat under Mr. Kirkland's teaching, as by apt illustration, and easy demonstration, the lecturer dissipated the difficulties which his experience taught him are encountered by students in mastering this important branch of applied mathematics. We are pleased to inform our readers that Mr. Kirkland has complied so far with requests made, both privately and publicly, as to prepare a treatise on *Statics*, which completely meets the highest expectations. A teacher of mathematics in one of our colleges, who has examined the work, pronounces it "the most valuable addition yet made by a Canadian teacher to our school-book literature." Turning from the history of the work to the contents we note that besides all the propositions found in Hamblin Smith's *Statics*, it contains many not usually found in elementary works. Propositions in moments and centre of gravity are much simplified. To each section is added an Examination Paper, which will thoroughly test whether the particular idea of the section has been fully grasped. A characteristic feature is the abundance of eminently practical questions and problems.

Examples:—

"Why cannot a round tub be steered at as great an angle to the direction of the wind as a long boat?" P. 34.

"Why cannot a pin practically be made to stand upon its point?" P. 77. &c. &c.

The sections of each chapter are arranged according to difficulty, hence students reading for the first time can omit the more difficult sections. In reading such a book as Hamblin Smith's *Statics* the student finds a knowledge of trigonometry indispensable. Mr. Kirkland's *Statics*, although containing more than Smith's, is entirely comprehensible by the student who possesses a knowledge of the *First Book of Euclid and Simple Equations*. The questions already given on *Statics* at first and second-class and to intermediate examinations are appended. Answers are given to all questions with hints for the solution of the more difficult.

The press work is very creditable. The relative importance of the different definitions, principles and propositions are shown by the type: the most important are printed in *black letter*; others in *italic*. It has not yet passed the binders' hands, but may be expected on the booksellers' shelves before May. No doubt every candidate for certificate of the first and second-class will secure a copy of the first edition. We can heartily recommend it, and hope soon to announce that it has been made an authorised text-book.

HUGHES' COMPOSITION EXERCISE BOOKS. *Adam Miller & Co., Toronto.*—Adam Miller & Co., Educational publishers, have issued a set of composition exercise books in three numbers, prepared by

Mr. James Hughes, I. P. S., Toronto, uniform with the spelling blanks which were published by the same firm last year. Composition is a most important branch of public school education, but we regret to say, very generally neglected. In a few schools it is not taught at all; in many it is badly taught. A complete composition lesson consists of at least three important parts: 1st—The preliminary instruction given by the teacher. 2nd—The practice, *i. e.*, the writing of the composition by the pupils. And 3rd—The correction of errors. With many the second part alone passes for teaching composition. The pupils of such making the same mistakes time after time, unchecked and uncorrected, must become confused in particular errors. Some teachers are satisfied with checking mistakes, and pointing them out to the pupils. This is not enough; the walls only of the house have been built; correction is required for the roof. Teachers whose pupils use the Exercise Books under notice, in the manner they are unmistakably intended, shall secure correction of mistakes by the pupils.

Exercise Books Nos. 1 and 2 differ only in the latter having a larger check-list of errors. Price, 10c. each. No. 3 contains eight pages of instruction and explanation, including concise and comprehensive rules for punctuation, capitals, clearness, &c., &c. Bristol board; price, 20c.

They deserve a ready introduction into Canadian schools. This we expect more confidently, knowing that Patterson's (Chicago) Composition Blank Books, which are similar, met with an unusually large reception across the lines last year.

CONVERSATIONS ON IMPORTANT PRACTICAL MATTERS. *By W. C. Moncrief. Toronto: Belford Bros; London: Reid & Anderson. Price, 25 cents.*—

These conversations are addressed to parents and teachers, and discuss in an interesting and profitable manner topics of highest interest to those upon whom devolve the teaching and training of youth, the developing of character and ingrafting of correct principles. The subject matter first appeared in the *London Advertiser*, and was then so well received that the author was requested to publish them in permanent form.

Belford's Monthly for April is equally as good as the former numbers of this popular Canadian monthly. "Canada a hundred years ago" is an interesting article, as also are "Forest Rangers and Voyageurs," "Artificial Fish-breeding in Canada," "Evenings in the Library," "A London Modern Green-room," and "Cruise of H. M. S. Challenger," illustrated. The serials and other Departments are well sustained.

"*The Adventures of Mr. Verdant Green*," by Cuthbert Bete, M. A., has been placed upon our table. It is an irresistibly funny book. "Verdant" has the happy faculty of meeting with more adventures, and more amusing ones, than ever before fell to the lot of mortal man. The story is made additionally attractive by 150 humorous engravings.

"*Through Fire and Water*," a tale of 1776, is a serial of considerable interest that has just been published in the *London Herald*, Mr. T. F. Dixon, teacher, Ballymote, being the writer. The scene of the story is in the north of England, near Solway Frith, and the writer shows considerable ability and fine descriptive powers in its narration.

Educational Intelligence.

GEORGE WHOLEY, EDITOR AND COMPILER, LONDON.

Items for this Department are respectfully solicited. Send on post-card or as "printer's copy," which can be enclosed in an envelope stamped at the rate of one cent per half oz.

- Cultivated timber—A School Board.
- Prof. Goldwin Smith will return to Canada in July next.
- The highest schools of medicine in Russia now receive females.
- J. M. Buchan, M.A., inspected Goderich High School last month.
- St. Thomas is preparing to erect a High School building to cost \$10,000.
- Eastwell is preparing to build a school house which will cost \$11,000.
- George Eliot has received for her published writings a total of \$162,000.
- The Ohio Compulsory Education Bill has been passed by the State Legislature.
- The average attendance in February of the Petrolia Public Schools was 412; total on register, 533.
- The Quebec Teachers' Association will hold its next annual convention in Sherbrook in October.
- The Elgin Teachers' Association meets in St. Thomas, on Friday and Saturday, April 27th and 28th.
- Wingham has a school population of 502, an increase of 102 over last year. Total population, 2,022.
- One half the students of the Kansas State University are ladies. Their average age is 18 years.
- The School of Agriculture at Guelph is to be enlarged so as to accommodate one hundred students.
- Why is a man who doesn't lose his temper like a schoolmaster? Because he keeps cool (keeps school).
- Mr. J. S. Carson, I. P. S., Strathroy, has been ill for several weeks and unable to attend to his public duties.
- 101 female students in the University of Michigan. In medicine, 37; law, 2; homeopathy, 2; literature, 60.
- Aylmer Mechanics' Institute Directors are making arrangements to add \$300 worth of new books to the library.
- The third term of the Whitby Ladies' College opened with seventy-two boarders, the largest number of any session.
- At the last meeting of the Windsor Board of Education, Rev. John Kay was appointed assistant master for the High School.
- The contract for the erection of a new High School building in Cornwall has been awarded. The building will cost about \$7,500.
- Some vandals have smashed a number of the windows of the school recently vacated by the Christian Brothers in St. John, N.B.
- Four second-class teachers were engaged at a recent meeting of the Stratford School Board, making eighteen teachers in all on the staff.

—At the 8th annual commencement of the Women's Medical College of New York Infirmary the graduating class consisted of 12 ladies.

—Mr. D. A. Maxwell, Mathematical Master in the Strathroy High School, is quite ill, and will be unable to resume work for a few weeks.

—A young lad, whose teacher is rather free with the rod, remarked the other day that "they had too many hollerdays at their school."

—The Brantford Collegiate Institute has seven teachers who receive salaries as follows:—\$1,650; \$1,000; \$1,000; \$1,000; \$600; \$450; \$300.

—The third story of the Ryerson School, Toronto, is to be fitted up to make room for the children unable at present to obtain admission.

—The annual boat race on the Thames between the crews of the two great English Universities of Oxford and Cambridge has this year resulted in a dead-heat.

—An exchange mentions some "new college building, capable of accommodating two thousand students of the most improved style of architecture." Are they ladies?

—The following new school districts have been formed in Manitoba, viz:—Meadow Lea, Greenwood, Rosseau, and Belle Plain. The election of trustees took place on March 31st.

—"Para, ought the teacher to flog a fellow for what he didn't do?" "Certainly not; my boy." "Well then, I want to tell you that he flogged me to-day because I did not do my sun."

—Miss Mathews, a young lady in the Freshman class at Colby University, Maine, has just received the prize for the best college preparation. The prize will pay her term bills through the course.

—"It isn't the 'unting as 'urts the 'owser' 'oofs," said a cockney, "hit's the 'ammering, 'ammering on the 'ard 'ighway." The same man went West, and at the third attempt to say Ho-i-ho broke his jaw.

—Another addition of fifty dollars' worth of books has just been made to the Acton Public Library, making the present number of volumes about 1,300, many of which are very valuable works.

—The proceeds of a literary entertainment held in the school house in Tranquility, Brant Co., amounted to nearly \$25 which will be expended in the purchase of additional books for the library in connection with the school.

—Among those who passed the recent Cambridge local Examination with honors was a lad named Farrow, who was absolutely deaf and dumb. He is under 16 years of age, and has obtained a certificate for classics and mathematics.

—Female music teacher to admiring young gentleman pupil:—"Try again, Mr. C——." Pupil—"Do, re, mi——" Teacher—"That won't do. You do not hold on to mi long enough." Pupil (wistfully)—"I wish I had a chance to."

—A few days ago Mr. J. Carson, Principal of the London Central School, was presented with a number of volumes of standard works, and an address from his pupils who had just passed into the High School. The address contained expressions of the regret felt by the graduating members at leaving Mr. Carson's class, and was a high tribute to the esteem in which that gentleman is held by those under his tuition.

—In 1851 the grand total paid for educational purposes in Ontario was first approximately ascertained as \$399,950. In 1861 this had risen to \$1,576,107; in 1871 to \$2,297,694; and in 1875 to \$3,823,982. Such facts speak for themselves.

—The proposed amalgamation of the Dundas High School and Wesleyan Institute has been abandoned, the Institute Board not being willing to guarantee the support required by the High School Trustees who proposed to furnish the teaching staff.

—Owing to the change in the time of the summer holidays the meetings of the Provincial and Eastern Teachers' Associations will fortunately not conflict. The latter will meet at Brockville on the 8th of August, the former at Toronto on Tuesday, the 14th of the same month.

—The combined offices of Minister of Education and Treasurer of the Province of Ontario have been separated. Hon. Mr. Crooks has retained the office of Minister of Education, and Hon. Mr. Wood has taken the Treasurership, Mr. Hardy (Brant) becoming Provincial Secretary.

—We learn from Mr. McMurchy, Secretary, that there are 400 or 500 copies of the Minutes of the Provincial Association on hand yet. The Inspectors or Secretaries of the different local associations should send for as many copies as they think will be disposed of at their next meeting.

—“Did I not give you a flogging the other day?” said a schoolmaster to a trembling boy. “Yes, sir,” answered the boy. “Well, what do the Scriptures say on the subject?” “I don't know, sir,” said the boy, “except it is in that passage which says, ‘It is more blessed to give than to receive.’”

—The Literary and Historical Society of Quebec has taken a step in the right direction. It proposes to set apart a special department of its library for Canadian works of all kinds. This will form an admirable record of our literary progress, and in time will be extremely valuable for reference.

—A school exhibition was given in Cookshire, Quebec, March 15th, the entertainment consisting of instrumental music, songs, tableaux, dramas, dialogues and essays. A dance completed this rather extensive programme, and if the quality was as good as the quantity we presume everyone got his money's worth.

—At the examination of a certain school, a reverend gentleman was asking the class the meaning of words. They answered very well till he gave “backbiter.” This seemed a puzzler. It went down the class till it came to a simple little urchin, who looked sheepishly knowing, and said, “It may be a flea.”

—The National Teachers' Monthly says:—Ontario not only sets a good example to the other Canadian Provinces, but to us also in maintaining the efficiency of her public schools. No backward steps are taken, and the Government even augments the annual appropriations in the estimates for the current year.”

Six school-ma'ams of Central New York have recently started for Buenos Ayres, South America. They each get \$500 in gold for the expenses of their passage, and a salary of \$2,400 in gold for five years. Then they are to get a six months' leave of absence and \$500 in gold for the expenses of their trip to this country and return.

—A little four-year-old boy, who had been taught his letters at home and felt his importance, on going to school, was called up by the teacher, who asked, “Can you read my boy?” The little fellow stood amazed for a moment at the impertinence of the question, and then exclaimed: “Haint you got cheek!”

Ida Story, a little girl, six years old, in Goderich, has been made a cripple for life by jumping on and falling off a sleigh on her way home from school. The sleigh passed over her, breaking her leg near the thigh. Teachers have control over the actions of children on their way to and from school, but seldom exercise it as they ought.

—One hundred and seventy volumes were added to the State University at Ann Arbor during February. One of the principal of them is a work of twelve volumes entitled “The Engineers' Manual of Roads.” The United States Centennial Commission has presented the library with sixteen volumes, all of them pertaining to the Exposition.

—During a recent examination of a class of youngsters in a County school, the teacher asked, “What is a monarchy?” and was immediately answered by a bright little eight-year-old boy: “A country governed by a king.” “Who would rule if the king should die?” “The queen.” “And if the queen should die, who then would be ruler?” “The jack.”

—A correspondent of the London *Spectator* proposes that a college for women shall be established at Malvern, England, which shall bear the same relation to Oxford that Girton does to the University of Cambridge, and which shall give women practically all the advantages in literary and general culture which are offered to men in the University itself.

—The next annual meeting of the National Educational Association and its associated departments will be held at Louisville, Ky., on Tuesday, Aug. 14th, and the two following days. The programme of Exercises will be announced in a future issue together with the hotel and railway arrangements. M. A. Newel, Esq., Baltimore, Md., is President of the Association.

—A deputation from a number of the ratepayers of S. S. No. 5, Goderich Township asked the Council to sub-divide the Section, so that two school-houses might be built at a moderate cost instead of one costly one. The Council could do nothing, as the law provides for the erection of an additional school-house on the application of the Trustees to the County Inspector.

—The state of education has been attracting thoughtful attention in Lindsay, and last month a meeting of the teachers and trustees of that town was held to discuss matters of prospective improvement in the schools. Frequent meetings of this kind for an interchange of views would have a beneficial effect in keeping up the interest in matters pertaining to the schools.

—On Washington's birthday the students of Niles, Michigan, High School got a sniff of the glorious air of freedom, and full of the spirit of liberty, petitioned the Professor for a half holiday. Their prayer being ignored, they resolved not to submit to tyranny, and rebelled, all but four marching about singing songs of defiance, love, victory, war, peace and liberty. Hurrah for Washington!

—A school-boy was asked by his teacher to give an example of earnestness. He looked bothered for a moment, but his face brightened like the dew-drops glistening on the leaves of the rose in the early morning, as he delivered himself of the following happy thought: "When you see a boy engaged on a mince-pie till his ears droop on the outer crusts, you may know he has got it."

—The death is announced of Mr. Charles Cowden Clarke, the English author, in his ninetieth year. Mr. Clarke's best known works are Shakesperian Characters, Moliere Characters, Tales from Chaucer, Riches of Chaucer, and a series of Essays on the Comic Writers of England. His name is also familiar through the magnificent and standard Shakesperian Concordance published by his wife.

—The New York *Sun* has heard of a young Englishman who is handsome, a perfect linguist, a graduate of Balliol College, Oxford, an accomplished gentleman, and, in spite of it all, serves well in the capacity of butler in a New York family. Did any one ever know of a more beautiful instance of genius rising superior to circumstances? Few young men similarly endowed could retain in adversity the proud spirit of a butler.

—Stratford Public Schools are prospering. The February report shows an average attendance of 903; being 65 higher than in January, and 17 higher than ever attained before. In consequence of a want of proper accommodation, pupils have to attend schools outside of the wards in which they reside. In the High School the number on roll for February was 100, average 85; being 30 per cent. more than same month last year.

—Some time ago prizes were offered by the Russian Government for the best and second best essays on "Cavalry as a military arm," the prizes being £600 for the best, and about half that sum for the second best essay. Foreigners being allowed to compete on condition that their essays were accompanied by Russian translation, Lt.-Col. Denison, of Toronto, has become a competitor, and, from the reputation he bears, we should not be at all surprised to hear of his success.

—A short time ago a son of William Tyler, London, played truant, and did not return home in the evening. Diligent search was made for him all night, but he could not be found. In the morning his body was found beside the railway track, about a mile from the city, the neck being broken. He had been stealing a ride and when jumping off the cars had met his death. He was not killed because he was playing truant, but if he had not played truant he would not have been killed.

—Donald J. McKinnon, Esq., I. P. S., Co. Peel, will issue in June next the first of a series of half-yearly Promotion Exercise Papers, which are designed "to (1st) guide the less experienced, and strengthen the hands of all teachers in their efforts to secure a fair and thorough classification of their schools; and (2nd) make the system of classification throughout the county as uniform as possible, and thus materially mitigate one of the evils flowing from the too frequent change of teachers in our schools."

—The Compulsory Education Bill is before the Illinois Legislature. It provides for at least 12 weeks' schooling annually to every child of school age, and prohibits the employment of children in factories, etc., unless they shall have had the requisite period of schooling the year before. The

school boards are invested with authority to execute the act and to bring its penalties to bear on those who violate it. Parents, guardians, or employers who evade or violate the law are punishable with a fine of \$5 to \$50.

—The Educational Department is erecting in England a new class of schools, to be known as "Certificated Efficient Schools." They will not be necessarily in receipt of aid from the Parliamentary grant, but must be open to inspection, and have all class books and other details in conformity with the Code. As after 1878 children under fourteen years of age will not be allowed to labor unless they have a certificate of having passed a certain school standard, these schools are being organized to meet that requirement.

—A meek-looking boy was intently pegging along towards a certain school house the other morning, when he was met by a crowd of his fellow-school-mates returning with their books under their arms. Upon perceiving their school-bound comrade a chorus of cat-calls and shrieks rent the air, hats were thrown up and heels were kicked ditto. "What's up?" inquired the lone boy, with a grin of anticipation spread all around his face, and oven back of his ears. "No school?" howled the mob; "teacher's sick!" And another pean of praise ascended from their united voices as they all turned the corner on the jump. A boy is a funny creature.

—Normal Schools in some of our neighboring States have lately been the subject of considerable discussion in the legislatures and elsewhere. In Kansas the Legislature has not only refused to re-establish Normal Schools but has withdrawn its support from the State University and Agricultural College. This unfortunate retrogressive step will, no doubt, be regretted by the people of that State. Maine and Minnesota have, notwithstanding strong opposition, secured ample appropriations for the efficient support of their Normal Schools. New York also, after a determined assault by the opposition, has secured the Normal School grant.

—In 1842 the population of the Province of Ontario was 476,055, not so much as the school population is now. There were then 25 High Schools and 1,721 Public ones. In all, there were of every kind 1,795 educational establishments, with 65,978 pupils, and salaries were paid to the extent of \$186,000. By 1852 the population had more than doubled; the number of High Schools had risen to 60, the Public Schools to 2,992, and the total educational establishments to 3,262. The number of scholars had risen to 179,557, and the money paid in salaries to \$428,948. In 1862 the number of High Schools was 91, and there were 3,995 Public School, while the number of pupils was 329,033, and the amount paid in salaries \$959,776.

—According to a London correspondent, the original of Gwendolyn, the heroine of George Eliot's "Daniel Deronda," is a lady now living in London, who some years ago was possessed of nearly a million dollars. She went to the continent and became "an infatuated gambler," losing nearly all her money, and parting with her necklace, as the book states. During her infatuation she was narrowly watched by George Eliot, and also by a wealthy gentleman living to-day in Manchester. So interested did he become in "Gwendolyn" that, as the book stated, he offered to

make good her losses if she would cease to play, but she refused. Gwendolyn is now about 25 years old, unmarried, grand-daughter of one of England's greatest poets, but lives on an income of about a thousand dollars a year, all that was saved from the wreck.

—G. J. Moloney writes from Ponetanguishene to the Dundas Standard as follows:—"You might insert this in your paper. I am engaged by the Emerald Base Ball Club of Boston at a salary of \$2,700. I was raised around Dundas. Am teaching school here, and I always call to see you in the summer vacation. If you insert, send the paper with insertion." Now there it is again—another proof that teachers are not sufficiently remunerated for their services. When will trustees learn to appreciate the labors of those whose astounding abilities command for them such handsome salaries (\$2,700 per month we suppose) as is now claimed by this young man who "was raised around Dundas?"

—If the following is a fair specimen of the articles that appear in the local column of the Brant Union we should judge that its editor was a boy—a bad boy—one who, on account of habitual naughtiness, was often whipped and placed upon the dunce's stool, and that in consequence of this punishment he did not love his teacher. Perhaps 'tis even so:—

"Father, who is that I see
A rushin' down the street?
Why does she hold her head so high,
And drag her great big feet?"

"That? Why that's a schoolnarm, boy,
Who's just received her pay;
She's only a maid that's filled with joy—
By Hokey! get out of her way."

—At the opening of the British Columbia Legislature, a few weeks ago, his Excellency the Lieutenant-Governor referred to educational matters as follows:—

"In respect to school matters, changes have been made in accordance with the expressed wishes of this honorable Legislature at its last session. A Deputy-Superintendent has been appointed for the mainland, and it affords me pleasure to say that the important institution at Cache Creek, that had been allowed to fall into decay and much diminished usefulness, has since the appointment materially improved. A High School, to provide for free instruction in the higher branches of education, has also been established in this city. It is doing very useful work, and has already proved to be a very valuable adjunct to our school system."

—A daughter of Mrs. Keegan, of 53 McCord street, Montreal, who is a school teacher at a village named Minuth, in Ontario, sent her mother \$25 in a registered letter, on March 8th. The letter was delivered on the 12th by the letter-carrier, but, on opening it, it was minus the money. On sending after the carrier and informing him of the abstraction of the notes, he said he thought at the time of delivery it had been tampered with on account of the letter being so thin. Complaint was made to Inspector King, who examined the letter and envelope, and who expressed his opinion that the money must have been in when the envelope was stamped at York River, as the impression had not penetrated the paper. The Inspector has written to the Postmaster at Kingston, in whose district York River is situated, about the robbery.

—The State of New York owns school property to the amount of \$31,017,904. The number of pupils attending the public schools during some portion of the past year was 1,067,199. The whole number of teachers employed was 30,109, and their aggregate wages reach \$2,965,804. The average compensation in the cities is \$740, and in the towns, \$237. The State school tax for the current fiscal year is \$2,797,725, and the income from the common school and United States deposit funds brings the available amount up to \$3,132,725. The total expenditures of the past fiscal year were \$11,439,038.78, the larger portion of which was furnished by local tax. Superintendent Gilmore urges that in order to secure greater efficiency in supervision, candidates for the office of school commissioner be required to be the holders of State certificates or of diplomas from one of the highest institutions of learning.

—The school premises occupied by the Christian Brothers have been transferred to the St. John (N.B.) Public School Board, on the understanding that in these schools none but Roman Catholic teachers will be employed. All teachers must be regularly licensed and engaged by the public School Board. In view of the fact that in New Brunswick every ratepayer is taxed in the support of Public Schools, and that supporters of Separate Schools have, therefore, to submit to being doubly taxed, this compromise may be regarded as a genuine triumph for moderation and liberalism. The Christian Brothers consider the Bishop acted hastily in accepting terms from the Board which were obnoxious to them, inasmuch as certain rules of their order prevent their teaching under the Free School Board. They will, therefore, return to Montreal in a few days. The Schools taught by the Sisters of Charity will come under the new arrangement also.

—The session of the Ontario Veterinary College just closed has been the most successful in every respect that has yet been held. The institution has been so improved in size and convenience that it may almost be said to be new. The accommodation for horses is very complete and adapted with all the modern appliances of a horse hospital. There is room here for about forty horses. The students' room are also ample and correspondingly improved. The dissecting room is now, in the opinion of Professor Buckland, as good as it could be made, well lighted, and fitted with gas, water, and mechanical means for moving the bulky subjects that are displayed here. This is probably the most important improvement in the College. In the front of the building up-stairs is a spacious hall, where there is already a nucleus of a museum containing anatomical preparations, and an extension of this collection will prove of value to the future students.

—The London School Board have printed information regarding the salaries of teachers in the schools under the Board. The largest salary paid to any one teacher is \$975, and this is supplemented by the Government grant in a very large school amounting to \$478, with \$150 for the instruction of pupil teachers and \$24 for drawing grant, making in the whole \$1,627. There are four in the London school system receiving more than \$1,500 per annum, including these extras for work. There are eleven who receive from all sources \$1,250 and under \$1,500; thirty-five who receive above \$750 and under \$1,000; sixty-four who receive above \$250 and under \$750; 107 who

receive over \$500 and under \$625; 111 who receive \$375 and not over \$500; and 41 who receive under \$365. No houses, rents, or other domestic aids are given to any of the teachers in the Board schools. Every teacher has to be qualified according to the Government standard, and the examination course is now very strict.

—At a meeting of the Senate of the University of New Brunswick the following resolution, proposed by the President for consideration, was adopted and passed by the Senate. "That students in Theology may find within the Province the means of instruction in Theology and the tenets of their respective Churches, and that the ties which after their Arts course binds them to the University be not weakened by after attendance at an institution entirely unconnected therewith, it is desirable to encourage the formation of Theological Halls or Colleges, and affiliate the same with the University. Be it therefore resolved, that until a separate building can be erected and maintained at the cost of the several religious bodies concerned, the use of a lecture room in the University be granted in the afternoon during term time to any Church or denomination with a suitable professor or professors for giving theological instruction to the students belonging to the said Church or denomination."

—A very interesting fact brought out in the report of the Ontario Schools for 1875 is, that while so much is said about Roman Catholic Separate Schools, and their necessity for the preservation of the morals of Roman Catholic children, the number of Roman Catholic teachers in our Public Schools is every year increasing. In the Province there were in 1875 6,018 certificated teachers—an increase in the year of 282. Of these 726 were Roman Catholics, of whom 516 were employed in the Public schools, and only 210 in Roman Catholic Separate ones. Let it be noted still further that while for 1875 there was an increase on the previous year of 34 Roman Catholics holding certificates as teachers, there was a decrease of 68 teachers in the Roman Catholic Separate Schools, while in the schools themselves there was a decrease of 10. Their income from all sources was \$90,626, or little more than one-fortieth of that of the Public Schools. In 1855 Roman Catholic Separate Schools were established. During that year 4,885 pupils attended those schools, while in 1875 the number had risen to 22,673.

—Among the inmates of a charitable soup house in St. Louis is a graduate of Harvard who is well connected in the East. He has been unfortunate in his efforts to support himself, and is too proud to write to his friends and let them know how wretched a failure he has made since he was graduated. He goes out every day in search of work, and gets an odd job occasionally. His habits are good; he is intelligent; he is careful of his pennies and is striving to save enough to take him to another town. The moral right of a man, who has friends that are willing to help him, to fall back upon public charity may well be questioned. The incident, however, illustrates a condition of American society which has not been known to within a few years. Education is not as valuable capital as it was twenty or fifty years ago. It was easier then for a college graduate to win immediate success than it is now. He had only to go from college to a village in a Western State, and the natural growth of the town would set him on his feet

and enable him to make rapid progress in professional or business life. Collegians who acquire literary taste and culture at their university, but who are above following their fathers' calling on farm or in shop, now have to struggle terribly hard in American cities, East and West, to keep the wolf from the door of professional life.

—The Senate of the University of London has decided, by seven votes to fourteen, to grant medical degrees to women who have gone through the prescribed training and can pass the examinations. The decision is of importance not only to the medical profession and to those ladies who wish to enter its ranks, but to the public. The history of the agitation for the admission of women to medical qualifications is a curious one. It has been going on for years, and the licensing bodies have acted for the most part in a strangely vacillating manner regarding it, as if they could not make up their minds on the question. Thus the authorities at Apothecaries' Hall admitted one lady, Mrs. Garrett-Anderson, and then refused any others. In Edinburgh, too, where the ladies, who bore the Eschylean nickname of the *septem contra Elinam*, urged their claim with much energy, the University acted most capriciously and illogically. They were admitted to the lectures, but refused prizes when they won them; they were allowed to go through the curriculum of study, but not to compete for the degree.

—When an editor under the heading of "Whacking a School-boy" gives a report of the trial of a teacher for punishing one of her pupils, it shows that his desire is to make his paper as sensational as possible. When other editors copy the article thus headed, the people are reminded of the fact that when one sheep jumps the rest of the flock do likewise. When the editor who wrote the article under "Whacking a School-boy" did so, he stated what was untrue when he represented that the teacher had to pay \$3.20 costs for "brutally whipping one of her scholars." The scholar was a hulking lad of seventeen years of age, and the teacher was a lady who was unable, however willing she might have been, to perform such an herculean task. Moreover, the case was never tried, the friends of the lady having, unwisely, we think, agreed to compromise the matter by paying the costs incurred rather than allow her name to be published in connection with the matter as it has been. We enter our protest, therefore, against the action of our contemporary (who is unknown to us) in whose article the lady, though untried, is pronounced guilty; and who has caused her name to be heralded throughout Canada as one who is unworthy to occupy the honorable position of a teacher.

—The Government of France have taken the first steps towards establishing free and compulsory education in that country. The standard of education, except in the cities, is very low; in some departments in the south, centre and west, more than sixty per cent. of the peasantry being unable to read or write, while in 1872 the average number with that lowest standard of education in the whole country was thirty per cent. of the population. After the Franco-German war, Frenchmen learned that much of their military inferiority was due to their inferiority in education, and M. Waddington, whose English education has imbued him with liberal views, proposes to give to all communes special power to make primary education gratuitous,

and to defray the expenses by the imposition of rates, and also enable them to borrow from the State for educational purposes at the rate of three per cent. The great opposition to this proposal will come from the Catholics, whose influence in the matter of education has been the controlling one, being so strong that private schools have been closed by the clergy because merely secular, although the parents of the scholars did not desire religious teaching in the schools. Besides, only one thousand out of the thirty-eight thousand schools in France are not strictly Catholic.

—Mrs. White, London East, still continues to meet with the East Middlesex teachers and others on Saturdays, for the purpose of giving instruction in her method of teaching singing and reading, simultaneous and individual recitation. These lessons are very profitable to the teachers, and, evidently, much appreciated, as some come long distances to attend them. Singing should be taught or allowed in every school. Its moral and physical influences cannot be easily overestimated. We know of teachers, not singers themselves, who have singing in their schools by taking advantage of the Sunday School teaching, and encourage the children to sing the hymns there learned, under the leadership of one of the pupils. Two weeks ago at Mrs. White's class, Messrs. Reid and Anderson distributed sample copies of a collection of hymns made by the Rev. Mr. Gall. This collection is very suitable for those who have to rely on the Sunday School singing, as it contains about 200 of the most popular hymns, such as "Hold the Fort," "Sweet By and By," "Over There," "Daniel's Band," "The Gate Ajar," "Only an Armour-Bearer," &c. It gives the air, and can be placed in the hands of every child as it costs only five cents. The want of a good collection of pieces adapted particularly to Canadian schools is much felt.

—WHAT'S IN AN EDUCATION?—As there are those who entertain grave doubts concerning the benefits of education, we believe we have only to introduce the following interesting report of an interesting conversation upon an interesting subject, to convince them that the want of education, sometimes at least, places very good people in awkward positions:—"My dearest Fanny," he said, as they stood beneath a tree in a flood of moonlight, "I have longed—oh, so longed!—for this blissful opportunity; and even now, I hardly dare to speak the swelling thoughts that struggle up for utterance. Not in the blistering glare of the noonday sun would I whisper to thee of the sweet love that has tinged my whole being with a celestial brightness, but in this soft silvery sheen of the constant moon would I syllable forth the ecstatic song of Eros. Oh! canst thou realize how like the radiance of heaven thy beauty beams upon me? And shall not the blessed boon be always mine? Wilt thou not henceforth, for all coming time, give me the right to shield thee from the rough contact and chilling blasts of an unfeeling world? Oh! if thy smiles could be mine while life should last, they would shed—a—a—ah, my dearest, they would shed—" While he hesitated and stumbled for a word, Fanny eagerly whispered, "Never mind the wood-shed, Albert, but go right on with your pretty talk."

—The Brant Teachers' Association met in Brantford on Saturday, March 10th, about fifty members and a number of pupils attending. "Entrance

Examinations" was first taken up by J. Mills, M. A., Brantford Collegiate Institute. He deprecated the addition of the whole history of England, lately introduced by the Central Committee as one of the subjects for entrance, and considered that it would have been much better to have confined the candidates to a specified portion of the work. He insisted upon earnestness on the part of teachers as well as industry and promptness and accuracy, on the part of pupils. Other speakers agreed with Mr. Mills that the programme was too extensive. Concerning accuracy, Mr. Davidson, St. George, cited Prof. Young, whose opinion is that if correct principles were employed, for example, in the solution of mathematical problems, it mattered not whether the result in every case were a correct one.

"How to teach a class," was illustrated by A. T. Watson, Langford. He first introduced a class of small children in the tablet lessons, their earnestness, eagerness, and evident desire to do their very best, being so apparent that their efforts were highly appreciated and complimented. Classes in the second and third books did equally well, and Mr. Watson explained his manner of teaching Elocution, and of advancing pupils from grade to grade. During the day Mr. Watson and his pupils visited the Blind Institute.

Chairman Kelley, I. P. S., discussed the "Feasibility of Establishing County Model Schools," and considered that with the means at our disposal at present it would be almost impossible to sustain efficiently such institutions; that in the rural parts of the county there were probably not more than three or four centres in which such school could be established; and that as only one hundred dollars was provided as extra support, there was but little chance of making such a school, if established, a permanent success.

M. Wilkinson read a good, practical essay on "Teaching." A reading, very well done, by Miss R. S. Smith; an admirable essay by Miss Clarke; and a reading, given with much taste and precision, by Miss Jennie Woodyatt, completed the programme. The annual meeting of the Association will be held in June.

—Wentworth Co. has one Separate School and 72 Public School Sections, 13 of these being Union Sections. In one school, 4 teachers are employed; in one, 3; in ten, 2; and in all the others except two that have paid monitors in the winter months, only one is employed; total number of teachers, 88. During the past five years \$64,000 have been expended in furnishing adequate accommodation. Twenty-four new school houses have been built, and 27 improved. Twenty-four school sites contain not less than an acre, and 37 not less than half an acre. In 1875 the total receipts for school purposes was \$57,528.85; of which \$8,223.47 was Legislative and Municipal grants; \$35,445.99, from taxation on property; and \$13,855.39, from other sources. The amount paid for teachers' salaries was \$30,956.03; for building school houses and purchasing sites, \$14,592.94; for incidental expenses, \$7,939.12; making a total expenditure of \$53,492.14, and leaving a balance of \$4,036.71 in the hands of the various Boards of Trustees. The average rate of taxation was 3 3/5 mills on the dollar. Of the 88 teachers employed, 49 are male, and 39 female. Of these, 72 have charge of a Public School; 1 of a R. C. Separate School; and 15 are assistants. The average salary of male teachers having charge of a Public School is \$426,

of females \$283, of assistants \$192. There were 5 teachers holding First-Class Provincial Certificates, 26 Second-Class Provincial, 17 First-Class County Board under the old Act, 38 Third-Class County Board under the new Act, and 2 Interim Certificates. The average increase of the salary of male teachers since 1871 was \$60, or nearly 27 per cent.; of females, \$34, or nearly 17 per cent. The highest salary paid to a male teacher was \$325, the lowest \$300; to females \$400, the lowest \$200; to assistants \$225, the lowest \$120. The total number of pupils registered during the year was 7,147; of these 7,028 were between the ages of 5 and 16, and 424 of other ages. The number attending less than 50 days was 2,126, or over 28 per cent of the registered number; between 50 and 150 days, 3,628, or nearly 49 per cent.; between 150 days and the whole year, 1,693, or 23 per cent. nearly. The average attendance for the first half year was 3,373, or over 45 per cent.; for the second half year, 2,982, or a little over 40 per cent., giving an average of nearly 43 per cent. for the year.

—In accordance with the suggestion of the Central Committee of Examiners, the following modifications will be made in the subject prescribed for candidates for entrance into Collegiate Institutes and High Schools, and the same shall come into effect at the Examination to be held in June next, viz.—

I. Candidates will be examined in the leading facts of English History. The questions set will not demand a minute knowledge of details, but will be strictly limited to the outlines of the subject.

II. Candidates will be examined, as heretofore, in reading from the Fourth Reader, pp. 1-256; but they will in addition be expected to show that they understand the meaning of these reading lessons.

They will likewise be examined more minutely on the selections enumerated in the following list, and they will be required to reproduce the substance of one or more of them in their own language:—

1. The Norwegian Colonies in Greenland.—*Scoresby.*
2. The founding of the North American Colonies.—*Pedley.*
3. The Voyage of the "Golden Hind."—*British Enterprise.*
4. The Discovery of America.—*Robertson.*
5. The death of Montcalm.—*Hawkins.*
6. Jacques Cartier at Hochelaga.—*Hawkins.*
7. Cortez in Mexico.—*Cassell's Paper.*
8. The Buccaneers.—*The Sea.*
9. The Earthquake of Caraccas.—*Humboldt.*
10. The Conquest of Peru.—*Annals of Romantic Adventures.*
11. The Conquest of Wales.—*White's Landmarks.*
12. Hermann, the Deliverer of Germany.—*Jevrer.*
13. The Burning of Moscow.—*Secur's Narrative.*
14. The Battle of Thermopylae.—*Raleigh.*
15. The Destruction of Pompeii.—*Magazine of Art.*
16. The Taking of Gibraltar.—*Overland Route.*

III. The local Boards are directed not to admit candidates that fail to obtain one of the marks given for the parsing question on the paper in grammar.

The annual report of the schools of Ontario contains very pleasing evidence of the progress of education in our Province. We subjoin the following report of attendance from the *Globe*.—

"The school population at the date of the report was 501,038, but this was thought to be below the real number. The total number of pupils attending school was 474,241, an increase on the year of 10,194. The number reported as not attending school was 10,809; but this must be far below the mark for very many returned as scholars only attended a few days in the course of the year. The average daily attendance was only 198,574. Of the pupils entered as at school, 48,216 attended less than 20 days during the year. No one could say these got anything to be called education. Then, of those who attended 20 but under 50 days, there were 93,321; and of those who were 50 up to 100 days, there were as many as 126,650. This would show that 268,187 pupils, or a great deal more than one-half of all in attendance during 1875, were at school for less than a hundred days. It is also to be noted, to make the thing worse, that this attendance was fitful; that now they were a day or two absent, then again present, and so on, making the good they received infinitely small, but the evil they inflicted upon the schools formidably large. Of the whole number of 474,241, only 19,904 attended more than 200 days during the whole school year. This is a very unsatisfactory state of matters. We notice that there are twenty-five different branches of instruction in the Public Schools. This must necessarily involve in very many cases a large amount of superficial work, and the neglect of the more ordinary but more important branches in which alone the great majority of the pupils can have time to receive instruction."

The amount of money expended during the year was \$2,993,080. The total receipts were \$3,365,454, while in 1860 they were only \$1,324,272. The highest salary paid to any teacher in a city was \$1,000; the lowest, \$400. In a county, the highest, \$800; the lowest, \$120. Male teachers' salaries in counties averaged \$361; female, \$236. These salaries show a small increase on those of the previous year. The number of School Sections in 1875 was 4,912, an increase of 81. The number of schools kept open was 4,834, in 4,014 of which the exercises were opened and closed with prayer. The receipts for High Schools amounted to \$348,018, and the expenditure was \$332,013. The number of pupils was 8,342, and of schools 108. Of the pupils at the High Schools, 100, during 1875, matriculated in some University; 454 entered mercantile life; 278 went to farming; 326 joined the learned professions; and 586 went to other occupations.

Association Meetings.

Will Inspectors or Secretaries of Associations please inform us in good time of the date of the next meeting of their respective associations, so that we may give the same a notice under this head.

NAME.	PLACE.	DATE.
N. Wellington.	Elora, Ont.	April 7.
Elgin.	St. Thomas, Ont.	April 27 & 28.
South Essex.	Leamington, Ont.	May
Perth.	Stratford, Ont.	May 25 & 26.
Brant.	Brantford, Ont.	June
Eastern.	Brockville, Ont.	Aug. 8.
Provincial.	Toronto, Ont.	Aug. 14.
National.	Louisville, Ky.	Aug. 14.
Quebec.	Sherbrooke, Que.	October

English Department.

J. G. HANDS, EDITOR, 76 CARTWRIGHT ST., LONDON.

Subscribers are cordially invited to co-operate with the Editor in making this Department as interesting as possible by freely discussing the points raised by enquiring correspondents.

Questions are invited bearing on the subjects of Grammar, English Literature, Etymology, &c.; but they must be of such a character as to be interesting to subscribers generally.

Matter for this Department must be addressed to the Editor as above not later than the 15th of the month previous to that in which it is expected to appear.

Answers to queries, &c., will be inserted in the second number following that in which they appear.

Queries.

Parse the italicized words in the following :

- (a) This book is *mine*. —SHELLEY.
- (b) I sift the snow on the mountains below
Till their great pines groan *aghast*. —SWIFT.
- (c) I live *as I did*, I think *as I did*, I love you *as I did*. —YOUNG.
- (d) The bell strikes *one*.
- (e) *The more you talk, the worse you make it.*
- (f) It continued *for more than a week*.
- (g) They were armed with various weapons, *such as guns, spears, &c.*

Mathematical Department.

SAMUEL R. BROWN, EDITOR, BOX 67 D, LONDON.

Teachers and others are invited to forward any problems they may think worthy of a place in these columns, provided always that the solutions accompany the problems.

Send Solutions before 15th inst., to receive attention, and address the Editor as above.

When sending solutions, correspondents will please send each month's problem separately.

The names of those who solve the several problems correctly will be published with the solutions thereof.

The solutions of all problems published in this department will be printed in the second number following that in which the problems appear.

Problems.

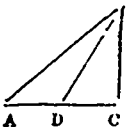
No. 55.—

In an endless screw, the length of the handle is 30 inches, the wheel has 70 cogs, and the axle to which the weight is attached has a radius of $2\frac{1}{2}$ inches. What weight will be sustained by a power of 200 pounds?

No. 56.—Suggested by G. W. Priest, Ayr.

Reckoning commercial discount at 8%, how long would a bill have to run so that the holder would be willing to pay something to get it off his hands? Show that the error in computing commercial discount, instead of true discount, varies nearly as the square of the time, when the time is small and the discount is small, compared with the debt.

No. 57.—



In the triangle ABC, the side AB is 60, the side AC 50, and BC 40; also AD is equal to DC. Find BD.

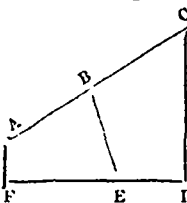
No. 58.—Proposed by James E. Frith, Norwich.

A merchant sells tea at a profit of 20%, but, when he had sold 20 lbs., he discovered that his sales had caused him a loss of $\frac{1}{4}$ oz. per lb. sold; he then corrected, as he supposed, the error, and sold 20 lbs., and found that he had gained $\frac{1}{4}$ lb. on the second sale. On the whole transaction he gained 13½ cts. above the 20%. Find (1st) his cost price, (2nd) his selling price, and (3rd) his total gain. By Arithmetic.

No. 59.—Proposed by Allan F. Pringle, North Dumfries.

A merchant bought a quantity of vinegar which was invoiced at 20 cents per gallon. Find the rate at which he must sell it so that he may clear just 25% on the net cost—allowing 5% of the quantity is lost by leakage, and that he loses 10% of the sales by bad debts. The charges for freight and commission amounted to 5% of the selling price.

No. 60.—Proposed by Thomas Worden, Cromarty.



ABE, CBE, AFD and CDF are right angles. AF = 2, FE = 10, ED = 6, and CD = 14. Find BE.

No. 61.—Proposed by A. McIntosh, Pinkerton. (Taken from Advanced Arithmetic, page 266.)

A semicircular plot of ground, whose radius is 12 yards, has inside the circumference a path two yards; the rest of the space is a flower bed. Find the size of the bed.

Solutions.

No. 42.—

If A and B together can do the work in 16 days, they can do $\frac{1}{16}$ in 1 day, and in 4 days they do $\frac{1}{4}$ or $\frac{4}{16}$ of the work; $\frac{3}{4}$ of the work is left undone when A is called off. B finishes this in 36 days. Now if B does $\frac{3}{4}$ of the work in 36 days, he can do $\frac{1}{4}$ of the work in $\frac{1}{3}$ of 36 days, or 12 days; and if he can do $\frac{1}{4}$ of the work in 12 days, he would do $\frac{1}{3}$, or the whole of the work, in 4 times 12 days, or 48 days. A and B together do $\frac{1}{16}$ in 1 day, B by himself does $\frac{1}{48}$ in one day, then $\frac{1}{16} - \frac{1}{48}$ or $\frac{2}{48}$ or $\frac{1}{24}$ is the part of the work A can do in 1 day. If A does $\frac{1}{24}$ in 1 day, he would do $\frac{1}{24}$, or the whole of the work, in 24 times 1 day, or 24 days.

No. 43.—

Multiply the numerator and denominator of the fraction by the numerator, and the equation becomes—

$$\frac{(Vc - Vc - x)^2}{x} = c \tag{1}$$

$$\text{Or } (Vc - Vc - x)^2 = cx \tag{2}$$

$$\text{Extracting the square root—} \\ Vc - Vc - x = Vcx \tag{3}$$

$$\text{By transposing, } Vc - Vcx = Vc - x \tag{4}$$

$$\text{By squaring (4), } c - 2cVcx + cx = c - x \tag{5}$$

Whence $c x - 2 c \sqrt{x} = x$ (6)

Dividing by \sqrt{x} , $c \sqrt{x} - 2 c = \sqrt{x}$ (7)

Or $(c+1) \sqrt{x} = 2c$ (8)

Whence $\sqrt{x} = \frac{2c}{c+1}$ (9)

By squaring (9), $x = \frac{4c^2}{(c+1)^2}$

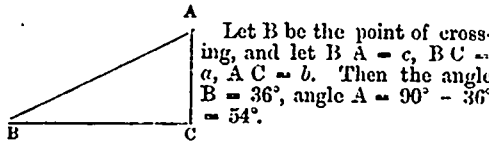
No. 44.--

Through D draw DE parallel to AC; then in the triangle BDE we have BD 80, DE 90, and BE 40 rods. We find the area of the triangle BDE (having the three sides given) to be 1599.8046 rods. But the area of a triangle = the base \times one half the perpendicular height. Therefore the perpendicular height of the triangle BDE = $1599.8046 \div \frac{1}{2} \times 40$, or 79.99023; this is also the perpendicular breadth of the parallelogram ACDE. Multiply this perpendicular breadth by the length and we have $79.99023 \times 100 = 7999.023$ rods, the area of the parallelogram ACDE; then $7999.023 + 1599.8046 = 9598.8276$ = the area of the whole figure, ABCD.

And $\frac{9598.8276}{160} \times \$40 = \$2399.70$, the sum he receives for the field.

The angle CDB is an acute angle.

No. 45.—By John Anderson, Dixie.



Let B be the point of crossing, and let BA = c, BC = a, AC = b. Then the angle B = 36°, angle A = 90° - 36° = 54°.

$\sin. A = \frac{a}{c}$, $\sin. B = \frac{b}{c}$ $\therefore c = \frac{b}{\sin. B}$

$= \frac{3 \frac{1}{2}}{\sin. 36^\circ} = 748$ yds. But $\sin. A = \frac{a}{c}$ $\therefore a = c \times \sin. A = 748 \times .599 = 605$ yds., then 605 : 748 :: 20 mls. to 24 $\frac{1}{2}$ mls. nearly.

No. 46.—By G. W. Priest, Ayr.

Let 1 or unity = cost of coffee per lb., $\frac{2}{3}$ = what he wishes to gain per lb., $\frac{2}{3} \times \frac{2}{3} = \frac{4}{9}$, what he received for $\frac{2}{3}$ lb., $\frac{2}{3} (\frac{2}{3} - 2) = \frac{2}{3} \times \frac{4}{9} = \frac{8}{27}$ = what he rec'd for $\frac{2}{3}$ lb., $\frac{8}{27} - \frac{2}{3}$ = what he received per lb., $\frac{8}{27} - \frac{2}{3}$ = gain per lb. $\therefore \frac{8}{27} - \frac{2}{3} = \frac{8}{27} - \frac{18}{27} = -\frac{10}{27}$, or unity = $\frac{27}{10}$, or 2 $\frac{7}{10}$ cts., the cost per lb.

No. 47.—By A. S. McGregor, Avonbank.

$\frac{1}{2}$ of 120 = 60; and $60^2 = 3600$. $3600 \div 1$ (verse sine) = 3600. $3600 + 1 = 3601$ feet, the diameter of the circle.

The diameter = $\frac{(\frac{1}{2} \text{ chord})^2}{\text{verse sine}}$.

No. 48.—By H. T. Scudamore, Wardville.

Let m_1 and m_2 be the respective masses, and v_1 and v_2 the respective velocities at time of impact. Then $m_1 v_1$ and $m_2 v_2$ are their respective momenta.

Their combined momentum after impact = $m_1 v_1 - m_2 v_2$.

Their velocity after impact $(m_1 v_1 - m_2 v_2) \div (m_1 + m_2) = \frac{1}{2} (v_1 - v_2)$, since the masses are equal and it is upward and equal to v_1 .

$\therefore \frac{1}{2} (v_1 - v_2) = v_2$ or $v_1 = 3 v_2$.

The velocity of the first is three times that of the second, and this is independent of the initial velocity, or of the time. Since initial velocity = $v_2 - v_1$, we have initial velocity : v_1 : $v_2 = 4 : 3 : 1$.

No. 49.--

(a.) The diameter of valve is 4 inches; \therefore its area = $(\frac{1}{2})^2 \times 3.1416 = 12.5664$ square inches; the leverage of valve is 5 to 1; \therefore 50 lbs. at the end of lever = 250, on the valve, that is, 250 lbs. is the pressure on the valve from without, and $250 \div 12.5664 = 19.89$ lbs., the pressure on each square inch from within to balance. Hence any power of steam over 19.89 lbs. to the square inch, will raise the valve.

(b.) Since each stay bolt is equal to a pressure of 3607 lbs., and the boiler carries 60 lbs. per square inch, there must be a bolt to every $\frac{3607}{60} = 60.116$ square inches. Then $\sqrt{60.116}$ or 7.7534 inches is the distance between each stay bolt, from centre to centre; or $7.7534 - \frac{1}{2}$ or $7.2534 = 6.8784$, the distance between each stay bolt from edges.

The following methods of solving No. 37, by arithmetic, will no doubt be interesting to our readers:

First Method.—A can do $\frac{1}{25}$, B $\frac{1}{33}$ and C $\frac{1}{33}$ of the work in one day. If the work is to be done in 25 days, there will be an average of $\frac{1}{25}$ done per day.

The L. C. M. of 18, 30, 33 and 25 is 4950. Now let us divide the work into 4950 equal parts, then there will be an average of 198 parts done per day.

A does 275 - 198, or 77 parts above the av. per day
B " 198 - 165, or 33 " below " "
C " 198 - 150, or 48 " " " "

Should the No. of days of A and B, without C, be in the ratio of 33 : 77, or 3 : 7, or 6 : 14, or 9 : 21, or 12 : 28, or 15 : 35, &c., there would be an average of $\frac{1}{25}$ per day, as A makes up for B's failure.

Again, should the No. of days of A and C, without B, be in the ratio of 48 : 77, there would be an average of $\frac{1}{25}$ per day.

Now take the No. of days A and B must work to give the average, with the No. of days A and C must work, and we will have the No. of days the three must work, to give the average.

If we take A and B, 3 and 7 with A and C, 48 and 77 respectively, the No. of days will likely be fractional. Let us take such ratios as will not give a fractional No. of days.

A and B 15 and 35, and A and C 48 and 77.	
A will then have 15 + 48 = 63 days,	} total 175 days
B " " " 35 " "	
C " " " 77 " "	
Then 175 days : 25 days :: 63 days to 9 days A's time	
175 : 25 :: 35 " 5 " B's "	
175 : 25 :: 77 " 11 " C's "	

Second Method.—

In one day A does $\frac{1}{25} = \frac{35}{875}$.
" B " $\frac{1}{33} = \frac{25}{825}$.
" C " $\frac{1}{33} = \frac{25}{825}$.

A, B, C, work 25 days; A can do the work in 18, B in 30, C in 33 days; or dividing the work into 990 990th parts, A does daily 55, B 33, C 30. What integers will multiply these three numbers to produce 990, so that the sum of the multipliers shall be 25?

30 divides 990 33 times; so if 0, 0, 33 could be taken as the days of A, B, C, we would have the whole work done; and if we combine multiples of 55 and 33, so as to have a multiple of 30, we shall obtain a distribution of the days different from 0, 0, 33.

The multiple of 55 must be a multiple of 3 because 30 and 33 are so. Similarly the multiple of 33 must be a multiple of 5. Therefore both are multiples of 165, and their sum must be divisible by 30 and therefore by 2; therefore both multiples must be odd, or both even. It will therefore suffice to combine a multiple of 165 parts, each 165 being result of 3 days, with a multiple of 165 parts, each 165 being result of 5 days, the remainder will be a multiple of 330, and must be 330 or 660, which, divided by 30, will be 11, or 22 for C's days of work.

Now either C's days are 11 and the remaining parts 4×165 must be divided in the ratio of 3 to 1, or 2 to 2, which numbers multiplied by 3 and 5, (the No. of days in which A and B do 165 parts,) must produce 2 numbers whose sum is $25 - 11 = 14$; 3 and 1 are these numbers, the products being 9 and 5 for the days of A and B; and we have 11 for C—or C's days are 22; 22 will not suit, for there would be 330 parts left for A and B, or 165 each, and multiplying 1 and 1 by 3 and 5 we should have A's days 3, B's days 5, C's days 12—the sum of which is not 25. Therefore the only amount is A 9, B 5, and C 11 days.

Correct solutions have been received as follows:

- No. 41, Allan F. Pringle, N. Dumfries.
 No. 37, 41, Thomas S. Menary, Egnondville;
 John McKenzie, Lorne.
 No. 36, 37, 41, Theophilus Hall, Markdale.
 No. 36, 37, 38, 39, 40, 41, F. W. M., Pt. Dover.
 The above were received too late to appear in March No.
 No. 42, John McBean, Jennie Moffatt, Rebecca McKenzie, Lizzie Keachie and John Milroy, all of S. S. No. 21, N. Dumfries; Aaron Break, Riverside; No Name, Sunbury; Wm. H. West, Sarah Lena Macausland, Emily Alice Christie, Thos. Harrop, Edward Harrop, all of Walpole; Geo. A. Clark, Wm. Shrimpton, Trout Lake; Wm. A. Kyle, Morrisburg; E. Higley, Rodney; Stephen Slough, Frederick Wood, Ensign Miller, Andrew Miller, Effie Miller, T. D. M. Metler, all of Fenwick.
 No. 42, 46, James Thompson, Cranbrook; Simcoon Hicks, Courtland; John Morris, Warwick; Allan F. Pringle, N. Dumfries; Robert O. Huffman, Riverside; W. H. Grant, Waterloo, Esqueving; Emma C. Urmy, Selkirk.
 No. 42, 46, 47, Thomas Hammond, Henry W. Hoover, Selkirk.
 No. 42, 43, 44, 46, Alex. Dickie, Toronto; A. S. McGregor, Avonbank.
 No. 42, 44, 46, 47, Thomas McCarthy, Downeyville.
 No. 42, 43, 44, 46, 47, Thomas Worden, Cromarty.
 No. 42, 44, 46, 49, W. Bickell, Clyde.
 No. 42, 43, 44, 46, 49, T. Cameron, Arkona.
 No. 42, 43, 44, 46, 47, 49, James W. Morgan, St. Helens.

No. 42, 44, 46, 47, 48, 49, Alleyn Husband, Metcalfe.

No. 42, 43, 44, 45, 46, 47, Joseph Richardson, Innerkip.

No. 42, 43, 44, 46, 47, 49, Wm. Moir, Fergus.

No. 42, 43, 44, 46, 48, 49, James E. Frith, Norwich.

No. 42, 43, 44, 45, 46, 47, 49, John Anderson, Dixie.

No. 42, 43, 44, 46, 47, 48, 49, G. W. Priest, Ayr.

No. 42, 43, 44, 45, 46, 47, 48, P. C. Kinamerly, Napanee.

No. 42, 43, 44, 45, 46, 47, 48, 49, F. W. M., Pt. Dover; J. W. Place, Augusta.

Answers to Correspondents.

Edward W. Bruce, Bluevale.—Your first and second queries are explained in Text Books; your third will appear in our next No.

A. E. Byers, Cadmus:—Problem No. 15, in COMPANION AND TEACHER, is similar to the one you propose.

John W. Place, Augusta:—Your problem is a good one, and will appear in our next No. Your suggestion will also be mentioned.

A. McIntosh, Pinkerton:—We thought better to place your question in our columns than to answer it by note; all our readers will notice it.

A. E. Kennedy, Princeton:—Your query will receive attention as soon as possible; we have many other fine problems waiting their time.

A. F. Pringle, N. Dumfries, S. S. 21:—We did not receive the Algebraic solution you sent; glad to see you take such an interest in the COMPANION AND TEACHER.

We would request our readers to be careful to send all matter for the Mathematical Department to the address at the head of the Mathematical column.

Selected.

Intemperance and Education.

The success of any government depends to a great extent upon the people; unless they are intelligent the country cannot prosper. It is the character of the people that gives the greatest guarantee for the stability of our institutions. No matter how much the matter has been investigated this truth boldly meets us everywhere. In Canada a generous provision has been made for the general education of the people—and our system of free schools is equal to that of any other country; and yet with all our facilities, and the stringent laws passed to enforce education, how many are there in the land who can neither read nor write? Our schools are multiplying yearly—new buildings are erected, more teachers employed, heavier taxes imposed upon the people, greater efforts in the direction of education are put forth, and yet there is still a demand for jails and penitentiaries, and the inmates of these institutions are annually increasing. And what is the cause of this? We have not the slightest hesitation in saying, that it is the facilities for obtaining liquor which is at the foundation of the ignorance, as it is of the crime and poverty which exist.

All through the country there are two opposite systems of education going on—antagonistic to each other no doubt—but both established by law, fostered and encouraged by the people—and both costing immense sums of money to support them.

The first of these is the public schools, the embodiment of enlightened ideas, producing citizens of superior character, promoting the welfare of all, building up and consolidating the power of the State.

The other system is the produce of the breweries and distilleries: the off-shoot of the whiskey-shops that are now under the protection of our Christian Rulers, and licensed by them to educate the rising hope of the country into drunkards, to spread over the land a flood of degradation and death, destroying the influence of the former system, and of the Churches, and plunging many of our people into a chronic state of poverty and crime.

The influence of our schools and colleges, even the warnings from the Churches, will have no effect so long as these schools of vice are allowed on every hand. We may build a school-house on every hill, pay the best teachers to take charge of them, and fail to have honest, sober and intelligent people, so long as the other—the debasing system of whiskey education—is permitted to exist, and the dram-shops to stand side by side with our churches, our colleges, and our schools.—*Week's Doings.*

The Young Should be Taught to Think

We have often suggested in our columns the importance of teachers drilling the young people under their charge to think. The greatest difficulty which the teacher has to contend with is not in accustoming the pupil to repeat the rules in grammar, arithmetic, and other studies, but to induce him to reflect on the reason why the rules are laid down, and why following the rule produces a correct result—in other words, to teach the pupil to think. A correspondent, Mr. R. K. Slosson, reflects in the *Western Rural* our thoughts on this subject in a somewhat lengthy article, from which we make the following extracts:—

The world is indebted for nine-tenths of its valuable knowledge, its improvements and progress generally, to men and women who have trained themselves to think in a systematic and consecutive manner. No man has ever become eminent in science, art, literature, or farming, who was not a profound thinker—who did not well examine and compare all the items pertaining to the subject—to know whether, in their various relations, they sustain the principle which public opinion upholds as being true. It is not a very uncommon thing that a principle has been enunciated by men who have put theories to support, and where it is plain to a thinking, unbiassed mind, that some of the important items of the theory are in direct antagonism to the principle, and therefore false; or otherwise, the principle itself has no foundation in truth.

The earlier, consistent with health, that youth learn to think, the more massive and powerful will be the brain in maturity—the better prepared will be the mind to shed a glow of interest and happiness on all around, and fill itself with an intense sense of enjoyment unknown to the undisciplined mind. This process of thinking should be systematized, so that the mind can bend its energies in full force on one point at a time, and after having examined in this manner the whole ground, the facts elicited can be classified, managed, and put in a position to be easily understood and be appreciated, because they are forcibly and logically brought to bear. If you once acquire the ability to concentrate the mind, so as not to be diverted from the

main question or object in view, you have made a long stride in the right direction, and the vigorous use of individuality, comparison, and casuality will be pretty certain to enable you to reach satisfactory and demonstrative ones.

To assist yourselves very materially you need specially to cultivate memory; and we believe this can best be done by the association of things and ideas. If you wish to retain an idea, you have only to specify in your mind a familiar idea, analogous in some particular to the one you wish to remember; so all you have to do is to recall the familiar idea and the new one immediately pops into your mind. A little practice in this way will convince you of its utility, and remember the longer you practice a thorough analysis of the subjects submitted to investigation, the more speedy, perfect and satisfactory will be your work. We believe, therefore, that all high schools should have a professor whose business shall be to teach pupils to think, and even our common school law should require elementary instruction in the scheme of thinking.—*Exchange.*

Is Juvenile Journalism Judicious?

Journalism by school-children is one of the signs of the times, and is, we believe, one only to be witnessed in North America. As those who scan the *Reporter* have had ample means of ascertaining, the number of primary schools having journals conducted by the pupils is very considerable; and the question naturally suggests itself, "What are the ends this novel phase of tuition is designed to accomplish?" Will it convey to them new and valuable knowledge? Will it incite them to more industrious study? Will it impart experience which shall better fit them as men and women to cope with the temptations and difficulties of life.

It is beyond controversy that all scholastic training should have for its aim the fitting of those coming under its influence to acquit themselves honorably and usefully; and any possessing a tendency different from this is, as it ought to be, scrupulously eliminated from systems enjoying the advantages of careful supervision.

Of course if juvenile journalism inclines in this direction, it deserves all encouragement, and should be as soon as possible introduced into our public schools; whilst if useless or deleterious it merits banishment from all academies.

It is well within the province of the *Reporter* and its readers to ponder on which side the balance lies.

The object of this school journalism ostensibly is to encourage the study of English composition, to attain excellence in which pupils will, it is held, strive far more when conscious that their efforts are to be printed, canvassed, and criticized than when they labor under the idea that, whether good or bad, their work will be unknown outside of their class. An impulse to essay writing will be given by this species of exercise, it is held, the result being greater mental activity applied to other branches, and higher results everywhere. Such are, in brief, the chief among the reasons which are or can be offered in advocacy of the practise.

Whether the designs are accomplished is a question to which the common-sense view suggests a negative answer.

There is perhaps no more formidable barrier to intellectual advancement than vanity—the assumption, of course, being that nature has not been remiss in her work. A high opinion of one's

qualifications or merits is fatal to improvement of them. The youth who learns to believe that he is remarkably clever or a pink of propriety never becomes either, unless he should have the good fortune to encounter enough of the purging which comes of persecution and rebuff to utterly uproot his self-esteem and present himself to himself in his true character. Having discovered how puny are his attainments where he most prided himself he excelled, there is some hope for him. Shame alone may force him on to a manly endeavor to supply his shortcomings. But where one is so blessed, a hundred go on through life wrapped in their strong faith in themselves. Such are the men who, whilst young, inflict all the harm upon society which is traceable to licentiousness; who later make bad members of the family and dishonorable knaves in business, and who, when at length they verge towards the grave poor and wretched, are scouted, and are despised even by themselves.

Vanity is a dread evil; and because it is we have no faith in journalism in the schools. Say what upholders of it may, the practice will develop the vice. Outside of the school the work appearing in the papers will be brought under notice, and parents and friends with more love than discretion will commend it in presence of the dear little pets who are the evolvers, and will make them believe that deeds which are of no unusual worth are sublime and something to be very proud of. Naturally *les enfants* will get quite stuck up; and when they do, be sure they will "stick." Infuse into them the idea that they are quite Shakespeares or Bacons; they will not require the information that they have attained the pinnacle of greatness. This they will deduce for themselves.

Another reason why we are disinclined from this journalism by scholars is that we believe it is only a dodge of mercenary school principals to bring themselves and their establishments under notice. It is a new advertising scheme merely, which parents may not with impunity allow their children to aid on.

In the national character there is already far more of the love of ostentation that is reconcilable with republican ideas or with virile thought. Instead of being encouraged to believe that "splurge" is proper and to be cultivated, children should be taught to condemn it as unworthy of American citizens and to hold that sound merit is alone worth being striven after.

When this style of ethics shall be generally inculcated, school journalism will cease, and the death blow will be struck at twenty-five cent diamond pins; gold Alberts and rings expressly imported to accommodate six-dollars-a-week light-headed heavy swells; and ten-cent cigars on an annual salary of \$150; and there will be hope that even gold-plated harness, liveried footmen, and other un-American extravagances may be banished from our midst.—*American Newspaper Reporter.*

Industrial Education.

There is no more important problem before this country to-day than this of industrial education, and, sooner or later, the country will have to solve it.

Education we have in abundance; we have colleges for teaching astronomy, the dead languages, higher mathematics, and philosophy, capable of holding three times as many students as are ready

to enter them. We have magnificent public schools in which French and Latin and drawing are taught to the sons and daughters of the poorest without money and without price; but we have no schools where any industrial occupation is taught—no school where girls can acquire neatness and skill in the useful arts, of making clothing and manipulating food, and boys, dexterity in the use of tools.

We charge it upon educated girls that they will not pursue legitimate business callings; but how can they? There is no means by which they can acquire knowledge of them. We blame our untaught seamstresses, dress-makers, and cooks; but how are they to learn except by practice upon the unwary housekeeper? An intelligent girl who wishes to become an expert—who is too conscientious to call herself by a professional title until she has earned her right to it—is driven back upon the bare fact, the utter absence of all means by which she can acquire the requisite knowledge and practice.

In France young women pay a high premium for admission into the best dress-making houses; but then they are put through a regular and systematic course of training; and they come out with certain principles well established in their minds, which are of use to them all their lives, as well as a knowledge of practical details, which are turned to immediate account.

In the large cities the trouble especially is becoming a serious one. Almost every woman is a beggar, or willing to become one, if she can find any one to give her anything; but if work needs to be done, it is one of the most difficult things in the world to get it well done, or to get it done at all.

It is a question whether, in our self-laudation, self-respect is not entirely dying out from among us. Certainly that self-respect which is based upon character, upon truth, and honesty in work and life, has few representatives.

Think of the wife of a man like Cornelius Vanderbilt having it to say when she died, only seven years ago, that she had never spent a dollar she had not earned! That was one of the reasons why he died worth a hundred millions more or less. We talk about "higher" education, but the higher is of little use unless it includes the lower, for it has no basis upon which to stand; and if the children of poor parents have not time for everything, let us give them, through our public schools, in addition to the old-fashioned reading, writing, and ciphering, not a weak smattering of Latin, French, and geometry, but a thorough knowledge of some useful and industrial art, by which they can earn their bread, and add to the comfort and happiness of the community.—*Demorest's Monthly.*

Vocal Music in Public Schools.

The importance of vocal music as a branch of education has been quite generally acknowledged by educators, and without going into extended argument in its favor, we shall only present a statement of some of the more important reasons why it should be taught in Public Schools.—

1. The influence which music has always exerted over the soul of man, and its consequent almost universal use, gives it a prominence as a branch of education, which demands more general attention.

2. If the knowledge of it ever becomes general, its study must be commenced in childhood, before the organs of hearing and vocalization become so

fixed that musical sounds can neither be produced nor appreciated.

3. In a sanitary view, singing is one of the best promoters of health.

4. Its good influence upon the morals and deportment of the young is incalculable.

5. The mental discipline required in learning the science gives it as high a position as any other study.

6. Music as a means of *social culture* is unequalled, and greatly aids in making good readers and speakers.

7. In the light of economy, the cost for tuition to the parent, in the way of private instruction, would be greatly lessened by having music taught in the public schools; while those who, from poverty, would otherwise never receive any musical training, would be greatly benefited.

If, then, it is desirable to have music more generally taught, as a science, in our schools, it will be necessary to consider the question

WHO SHALL TEACH IT?

In cities and towns where special teachers are employed, but little difficulty will be found in arranging the mode of instruction; but in the vast majority of schools, no special teachers are employed, and consequently it remains for the regular teachers to perform all the work that may be done in this department. In this connection, the question will naturally arise in the minds of many, how is it possible for the ordinary school teachers to impart musical instruction, since so many know nothing of the science, being unable to sing? Perhaps the best answer is the simple statement that all such as have earnestly and perseveringly attempted the work have succeeded, and succeeded well. Teachers are accustomed to habits of study and investigation; and if they will make use of any of the valuable text-books that have been prepared for their special benefit, they need not find any difficulty in learning the principles of musical science, so as to be able to teach the same to their pupils. If a teacher is unable to sing, undoubtedly there may be found some pupils in the school, or a friend, who can and will gladly assist until the entire school can sing the scale correctly. When this has been accomplished, the teacher's work will consist in giving instructions in the elements, and seeing that proper practice is given by the school in exercises and songs. In connection with this, we copy the following from the report of the Music Committee of the Boston Public Schools:—"An aptness to teach only is necessary, and any person who is fitted in other respects to hold the responsible position as a teacher in a public school has the ability, we contend, to learn in a very short time how to teach the elements of music, as well as the other studies required in our common schools. Nor is it necessary that the teacher should be able to sing, in order to be successful in this branch of study, though, of course, it is an aid." Hundreds of instances might be cited to show the success of teachers, who, at one time, thought it impossible for them to do anything in the matter, but who have since earnestly taken hold of it; but it is certainly unnecessary, as we hold that every faithful teacher, who seeks to render to those whose education is intrusted to him the greatest amount of good, will make the experiment, and ascertain for himself whether or not we are correct.—*Educational Weekly*.

A Wise Teacher—A Boy Saved.

A boy fifteen years old had been flogged and harshly treated at home and at school until he had lost his self-respect, and became utterly reckless of his character. So bad, indeed, was he, that the trustees in his native district had caused his expulsion from the public school. His father, almost in despair, requested a teacher in the neighboring district, who was known for his great success in managing the worst of boys, to try his son. On entering the school the teacher lent him an interesting book, telling him he might read it the first day, and not commence to study until he had become acquainted with the place. That night he told the boy he thought him capable of becoming one of the best scholars in the school, and that if he would try to excel, he should have every opportunity afforded him, which would enable him to disappoint the expectations of everybody. The poor outcast opened his eyes with astonishment, amazed that any one should speak kindly to and be interested in him. For several weeks he seemed to forget his wayward habits, and devoted his mind to study with remarkable success, to the surprise of all who knew his history. One day he became very angry because the teacher would not aid him, at the moment, in solving a problem. He laid down his books and sat nursing his wrath, and when the teacher found leisure and offered to aid him, he tartly replied, "I do not wish it." When the school was closed the boy was requested to remain, doubtless expecting a flogging, as in former times; but what was his astonishment when the teacher sat down by his side, and said, "Thomas, I thought you were willing, and meant to be a good boy, and I have given you a good name among all your acquaintances, which seemed to give them great joy. Must I now go and tell them that all my hopes for you are crushed, and that all my kindness toward, and efforts to help you, are lost?" Thomas wept under this appeal, for he expected the whip or expulsion from school; and from that hour his reformation was confirmed. After he had found that one, at least, "cared for his soul," he became an excellent scholar, and was known for exemplary conduct, and a more worthy man than he is now cannot be found in that neighborhood. He dates the turning point of his life and character to that hour with the teacher at the close of the school on that eventful day.

Now, suppose the teacher had allowed his anger to be provoked by the boy's sullen insolence, and he had scolded and whipped him, as others had done, instead of arousing the boy's benevolence and friendship, and awakening his self-respect and regard for the opinion of others, he would have gone from school but an outcast and an Ishmael.—*Phrenological Journal*.

Puzzling Poetry.

Wife, make me some dumplings of dough—
They're better than meat for my cough;
Pray let them be boiled till hot through,
But not till they're heavy or tough.

Now, I must be off to the plough,
And the boys, when they've had enough,
Must keep the flies off with a bough
While the black mare drinks at the trough.

Scientific and Literary.

Blue Glass Mania.

[Below we give two selections on the subject of "Blue Glass," about which so much discussion has recently taken place. These will serve to give our readers as thorough an understanding of the subject, as it is possible to give them at present.—Ed.]

No better confirmation of the assertion of a cynic, that people "love to be humbugged" has been recently afforded than in the blue-glass delusion, which has in some sections acquired almost the character of an epidemic. Whether there is a popular fondness for being deceived or not, there is certainly a manifest tendency to receive with readiness almost any novelty in the shape of a remedy for disease if it is only heralded with a sufficient amount of assurance and is backed by a few reputed "cures."

Losing their confidence upon such grounds as these, hundreds of people have recently been led to make a trial of the blue-light method of treating disease. Quite a business has been established in the manufacture of blue or cobalt glass. In some cities, scores of windows may be seen ornamented with a few panes of "Gen. Pleasanton's blue glass." Every day we pass a window in which hang a frame containing alternate panes of blue and colorless glass, behind which sits a little cripple suffering with disease of the spine. His fond parents are vainly watching for the magic influence of the blue light to be manifested in restoring their little one to health. No doubt hundreds of others are pursuing a similar course.

We have not space to give in detail all the claims which Gen. Pleasanton makes for the blue light nor to show, as might readily be done, the absurdity of each one. A careful examination of his experiments will show that they were not conducted in a scientific manner. There were large chances for error in all of them. When analyzed carefully it is found that they are wholly incompetent to establish the value which he attaches to blue light as a remedy for disease.

One grave objection to Gen. Pleasanton's theory is that it does not harmonize with science and the well-known laws of optics and electricity. He claims that the blue glass not only isolates, but increases, the intensity of the actinic or chemical rays. Careful experiments conducted by competent observers have shown, that the only difference between blue light and colorless light is that the other rays are imperfectly filtered out by the blue glass, the blue or violet rays being allowed to pass through. It has been proven, however, that the blue light contains much less of the actinic or chemical properties of light than colorless rays. The blue light, in effect, is only ordinary light diminished in intensity.

It is not surprising that numerous "cures" are reported as having resulted from the use of this new remedy. Every new remedy can boast of as many "cures." Some of these, without doubt, are the effect of the imagination, which has long been recognized as a powerful agent in the treatment of the sick. It should also be borne in mind that in the use of the blue light the patient is also subjected to a sun bath, the great therapeutic value of which has long been recognized. No doubt the larger share of the good results claimed for blue light are really due to the colorless rays which are mingled with the blue.

But it may be suggested that experience might prove the value of a remedy even though its effects could not be accounted for on scientific principles. We might question the truth of this position without injustice; for true science and correctly interpreted experience always harmonize. Nevertheless, a practical trial of the merits of the remedy will be the criterion by which the general public will judge it.

For the purpose of testing the value of the blue light when compared with colorless light, we had one of our four sun-bath rooms at the Health Institute arranged for the use of the blue light according to the most approved fashion. After a trial of two months we are unable to see the least advantage which it possesses over the clear, natural sun-light just as it was made by the Creator. It really seems quite improbable that the Omnipotent should have made so great a blunder as to have so clumsily mingled the constituents of sunlight that it was necessary for Gen. Pleasanton to invent a means to filter out the deleterious rays. —*Health Reformer.*

Popular manias do not always have a method in their madness; but, nevertheless, they repay investigation, for the mere chance of finding truth and usefulness in one out of a hundred. Of the blue glass mania we can only give facts, leaving it to those who are scientifically interested to investigate for themselves. General Pleasanton, the accredited medium by which it has been introduced to the public, and whose book on the subject is, as yet, the best authority, is not the far-famed general of the rebellion, but his brother—General Augustus Pleasanton. He is a graduate of West Point, a breveted Brigadier-General of Pennsylvania militia, and a lawyer of prominence. Owning a farm just out of the city of Philadelphia, he, in 1860, began to experiment on the influence of the sun's rays as affecting vegetable and animal life. Experiments made in Europe had already evidenced that blue rays of the sun had great chemical powers, and that their effect on vegetation, owing to greater heat, was more stimulating to growth. The General arranged a graperly covered with glass, every eighth row of which was blue, by which means every fruit and leaf partook equally of the azure rays. In April, 1861, he set out twenty varieties of grape vines, all cuttings one year old, about the size of a pipe stem, close to the ground. By September he found the vines had grown forty-five feet in length, and were one inch in diameter a foot from the ground. The next year the vines bore 1,200 pounds of delicious fruit. He next tried the effect of his theory on animal life. A litter of pigs were placed in a pen lighted by blue and plain glass equally, and thrived marvelously. A sickly and dying bull calf, under the effect of the blue rays, stood erect in twenty-four hours, was taught to drink milk, and in four months was a perfectly developed bull. As an instance of precocity, a heifer, under the blue glass, became a mother at as early as fourteen months, a most uncommon circumstance. For neuralgic, rheumatic, and nervous affections, it is said to be a sovereign panacea.

The General, in his book, says of it: "Sunlight passes through plain and transparent glass with slight obstruction, as through the atmosphere or ether of space. As it produces no heat the glass remains cold. When adjoining sunlight,

with same velocity (186,000 per second), falls on a blue glass pane, six out of seven of the primary rays are arrested and only the blue ray passes. The sudden stoppage of the six, with enormous velocity, produces friction; friction evolves negative electricity, which is electricity of sunlight, passing through cold ether of space and in cold atmosphere; both of which, being negatively electrified, impart electricity by induction to rays of sunlight as they pass. Blue glass is oppositely electrified. When these opposite electricities are brought together, and meet at surface of glass, then conjunction evolves heat and magnetism. The heat expands the molecules of glass, and a current of electro-magnetism passes into the room, imparting strength and vitality to any animal in it. When the atmosphere becomes electro-magnified, the inhabitants derive benefit from it." General Pleasanton's book is full of a scientific discussion of his theory, and he boldly combats established theories, and puts his own in their place. He disbelieves entirely the Newtonian idea of gravitation, and holds electricity to be the all-controlling force of nature. By, and through it, we live, the earth revolves, and planets are held in their places. He denies the sun to be incandescent throwing off heated rays, and also that there is heat in sunlight. He argues, the earth, surrounded by an atmosphere and ether, proved to be of temperature minus 142 degrees centigrade, and says it would be impossible for the rays of the sun to penetrate this cold envelope for a distance of 92,000,000 miles and preserve any heat. He holds that heat is evolved from the earth. We can only advise those interested to investigate the subject themselves, in order to prove or disprove all these theories. The proportion of blue glass on vegetable life should be one-eighth; for animal, of equal force. Already French, *savants* are making investigations, and testing those discoveries already made.—*New York Milliner and Dressmaker.*

Harmony of Science and Religion.

Now at eighty-two and a half years of age, still, by God's forbearance and blessing, possessing my mental powers unimpaired, and looking over the barrier beyond which I soon must pass, I can truly declare that, in the study and exhibition of science to my pupils and fellow-men, I have never forgotten to give all honor and glory to the infinite Creator.—If I might be the honored interpreter of a portion of His works and of the beautiful structure and beneficent laws discovered by the labors of many illustrious predecessors for this I claim no credit. It is the result to which right reason and sound philosophy, as well as religion, would naturally lead.

While I have never concealed my convictions on these subjects, nor hesitated to declare them on all proper occasions, I have also declared my belief that, while natural religion stands on the basis of revelation, consisting, as it does, of the facts and laws which form the domain of science, science has never revealed a system of mercy commensurate with the moral wants of man. In nature, in God's creation, we discover only laws—laws of undeviating strictness, and sore penalties attached to their violation. There is associated with natural laws no system of mercy. That dispensation is not revealed in nature, and is contained in the Scriptures alone. With the double view just presented, I

feel that science and religion may walk hand-in-hand. They form two distinct volumes of revelation, and both being records of the will of the Creator, both may be received as constituting a unity, declaring the mind of God; and therefore, the study of both becomes a duty, and is perfectly consistent with our highest moral obligations.

I feel that, as the subject respects my fellow-men, I have done no more than my duty; and I reflect upon my course with subdued satisfaction, being persuaded that nothing which I have said or omitted to say in my public lectures, or before the college classes, or before popular audiences, can have favored the erroneous impression that science is hostile to religion.

My own convictions are so decidedly in the opposite direction, that I could wish that students of theology should be also students of natural science—certainly of astronomy, geology, natural philosophy, and chemistry, and the outlines of natural history.—*Prof. Silliman.*

A Sun in Flames.

The researches of astronomers tend, it must be confessed, to shake our faith in the stability and immobility of our solar system. There is, for instance, evidence suggestive of the probability that the sun is gradually parting with its energies in such a manner that our descendants will be less thoroughly warmed and lighted than we are ourselves. Again, we are told that should a comet fall into the sun there would be a tremendous outburst of solar heat, whereby the earth and all the worlds which circle around the sun would be destroyed. The latest news, however, from the star world concerns us much more nearly than these scientific speculations, for it tells us of a catastrophe which has befallen a sun, which, like our own and hundreds of millions of others, is the centre of a scheme of circling worlds. Accidents among suns, though rare, do sometimes occur. A few among the suns appear suddenly to have lost a great part of their heat and energy, as though the supply of fuel had suddenly run short. This is bad enough, but not so bad as would be an accident of the contrary kind—a sun suddenly blazing out with more than a hundred times its usual splendor; such an accident, however, has actually occurred within the last two months. On Nov. 24, the director of the Athens Observatory discovered a star in the constellation of the Swan, where no such star should be. The news was at once telegraphed to the principal observatories, and the new star was subjected to searching scrutiny. Its brightness increased until it assumed a markedly yellow color. Spectroscopic examination during the height of brilliancy reveal the presence of bright lines of hydrogen and magnesium in the spectrum of the star, evidence of the most intense and glowing heat. This vivid lustre did not, however, last more than a few days, after which it rapidly dwindled down to greenish blue light. In plain words, this formerly quiescent sun, after bursting forth into an intense glow and blossoming with flames of hydrogen, has resumed its feeble lustre. In commenting on the above case an eminent English astronomer remarked lately that all the elements of the catastrophe which has befallen the remote sun in the Swan exist in our own. In fact, there is nothing to assure us that our sun may not suddenly burst out with terrific splendor, so that a sudden expulsion will take

place, and the fires intended to warm our earth blaze forth to its destruction. If this did happen, the sun would probably cool down again to its present condition in a few days, but unfortunately no terrestrial observers would be alive to know whether he did or not, though the whole series of events might form subjects of interesting speculation to the inhabitants of worlds circling round Sirius and Arcturus.—*Witness.*

Poetry.

Peggy Macdonald.

Well, Peggy was pretty; indeed, it was said
That Peggy possessed the most beautiful head
That there was in the land. Complexion so fair!
Such tender blue eyes! Such radiant hair!
She lived in the country. The bloom of the rose
Was seen on her cheek. And even her nose
Possessed the same tint: but that was no harm,
For Peggy Macdonald was raised on a farm.

But Peggy was pretty; and then, what was more,
Her father had riches in bountiful store.
His income was large and his debts very small,
And Peggy, you see, was the heiress of all.
And this is the reason that gallant young eyes
Were looking on Peggy; though she was a prize,
So sweet and so charming, so lovely herself—
Of far greater value than all of her pelf.

Just north of Macdonald's, and on the same road,
Stood a neat little cottage, in which there abode
A pleasant young fellow, Jim Crayton by name,
Hard-working and honest. Now, Jim was the
same

Who first went with Peggy; in fact, her first beau,
When both were but children, a great while ago.
In those early days there was kindled a fire
By the light of the eyes that could never expire.

Yes, Jim truly liked her deep down in his heart,
But waited for something to give him a start
To tell her his passion; but always somehow
His throat would choke up and his speech wouldn't
flow.

Thus he, always nursing his love in his breast,
Dared not put his doubting forever at rest,
While Peggy, sweet creature, was dying to hear
The story Jim wanted to pour in her ear.

Just south of Macdonald's, and on the same road,
Was another nice dwelling, and in it abode
Another young fellow, Tom Turner by name;
And he, too, loved Peggy; but she was to blame,
For often, on Sundays, when both were at church,
And Tom's eyes were wandering, so restless, in
search

Of some one like Peggy, her lovely eyes burned
With language that told him his love was returned.

But Tom was so timid and bashful withal,
He never could talk to the maidens at all.
Like Jim, he kept waiting and living in hope
That some time and some how the ice would be
broke.

But all of his waiting and hoping were vain,
For, waiting and hoping, he let it remain
As it always had been: he never could find
A fitting occasion to tell her his mind.

Now Peggy liked both; 'twas too painful a test
To decide in her heart which she did like the
best;

For the neighbors said each was a very fine catch,
And Peggy was longing to make a good match,
But what could she do if they never came nigh,
But did all their courting alone with the eye?
While silence is golden, sometimes, it is said,
Some brass is much better for those who would
wed.

And so it went on; and thus year after year
Each suitor was jealous, and slave to a fear
That the other had asked her to share in his lot;
Yet each one was hoping the other had not.
When much time was wasted in doubting and fear,
At last it was whispered in Thomas' ear
That Peggy had promised his rival to wed:
The guests were invited, or so it was said.

The very same story was told unto Jim—
Important exception, it was not to him,
But Thomas, his rival, the prize was secure,
And this was too much for a man to endure.
One morning, soon after, the country around
Was thrown into fear and excitement profound;
The suitors their cowardice plainly had shown,
For both had departed for regions unknown.

Going Home.

Where are you going so fast, old man?
Where are you going so fast?
There's a valley to cross and a river to ford,
There's a clasp of the hand and a parting word,
And a tremulous sigh for the past, old man;
The beautiful, vanished past.

The road has been rugged and rough, old man;
To your feet it's rugged and rough;
But you see a dear being with gentle eyes
Has shared your labor and sacrifice,
Ah! that has been sunshine enough, old man;
For you and me, sunshine enough.

How long since you passed o'er the hill, old
man;
Of life? o'er the top of the hill.
Were there beautiful vales on the other side?
Were there flowers and trees with their branches
wide,
To shut off the heat of the sun, old man;
The heat of the fervid sun?

And how did you cross the waves, old man?
Of sorrow; the fearful waves?
Did you lay your dear treasures by, one by one,
With an aching heart and "God will be done,"
Under the wayside dust, old man;
In the grave 'neath the wayside dust?

There is sorrow and labor for all, old man;
Alas! there is sorrow for all;
And you, preadventure, have had your share,
For eighty long winters have whitened your hair,
And they've whitened your heart as well, old
man;
Thank God, your heart as well.

You're now at the foot of the hill, old man;
At last at the foot of the hill.
The sun has gone down in golden glow,
And the heavenly city lies just below,
Go through the pearly gate, old man—
The beautiful pearly gate.

Address to the Skeleton in the Royal Academy.

CONTRIBUTED BY W. R. E., BROCKVILLE.

About forty years since, the following lines were found deposited in the case containing the skeleton, at the Royal Academy, London, England. It is believed that they were written and deposited there by one of the students. We think they have never been published in America before.

"Behold this ruin! 'twas a skull,
Once of ethereal spirit full;
This narrow cell was life's retreat,
This space was *thought's* mysterious seat.
What beauteous pictures fill'd this spot!
What dreams of pleasure long forgot!
Nor love, nor joy, nor hope, nor fear,
Has left one trace or record here.

"Beneath this mouldering canopy
Once shone the bright and busy eye.
But start not at the dismal void—
If social love that eye employ'd,
If with no laudless fire it gleam'd,
But through the dew of kindness beam'd,
The eye shall be for ever bright
When stars and suns have lost their light.

"Here, in this silent cavern, hung
The ready, swift, and tuneful tongue.
If falsehood's honey it disdain'd,
And, where it could not praise, was chain'd.
If bold in virtue's cause it spoke,
Yet gentle concord never broke—
That tuneful tongue shall speak for thee
When death unveils eternity.

"Say, did these *fingers* delve the mine,
Or with its envied rubies shine?
To hew the rock, or wear the gem,
Can nothing now avail to them?
But if the page of truth they sought,
Or comfort to the mourner brought,
These hands a richer need shall claim
Than all that wait on wealth and fame.

"Avails it whether bare or shod
These feet the path of duty trod?
If from the bowers of joy they fled,
To soothe affliction's humble bed;
If grandeur's guilty bribe they spur'd,
And home to virtue's lap returned
These feet with angel's wings shall vie,
And tread the palace of the sky."

The Allurements of Mathematics.

"Come where the constants for thee do wait,
Come to the variables, and do not be late,
Where the Radius of Curvature never is still,
And the Osculatory Circle goes round like a mill.
Come! oh come!
Tum, ti tum, tum!

Differentiate first, and then take the sum."

"Come where the Ellipsoid goes round, like a top,
And still is revolving, never to stop.
Where the song of the Hyperbola never is silent,
And the howl of the Cycloid excessively violent.
Come! oh, come!
Fi, fo, fum!

With the Log of Napierian base = 1."

"Come where the body of an initial velocity
Is forced on your notice, with great animosity,
Where the Asymptote is tangent, at an infinite dis-
tance,
And gravity is inverse, as the square of the dis-
tance.

Come! oh, come!
Tum, ti tum, tum,
With a moving force, measuring, momentum."

Fireside Department.

Mrs. Gordon's Lot.

It not unfrequently happens that men who are doing a large business are quite ignorant of how they stand, and when death intervenes their families are left unprovided for. Such was the case with William Gordon. He was stricken down suddenly, and died in less than a week from the time of his attack. His family had scarcely roused themselves from the grief which this bereavement brought with it, when they were called upon to bear another. It was found that on settling up Mr. Gordon's affairs, not more than a couple of hundred dollars were left for the maintenance of his family. In addition to this, though it was hardly thought worth mentioning, was a tract of land located somewhere in Illinois, which Mr. Gordon had purchased some years back for a mere song, and which was probably worth no more now than at that time.

The Gordon family consisted, besides Mrs. Gordon, of two children, one a daughter of eighteen, the other a boy of twelve. Isabel Gordon was attractive both in mind and person, and before her father's decease had been quite a belle in society. Then, however, her father was thought to be wealthy. Now that the family was almost penniless, a change quickly took place. Those who had before been considered intimate friends became chilly in their manners and seldom called. Still there was one ground of hope left. Isabel had been sought in marriage by a young man in an excellent business, producing a large income, and at her marriage her mother and brother would undoubtedly be invited to make their home with her husband. But failing prosperity was a touchstone which revealed the inherent baseness of Gerald Rhodes. He did not call upon the family for some time after their affliction. At length he called, but did not appear as easy as usual.

"We have expected you before," said Mrs. Gordon, with something of reproach in her tone.

"I hardly thought you would wish to see me while you were overcome by grief."

"This was plausible and might be true, but there was a stiffness in his tone which led to a suspicion of insincerity.

"I am so glad you are here," said Mrs. Gordon. "I wish to consult you about our plans for the future. You know, of course, that we are left with little or nothing."

"So I have heard," said the young man in a constrained tone.

"And we must, of course, make up our minds to be doing something. I have heard that you have a vacancy in your store. Perhaps you would receive Charlie into it? I feel obliged to take him away from school."

"I am afraid he is too young for my purpose,"

said Gerald Rhodes, in rather a forbidding manner.

"How old a boy do you expect to get?"

"About fourteen."

"Charlie is twelve."

"I—the fact is—I scarcely think he would answer."

"I think you mentioned two months since," said Mrs. Gordon, with justifiable indignation, "that you should like very much to have Charlie in your employ. But perhaps your feelings toward other members of the family have been affected by our change of circumstances? I am confident that Isabel will not wish you to consider yourself bound to her against your will."

"I was about to speak of that," said Gerald Rhodes, in a tone half of shame, half of determination. "I have been led to think of late that we were not so well suited to each other as we supposed, and perhaps it would be well to sever the connection."

"I am quite of your opinion, Mr. Rhodes," said Isabel, who had just entered the room and heard the last words of the speaker, "and I cannot be too grateful to the change of circumstances, bitter as they may be in other respects, which has revealed to me the true character of the man to whom I was about to sacrifice my life."

As she stood erect, with flashing eyes and flushed cheeks, looking down upon her recreant lover, he cowered beneath the glance, and stammered out that he wanted to do what was right, and hoped that he had not hurt her feelings.

"You need not trouble yourself on that score, sir," said Isabel, proudly, "nor could you have taken a more effectual method for dissipating whatever of regard I once had for you. For that I feel grateful to you."

Gerald Rhodes did not find it agreeable to remain much longer.

"Well, I'm glad it's over," muttered he as he left the house. "I don't want to be tied to a beggar. When I marry I want to extend my business connection. How fortunate it was that I didn't marry last spring, as I thought of doing. Then I couldn't have helped myself. Now I am well off with it. And yet she did look handsome when she stood there looking at me. I wish things hadn't happened so, for I shan't soon meet with one that would have done more credit to my choice."

It was now necessary for the family to seek some employment. Isabel procured a school that yielded her an income which, though not large, was of essential service in procuring the family comforts.

Charlie also obtained a place in a store, and he, too, was able to contribute his share; while Mrs. Gordon took charge of the housekeeping, and did plain sewing. Of course they had moved into a smaller house, and lived frugally. Of course, too, they were obliged to submit to many privations, and Charlie's education was suspended. From this condition they were finally relieved, and, strangely enough, by Gerald Rhodes himself. As the reader's curiosity is no doubt excited by this statement, I will proceed without delay to detail the circumstances.

In the course of business he was called to Chicago the spring after Mr. Gordon's decease. As this was the first time he ever visited this enterprising Western city, he had a curiosity to look about him and mark the evidences of its prosperity. His attention was called, in the course of a morning walk, to a large tract of land just outside the city.

"That land," he remarked, "will soon become of great value."

"Yes," was the reply, "the city is fast reaching it, and it will soon be cut up for building lots. Five years hence and it will be worth, I am confident, not far from a hundred thousand dollars."

"To whom does it belong?" inquired Gerald Rhodes, with interest.

"If I am not mistaken, it was purchased years ago for a trifle by a Mr. Gordon of your city. I was acquainted with the former owner, who regrets very much that he did not retain his hold upon it."

"Mr. Gordon!" exclaimed Gerald, starting.

"Yes; do you know him?"

"I did formerly," said the young man, evasively.

Gerald Rhodes had now plenty to think about. He had no doubt, in his own mind, that this was the lot belonging to Mrs. Gordon, and it was evident that she was entirely ignorant of its value. After all, it would have been a good speculation to marry Isabel. A hundred thousand dollars in five years was no trifle. It would at least treble his wealth.

Then came the thought "Perhaps I can yet win Isabel for my wife. I have always liked her, and the only objection I had was her poverty. Now this is removed, and I need feel no hesitation. I don't believe she will refuse me. A husband with fifty thousand dollars is too great a catch to be given up."

Accordingly, within two days after his arrival home, he dispatched the following letter to Isabel:

"DEAR ISABEL,—I hope the former relation existing between us will permit me to address you in this manner. When, some months since, we agreed to separate, I did not know my own heart, nor how much you were endeared to me. I fancied there was an uncongeniality, but I confess it was a delusion. I have since found that I did not know myself. You will not, I hope, think that your change of circumstances had anything to do with influencing me. Fortunately I have enough to make it quite indifferent to me whether my wife has or has not any property. My chief desire is to find one whom I can esteem and love. Let me hope to receive a favorable answer, and that the old relations existing between us may be renewed.

Yours affectionately,

GERALD RHODES.

P. S.—There is a vacancy in my store, and I shall be happy to receive your brother Charlie into my employ."

The amazement of Isabel on receiving this letter can scarcely be conceived. She did not for a moment think of accepting the proposal it contained. She had once lost confidence in Gerald Rhodes, and with her confidence and respect had vanished her love. Was it possible that he had so changed as this letter would seem to imply? Was it possible that, after all, he had been cured of the meanness which she supposed inherent? She did not know, but even if her love remained, the change was too great and too sudden for her to credit without suspicion. Besides, she had met another young man, in every respect superior to Gerald Rhodes, except in wealth, for of this he had little, and she felt that she had never truly loved until she met him. The next day after his own letter had been sent, Gerald Rhodes received the following reply:

"MR. GERALD RHODES—SIR,—I acknowledge the receipt of your note of yesterday, in which you express a desire to revive the relations exist-

ing between us before my father's decease. Since that time my feelings have entirely changed towards you, and I am led to doubt whether they were ever of such a character as to justify matrimony. I may add that I have plighted my faith to another, and the marriage will take place at an early day. You will see, therefore, that I am obliged to answer you in the negative. Nevertheless, courtesy requires me to thank you for the preference you have indicated.

ISABEL GORDON.

P. S.—My brother is already in an excellent place."

"Confounded fool!" muttered Gerald Rhodes, discomfited, when he read this note. "So she is otherwise provided for, and there's no chance for me to get possession of the land in this way. I must resort to something different."

It was not long before he devised another plan. It was this. He would propose to buy the land, which he could undoubtedly do for a small sum, as Mrs. Gordon could not be acquainted with its value. Thus he would get it without the incumbrance of a wife. It would not be prudent, however, for him to transact the business in person, since they would be likely to suspect him of some design in the affair, especially when they remembered his renewed proposal. He accordingly placed the matter in the hands of a lawyer, with these instructions:

"You are to offer one thousand dollars in the first place. If not accepted, gradually increase your offer. I authorize you to go as high as ten thousand, and will place the money in your hands. If they agree, draw up the papers at once."

The next day Mrs. Gordon received a call from Erasmus Quill, attorney-at-law.

"I am informed, madam," he said, "that you have a lot of western land in your possession."

"My husband had such a lot, and I retain it."

"Would you like to sell?"

"If I could get a fair price," she answered.

"I am authorized by a client to offer you a thousand dollars for it," said the lawyer.

Mrs. Gordon had little acquaintance with business, but she had shrewdness enough to perceive that if a thousand dollars was the first offer for the land, it must be worth a great deal more. She accordingly declined the proposition.

"I will give you two thousand," said Mr. Quill.

This confirmed her first thought.

"Mr. Quill," she said, "will you oblige me by mentioning the utmost that your client authorized you to offer. Otherwise our conference closes."

"Ten thousand dollars," said the lawyer, with some hesitation.

"I will sell for that sum," said Mrs. Gordon.

"Then we will draw up the papers at once," said Mr. Quill.

In fifteen minutes the sale was effected and the money paid.

With the deed in his pocket, Gerald Rhodes again went out to Chicago, when, what was his dismay to find that he had been misinformed—that the Gordon lot was situated five miles from the city and was not worth five hundred dollars. In his cupidity he had overreached himself, and Mrs. Gordon was the gainer.

This piece of good fortune enabled Isabel to marry at once. Fortune smiled upon her husband till even, in a pecuniary view, Isabel had done quite as well as if she had married Gerald Rhodes.

Paddy and the Bees.

The scene is on the lawn of the O'Donoghue's castle in Kerry. The tenants have assembled to meet the worthy English Baronet who had purchased the property, and who with his agent standing in the parlor window watched eagerly for some result of the many "improvements" which at great cost he had endeavored to introduce to the wild and untutored peasants of the district. The agent presents the tenants to the worthy innovator, who inquires into the condition, of the grumbling, dissatisfied recipients of his favors. At length on a tenant presenting himself whom the agent fails to recognize, the baronet turns to the figure before him, which, with head and face swollen out of all proportion, and showing distorted features, and fiery eyes through the folds of a cotton handkerchief, awaits his address in sullen silence. "Who are you, my good man? What has happened to you?" "Faix and it's well ye may ax; me own mother wouldn't know me this blessed mornin'; 'tis all your own doin' entirely." "My doing," replied the astonished baronet, "what can I have to do with the state you are in, my good man?" "Yes, it is your doin'," answered the enraged proprietor of the swollen head; "'tis all your doin', and well you may be proud of it; 'twas them blessed bees yo' gev me. We brought the baetes into the house last night, an' where did we put thim but in the pig's corner. Well, after Katey and the children and myself was awhile in bed, the pig goes rooting about the house, and he wasn't aisy till he hooked his nose into the hive, and spilt the bees out about the fire; and thin when I got out of bid to let out the pig that was a roarin' through the house, the bees stitted down on me, an' began stingin me, an' I jumped into bid agin, wid the whole of thim after me, into Katey and the childer; an' then, what wid the bees a buzzing an' a stingin' us under the clothes, out we all jumped agin, an' the sorra such a night was ever spent in Ireland as we spint last night. What wid Katey an' the childer a roarin' an' a ballin', an' the pig tarin' up an' down like mad, an' Katey wid the besom, an' meself wid the fryinpan, flattenin' the bees agin the wall till mornin', begor its ashamed of yourself you ought to be."—"O'Donoghue," by Charles Lever.

Curran's Ingenuity.

A farmer, attending a fair with a hundred pounds in his pocket, took the precaution of depositing it in the hands of the landlord of the public house at which he stopped. Having occasion for it shortly afterwards, he resorted to mine host for payment. But the landlord, too deep for the countryman, wondered what he meant, and was quite sure no such sum had been lodged in his hands by the astonished rustic. After ineffectual appeals to the recollection, and finally to the honor of Bardolph, the farmer applied to Curran for advice.

"Have patience, my friend," said the counsel, "speak to the landlord civilly tell him you have left your money with some other person. Take a friend with you, and lodge with him another hundred in the presence of your friend and come to me."

He did so, and then returned to his legal friend.

"And now I can't see how I am going to be better off for this, if I get my second hundred back

again. But how is that to be done?"

"Go and ask him for it when he is alone," said the counsel.

"Why, sir, asking won't do, I am afraid, without my witness, at any rate."

"Never mind; take my advice," said his counsel; "do as I bid you and return to me."

The farmer returned with his hundred pounds, very glad to find that once more safe in his possession.

"Now, sir, I must be content; but I don't see that I am much better off."

"Well, then," said the counsel, "now take your friend along with you and ask the landlord for the hundred pounds your friend saw you leave with him."

We need not add that the wily landlord found that he had been taken off his guard, while his honest friend returned to thank his counsel exultingly, with both hundreds in his pocket.

A Royal Joke.

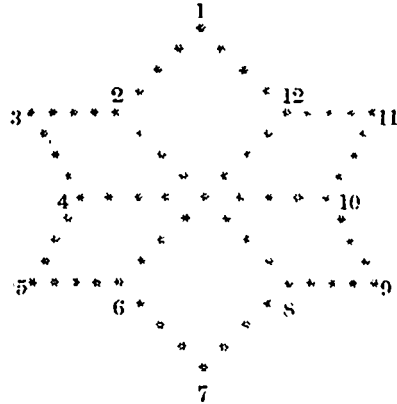
One does not think of Frederick the Great primarily as a joker. His life was anything but humorous, and was the cause of more tears than smiles. But Frederick loved a joke, especially if there was spice of maliciousness in it. His whole intercourse with Voltaire was a great comedy—a burlesque of friendship and literary patronage. On one occasion Voltaire requested the privilege of reading a new poem to him. Frederick was delighted, and named an hour when he would graciously listen to the latest production of the great French genius. At the appointed time Voltaire appeared, manuscript in hand, and read the poem. The king had meantime secreted behind a screen in the same room a man of a wonderful memory, who had the gift of repeating any composition, however lengthy, to which he had once listened. When Voltaire had concluded his recital, Frederick expressed great admiration, but declared he had heard the poem before. The poet was indignant, repelling the charge of plagiarism with great warmth. The king, however, insisted that the poem was by no means of recent origin, and said there was a man in his court who could repeat it from beginning to end. He sent for the man who had been concealed behind the screen, and who had listened to the reading, and requested him to repeat a certain poem, quoting the first lines. The man instantly, and to the great astonishment of Voltaire, repeated the poem word for word. The indignation of the poet, when he discovered the trick, may be more easily imagined than described.

Children's Department.

Having several hundred letters on our table from our young friends, we are unable to examine them in time to make our awards of prizes in this number. Nor have we space to insert any of the very excellent letters we have received. We hope they will pardon us, but perhaps it is as well, for doubtless every one who wrote to us is expecting to see his or her letter in the COMPANION. Of course that could not be done, and the disappointment to those whose letters are as well written as they could perhaps make them, but not so creditable as those of some who have had more practice or experience, will not be so great when they find that none are more fortunate than themselves.

We present this month a new puzzle, which we think will prove very interesting. Solutions must be received before May 20th, and all who send replies will be allowed to compete for the prizes which we will offer in our next number. Our next prizes will be offered for the solution of puzzles that will be given in the April, May, June and July numbers, and will be distributed on a plan that has never before been adopted in Canada. Look out for our next number, and do not forget to ask all your young friends to get their papa or mamma to subscribe for the COMPANION and TEACHER.

Canada Star Puzzle.



1 to 2 signifies a military instrument of music; 2 to 3, very desirous; 3 to 4, remains; 4 to 5, to seize; 5 to 6, to lift; 6 to 7, a decree; 7 to 8, conveyed; 8 to 9, not at any time; 9 to 10, a bird of prey; 10 to 11, to whiny; 11 to 12, a harbour; 12 to 1, a prince in India; 2 to 8, instruction; 4 to 10, a popular magazine; and 6 to 12, rivalry.

Publishers' Department.

TOO LATE AGAIN.—Just as we close our forms for the press this month, several pieces of music have come to hand. We are sorry we cannot use any, but we will probably give in our next number a double piece, the "Students' Reunion."

DON'T FORGET IT.—A liberal support and a reasonable addition to our subscription list will enable us to complete arrangements for further improvements with the opening of our next volume. We have guaranteed to enlarge our magazine in November if our friends will during the coming six months double our subscription list, which now numbers about 1,500 subscribers. This is not an impossibility, for if only one-half of the teachers in Ontario, numbering over 6,000 were enlisted, the work would be done. We have, however, already a very respectable list of subscribers from the other Provinces and the United States, and are continually adding to our lists from these places. Our neighbors across the line are much interested in our system of education, and look to the COMPANION AND TEACHER for particulars thereof; and in view of this it should be our endeavor to make our magazine as presentable and interesting as possible, and to vie with them in the support of our educational journals. At our present rate of subscription we cannot afford to place canvassers

in the field, but must rely on the assistance voluntarily given us by *Inspectors and Teachers*, all of whom should be sufficiently interested, and many of whom are, to speak a good word for our magazine on every occasion upon which opportunity offers. *Inspectors* can do a great deal to extend our circulation by making it a part of their work at every school to recommend the *COMPANION AND TEACHER* to both trustees and teacher. There are hundreds of teachers even in Ontario who have not yet seen it or heard of its existence, and without the aid of *Inspectors* we will find it very difficult to reach these. We are glad to be able to say that *Inspectors* are beginning to wake up on this subject, and having satisfied themselves on the character and stability of our magazine, have commenced to work up its circulation. One has sent in 47 names within three months, and others who have yet done nothing have written their approval of our work, and promised to recommend it to all. Every teacher who is alive to the importance of his work will not only subscribe for a good home educational journal, but will use his endeavors to extend its circulation by inducing his friends and trustees to subscribe; and we venture to assert that those who thus manifest their interest in the cause of education will receive the approval and support of those whom he induces to subscribe for a magazine in every way so worthy of their commendation. Our readers will pardon us for speaking thus freely of the merits of our magazine, since we but reflect the sentiments expressed by so many hundreds when they sent in subscriptions. We want all to understand that we are in earnest when we agree to enlarge in November, for we know that if our conditions are met, and our list is doubled by that time, we can in a few months thereafter add 2,000 more subscribers to the list. How many of our readers are sufficiently interested in the support of a spicily educational magazine of their own, to give it the assistance it requires to complete the improvements contemplated? We shall see. Meantime, dear reader, what are *you* doing for us?

THE NEW YORK SLATE PAINT CO., whose advertisement has appeared in our magazine, as well as nearly all the leading papers in Canada and the United States, are swindlers. We believe that other publishers will agree with us that if Geo. P. Rowell & Co., of New York, who claim to be the printers' and publishers' champion and protector, had exposed them at an earlier date, they would have shown themselves much more worthy of the patronage they seek at our hands. It may not be their business to enquire whether every advertiser is sound and reliable, but when a firm doing business in their own city sees fit to insert advertisements in a thousand papers throughout the country, and for which advertisements they never intended to pay, we hold that G. P. Rowell & Co. owed it to their patrons to say that they were not reliable. Instead of this, after hundreds of publishers have been swindled, they vouchsafe a little second-hand information to the effect that "one of the victims of the Co.,— has been looking up the standing of the firm, and claims that their whole assets would make a five-dollar bill blush." As for ourselves, we were induced to insert the advertisement from the fact that so many respectable journals had done so, and still do so; but, hereafter, we shall judge and act for ourselves, and may be able to say at some future day that the "N. Y.

Slate Paint Co." has put money in our pocket. In the meantime, when we want news pertaining to the craft, we shall search for it in the columns of the "Printers' Miscellany," St. John, N. B., or the "Dominion Stereotyper," Brockville, Ont., both of which are creditable and reliable journals, and though only in their first year, have already secured extensive circulations and a good business connection in the United States as well as in Canada.

A RAID ON TRUSTEES.—We want to circulate the *COMPANION AND TEACHER* more largely among trustees, and to accomplish this end we make the following offer to teachers:—We will send a chromo, "Maggoire," "Lucerne," or "Isola Bella," to any teacher who will send us the names of their three trustees and \$1.50 for the C. AND T. six months on trial, the chromo to be framed and hung up in the school. This is an opportunity few trustees will refuse to accept, as by paying 50 cents he secures our magazine for six months and helps to procure for the school a handsome chromo. If any trustees decline to subscribe teachers may substitute for their names that of any other parent in the section. If preferred, we will receive the subscriptions of the three trustees (without chromo) for six months, for one dollar—or only 33 cents each—it being understood that this is for a trial trip only, and that the offer will not be repeated. If more than one club can be got up in any section, the orders will be filled by us at the same rate and on the same conditions as above. Roll in the names of the "territorial rulers."

TO CITY SUBSCRIBERS.—We have several hundred subscribers in this city, some of whose subscriptions expire with this number. To many of these we know our paper is not so interesting as when a year ago only fire-side matter was published, but we hope to retain the majority on our list, particularly as we can afford to make them a more liberal offer than we could afford to our subscribers generally. We will receive their subscriptions for six months, to complete the present volume, and will give them besides either of the chromos "Maggoire," "Lucerne," or "Isola Bella," for \$1. This we can do because we will not have mailing expenses to pay on their premiums, and because, in addition to this, we in most cases realize a small profit from the framing of their premiums. Subscriptions will not be solicited by a personal canvass, but those finding this item marked will please understand that their time is out, and that if they want to continue they must call at our office and renew.

THE BEST MEDIUM.—"We find the *COMPANION AND TEACHER* the best medium for advertising, and will continue our advertisement." So says the "Teachers' Supply Bureau," Baltimore, Ont., who are doing an extensive and constantly increasing mailing business with teachers. We can give them a hearty commendation, the "Arithmetic" they advertise being a first-class article, and one which can only be secured through them. The *Ontario Gun Agency* says, "Having had good returns from our last advertisement, we will give you two for your next issue." Advertisers who have the right class of goods to dispose of will find our readers an intelligent class of purchasers.