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# The Educational Journal

CONSOLIDATING

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## Editorial Notes.

WE have received, too late for extended notice in this issue, a copy of the new edition of "Statutes and Regulations Governing the Public and High Schools of the Province of Ontario." In our next number we shall be able to give a full explanation and summary of all changes and notifications that have not already been noticed in our columns.

WE wish again to thank the many friends who are sending us lessons and papers on various practical subjects, and to ask them to pardon the necessary delay in the publication of many of them. These volunteer contributions are coming to constitute an important and valuable part of the paper. We hope they will continue to do so, and to a still greater extent. We will publish them as fast as we can find room. We have never before been so well supplied with matter of this kind, and are both gratified and grateful accordingly.

"GET a boy morally straight and his intellect will look out for itself." So said Principal Parkin, in his speech at the recent reunion of the Old Boys of Upper Canada College. The epigrammatic sentence contains a truth which is well worth pondering by all who have to do with the education of boys. The moral faculty is, or is intended to be, the sovereign authority in the little state of man. The moral forces are by nature the driving and regulating forces by which, and by which alone, the whole machinery of mind can be driven steadily and harmoniously. Dr. Parkin's sententious maxim is worthy to take place as an educational aphorism.

WE call the attention of our subscribers and all who have business dealings with THE JOURNAL to the fact that the corporate name and style of the publishers has been abbreviated from "The Educational Journal Publishing Company" to "The Educational Publishing Company." All business communications of every kind should henceforth be sent to the latter address. Matter for publication or notice

in the columns of the paper should, of course, as heretofore, be addressed to the Editor. Time and trouble will be saved if all questions requiring answers in THE JOURNAL, when they belong to a special department, *e.g.*, the Mathematical, the Scientific, etc., be sent directly to the editor of that special department. Questions relating to Entrance or Public School Leaving work, and all matter intended for THE ENTRANCE JOURNAL, should be addressed to the editor of that paper, at this office.

At the South Grey Teachers' Convention the unprofessional and dishonorable practice of underbidding and undermining teachers was unsparingly denounced, and at the request of the convention the president named a committee to draft a resolution deprecating the conduct of those who resort to such practices in their eagerness to secure situations. No odium is cast upon the teacher who offers his services at a low figure where a vacancy has been declared. The convention fully recognized the right of a teacher to make his own terms. As one teacher put it, "one may work for twenty-five cents a year if he wishes, but let him wait for a vacancy." Still, it seems to us that before offering or accepting a very low salary, even where there is a vacancy, the teacher owes it to himself and his fellow-teachers to consider whether he would not thereby be lowering the dignity and average remunerativeness of the profession, and thereby doing the cause of education a real injury.

It is encouraging to note some indications that school boards are likely to receive more attention in the future than they have in the past, in connection with our educational work. The school board is really one of the most important of all the many parts which have to be not only joined together, but nicely adjusted to each other, in order to the harmonious and effective working of our somewhat complicated educational machinery. No other part is more useful. No other has the individual school more completely in

its power, to make or mar. At the West Algoma Teachers' Convention, which met in Fort William in October, Mr. Dobie, of the Port Arthur Public School Board, gave an address on "School Boards and their Functions," which seems to have attracted and merited a good deal of attention. Mr. Dobie defined the functions of the school board to be: (1) To engage the best teachers possible, and to pay them fair salaries; (2) to see that these teachers do their duty; (3) to do all in their power to establish a feeling of sympathy and confidence between teacher and board; (4) to support the teacher in discipline; (5) to encourage the teacher who does good work. If every school board knew its duty and did it, what a prodigious advance would be made in the schools in a single year!

A GOOD deal of attention is, we perceive, being given to the comparative merits of the two systems of penmanship which are now competing for preference in the schools and elsewhere, *viz.*, the Spencerian and the Vertical. We ourselves confess that, setting out with a decided predilection for the former a few years ago, we have come to have a still more decided preference for the latter. The change has been wrought in us partly by weight of argument, but largely by what we have seen of results. These results are judged chiefly on the ground of legibility. The relief we have so often been conscious of in turning from some manuscript which, with its light strokes and slant characters, tried both the eyes and the patience of the reader, to the erect, legible strokes of some unpretentious vertical hand, has been too great to be ignored. We do not say that the Spencerian and related systems may not produce both legibility and beauty, in the hands of a master, but it does seem to us that those who succeed in so far mastering these systems are but the exceptions among the masses who use them. On the other hand, we have known those whose attempts under the old system have been anything but successful, in point of legibility, by unconsciously reverting to an upright style, to achieve very satisfactory results. Hence we have learned to prefer the vertical. But this is by no means an "expert" opinion.

## English.

All articles and communications intended for this department should be addressed to the ENGLISH EDITOR, EDUCATIONAL JOURNAL, Room 5, 114 Richmond Street West, Toronto.

### THE WATERFOWL.

Following is the only answer yet received to the question asked by "J.C.H." in the number for October 15th:

Considering the facts under which the poem "The Waterfowl" was written, I am inclined to believe that the bird was going south. The poet, feeling very lonely and dejected, was looking at the last rays of sunset, while all around him was in darkness. His attention was attracted by the waterfowl coming between him and the light along the horizon, so that it was going either south or north. In stanzas 5 and 6 the poet says the waterfowl has been travelling all day and is looking for a summer home; and, as it is a migratory bird, I think it was going south.

A. W. P.

Charleville, Oct. 24th, 1896.

### NOTES OF A LITERATURE LESSON GIVEN OCTOBER, 1896.

#### I. CLASS MANAGEMENT.

*Stage I. Preparatory.* (a) The class looks over the lesson silently for four minutes. (b) The teacher reads two stanzas in slow time, with sentimental pitch, called stress and monotone, as a pattern for the class. (c) The class reads the poem aloud. Eight pupils thus read through the poem twice, one stanza each.

*Stage II. Expository and Critical.* (d) The teacher now begins to place the literary analysis on the blackboard as fast as it can be worked out by the class with the help of the teacher's questions and instruction. (N.B.—The plan of doing this and the time required will vary very much according to the age and ability of the class, and the skill of the teacher. Haste and impatience will spoil all.)

*Stage III. Retentive and Digestive.* (e) The pupils are directed to learn the piece thoroughly by heart, one line a minute.

(f) They are set to copy it out again from memory.

(g) They write the story in their own words from memory.

(h) Some of these exercises are read aloud in class, and a number of pupils write extracts of three or four sentences on the blackboard, which are examined, criticised, and emended before the class.

(k) Class questions and problems for testing and for securing a final scrutiny of the workmanship and literary art of the poem. A few such questions are added below.

#### II. BLACKBOARD ANALYSIS.

(See High School Reader, p. 217.)

*Title.*—The Glove and the Lions.

*Subject.*—Vanity Punished.

*Form.*—A Modern Ballad with a didactic suggestion.

*Method of Development.*—Inductive by a concrete example leading up to a judgment.

*Details (a) Metre.*—Iambic heptameter arranged in six-line stanzas. In lines 6, 7, 23, trochees and anapæsts are here and there substituted to suit the movement of the line to the sense expressed. The pauses are well marked, but are not so long as those commonly found in an old ballad.

(b) *Description.*—This is vivid and effective.

Successive pictures are presented in simple Saxon words, and each stanza has its own appropriate work.

Stanza I. lifts the curtain, places before us the group of people looking at the lions, and individualizes the king, DeLorge, and his lady-love in the foreground.

Stanza II. turns our eyes upon the struggles of the lions.

Stanza III. draws out the suspense while the lady indulges her foolish thoughts and forms her cruel plan.

Stanza IV. gives the climax of the ballad, and puts the moral into the mouth of the king.

(c) *Symmetry.*—The first two stanzas deal chiefly with the lions and their surroundings; the last two give the human side. The first part deals with spectacular effect, the second with motives and conduct. Thus the form is symmetrically adapted to the matter, and the latter proceeds from the lower to the higher in climactic order.

(d) *Motive.*—The poet attempts to please by describing a "crowning show" and the incident that happened. He also starts a moral question, and gives an opinion; but the didactic element is merely suggested by the sudden ending, as being the last thought upon which the mind is most likely to dwell for some time. The sequel of the incident is left to be guessed, so also the general condemnation of vanity is not expressed in words. The author apparently thought the story worth telling for the sake of these suggestions.

(e) *General Result.*—The close of the last stanza is not tranquillizing. The lady erred grievously through her vanity; but her public shame and confusion do not give an artistic and satisfactory ending for a poem. The two lovers are estranged without any compensation to the reader except the king's sentence of condemnation upon the lady, which is distinctly painful, so that the more the moral is apparent the worse for the general effect of the poem. The first three stanzas are successful in arresting attention, gratifying the pictorial imagination, holding our interest in suspense, etc.; but to make the whole poem entirely satisfactory, we need some hint of subsequent repentance and reconciliation. The moral judgment may be satisfied, but the æsthetic faculty would be more delighted with a happier conclusion.

#### III. CLASS QUESTIONS.

N.B.—The most economical and effective use of such questions for drill and review seems to be this: At the close of the lesson analysis the teacher dictates a series of numbered questions. To these the pupils prepare answers or notes of answers, as part of their desk-work or of their home exercises. At the next recitation, along with the work of stage III., the teacher calls on a student to read question No. 1, and on others to give the answer, orally or from the notes prepared. The answers are discussed, compared, corrected, supplemented, etc., by the teacher and then the next question is read.

(1) Tell the time when, and the place where, the scene is laid.

(2) Pick out a line that summarizes the "situation," and state the things that stand in contrast in that particular stanza.

(3) Distinguish *title* and *subject* in the poem. Is the title given in the order of the poem? Where is the real subject most clearly indicated?

(4) By what particular rule does the poet chiefly procure unity for the whole composition? **ANS.**—By carefully observing the order of time in his narration, and by making each stanza confine itself to a single element of the story in proper succession.

(5) Distinguish the old ballad from the modern

ballad, and select examples of each from the Reader.

(6) Exhibit in tabular form the scansion of one stanza. Put a full round dot in each line to mark the cæsural pauses.

(7) What pleases you most in this poem? What least?

(8) Compare the first two stanzas with the first two of the ballad on p. 209 as pieces of description. How do they agree, how do they differ? Put your answer in parallel columns, showing the similarities and the differences.

(9) Compare the conclusion of "The Well of St. Keyne," p. 209, with this ending. Which is the more satisfactory?

(10) Read "The Lord of Burleigh," p. 370, and "The Revenge," p. 373. Compare these endings with the ending of this ballad. Is it more or less satisfactory to end with the *shame* and *disgrace* of a young lady than it is to end with the *death* of an affectionate wife? Are you better or worse content to have the soldiers on a ship fight against fearful odds, lose their commander in the fight, and at last surrender, or to have a "beauteous, lovely dame, with smiling lips, and sharp, bright yes," led by vanity to perpetrate an act of folly and suffer public rebuke and mortification?

*Remark.* A few words of explanation will suffice. These notes are the rough record of a lesson given to a primary class. A pupil kindly supplied a copy of the blackboard analysis, and the rest has been added to comply with the request of an ex-student who is preparing a class for examination and is also studying methods of teaching. This will serve to explain the form of the notes above. It occurred to me later that I once heard another teacher remark that this poem was somewhat barren of ideas and suggestions and rather hard to teach, and hence I concluded that perhaps these few notes might be acceptable to some of the readers of THE EDUCATIONAL JOURNAL. Accordingly I submit them, such as they are, partly as an exhibition of *actual* teaching, however imperfect, and partly with the hope that they may help some other young teachers as well as him for whose use they were first drawn up.

C. CLARKSON.

Seaforth, Ont.

### TEACHING COMPLEX SENTENCES.

BY A. C. BATTEN, BARRIE.

When pupils have had considerable practice in the construction of various simple sentences and their analysis, other sentences, not simple, shall be written on the board and resolved into simple sentences, as "When I'm a girl, I'll try to succeed." (I am a girl, I will try to succeed.) "The cat ate the rat that ate the cheese that I bought." (The cat ate the rat. The rat ate the cheese. I bought the cheese.) Considerable practice should be given in work of this kind.

Class will then be taught that only two other kinds of sentences can be constructed—all sentences of these classes being formed from a combination of simple sentences, the kind of sentence being determined by the grammatical relation these simple sentences (now called clauses) bear to each other or one another in the given sentence. These clauses are either independent, or dependent; co-ordinate, or subordinate.

Pupils are now prepared for the combination of simple sentences into one sentence (in this case, a complex sentence) of dependent clauses, one and only one of which is principal to, not independent of the other, or others. Examples: "William Henry was driving to Toronto. Joseph shot a

partridge." Class decides to make "Joseph shot a partridge" modify "was driving"—hence the complex sentence, "William Henry was driving to Toronto, when Joseph shot a partridge"; or class wish to make "William Henry was driving to Toronto" modify "shot"; hence the complex sentence, "When William Henry was driving to Toronto, Joseph shot a partridge." Many examples of this kind, proceeding from easy to more difficult, will give exercise in determining the *principal* clause, a practice very essential preparatory to teaching in detail the analysis of complex sentences.

## Primary Department.

### READING.

RHODA LEE.

#### LESSON XIX.—COMBINATION "SH."

*Introductory story.*—It was twelve o'clock and mother was waiting for the children to come home to dinner. She had not to wait long. In they came, and all began to tell her what they had been doing at school. "Sh, sh!" said mother, "remember baby is asleep, so talk quietly."

*New words.*—Ship, shop, shot, shell, shed, shelf, shod, dash, nash, lash, hash, rash, crash, trash, lash, splash, cash, sash, smash, dish, fish, wish, shet-land, flash, flesh, shall.

Up to this time we have intended the sentences for sight-reading to be written on the blackboard. At this stage, however, it is better to give the class sentences written on slips of paper. No two stories need be exactly alike. The children read the sentence to the teacher and then receive another. If strong paper or cardboard be used for this purpose the stories will last a long time.

In the remaining lessons we will only give lists of words from which sentences may be formed.

#### LESSON XX.—COMBINATION "EE."

We speak of the two e's as the twins. If separated they can say only *ē*, but if they take hands they say together their own name *ēē*. Teach the word *you* with this lesson.

*New words.*—Meet, feet, feel, heel, peel, bee, see, tree, free, deer, steer, peep, steep, sleep, creep, beet, beef, seem, green, seen, need, week, weep, weed.

#### LESSON XXI.—LETTER "U."

*Introductory story.*—A little girl was on her way to school one morning when she noticed some ice on the sidewalk. She had no time to spare, but she thought she would just have one slide. It must have been too slippery for her, as she got a bad fall. She said "u" (sound of *ū*) as she fell. Then she picked up her bag and ran off to school.

*New words.*—But, nut, hut, run, fun, bun, gun, pun, stun, bud, bug, rug, dug, mug, hug, grunt, hunt, stump, gruff, stuff, dust, must, mush, rush, glum, mud, bump, dump, crust, duck, luck, dull, gull, crumpets, grumble.

#### LESSON XXII.—LETTER "J."

Introduce as in previous lessons.

*New words.*—Jam, jap-an, jack, jill, just, jest, john, jack-et, jim, jip, jig, jump.

#### LESSON XXIII.—COMBINATION "OO."

These we call the quiet twins because of the soft, gentle sound they make.

*New words.*—Cool, tool, pool, spool, spoon, stool, stoop, soon, moon, roof, noon, shoot, loose, goose, scoop, school, fool, fool-ish, room, boot, coop, loop, roost, groom.

#### LESSON XXIV.

Long sounds of the vowels *a, e, i, o,* and *u*. The silent "e" at the end of a word makes the letter inside say his own name. The long sound is indicated by a dash over the letter.

*New words.*—*ā*—Mate, late, gate, came, game, lame, same, safe, spade, slate, grave, shave, shame, state, taste, plate, slave, wave.

*ē*—Mete.

*ī*—Line, fine, mine, shine, five, dive, crime, dime, time, lime, shine, spire, life, bite.

*ō*—Bone, home, hole, pole, stole, stove, store, grove, more, rope, shore, tore.

*ū*—Tune, tube, cube, cute, mute, lute, pure, cure, mule.

#### LESSON XXV.—LETTER "K."

This letter has been incidentally introduced in connection with "c," the sounds of the two letters being the same.

*New words.*—Kit, kit-ten, kill, kin, kick, kate, kite, like, pike, spike, skin, skip, kiss, lake, strike, spoke, broke, smoke,

#### LESSON XXVI.—LETTER "X."

The sound of "x" is equivalent to that of "ks."

*New words.*—Ox, box, sox, fox, six, mix, fix, axe, tax, max, axle, taxes.

#### LESSON XXVII.—LETTER "Y."

"Y" has three sounds, as shown by the words yes, fly, and funny. In regard to the last two, we may say that at the end of a short word y says *ī*, and at the end of a long word it says *ī*.

*New words.*—Yes, yet, yell, yelp, yoke.

*Y = ī*—Fly, my, cry, dry, shy, by, spy, fry, sly, sky, sty.

*Y = ī*—Funny, sunny, fanny, tommy, nelly, happy, penny, frosty, windy, willy.

### FAULT-FINDING,

RHODA LEE.

It is possible for a teacher to see too much, or, rather, to take notice of more than she should. When such is the case, it is expressively called "nagging." I have seen classes in which the teacher had acquired this habit, and it was extremely painful to me to witness it. There was a rigidity about the order that was not healthful, to say the least, and a sullen look upon some of the boys' faces that betokened rebellious thoughts, if not actions. The teacher looked strained and weary, as though she might wear out before very long. This is a somewhat dole-

ful picture I have drawn, but it is not exaggerated. It is a truthful description of a class in which the teacher "nagged, nagged, nagged," in the vain endeavor to get her class into what she deemed ideal order. She deserved credit for her conscientious and painstaking effort, but she worked with a false idea of order in a primary room.

We must not expect too much from little children. We cannot put old heads on young shoulders. The most important matter is the spirit in the class. If this be right, the little faults will gradually be overcome without incessant nagging, scolding, and fault-finding.

Suppose a boy who is possessed of a naturally bad temper, but who has been trying to do right all term, comes in some morning with a frown upon his face, out of sorts with everything and everybody. The teacher observes that he is doing everything badly; he is out of position, noisy, etc. If she were to begin finding fault with him, there would probably be a scene that would undo all the good that had been accomplished in the session, and he, because of his failure, would be very much discouraged. Instead of this, she *does not see* his mistakes, and, as soon as possible, gives him something to do for her that she knows he will appreciate. Later on she finds she needs him to help a couple of junior pupils who are backward in their work. By ten o'clock he is himself again. The storm has blown over. Of course, a repetition of this would necessitate a talk after school, or some such treatment.

I believe that, even with little children, there is a danger of tantalizing them into wrong-doing. I have known people, not teachers, I am thankful to say, who by undue severity fostered deceitfulness and disobedience in their children. The words "don't," "stop," "naughty," and others of a like character are too often found on the lips of both teachers and parents. If, instead of the fault-finding, negative method of discipline we were to try to direct the energies into other channels than those we wish to avoid, there would be more kindness and gentleness and fewer unlovely dispositions among children. Some one has said, "Cultivate right tendencies in humanity and the wrong ones must die out," and another, "Build up the positive side of a child's character and the negative side will not need to be unbuilt."

### A WORD PICTURE.

The wind that breathes of columbines  
And bleeding-hearts that crown the rocks,  
That shakes the balsam of the pines  
With music from his flashing locks,  
Stops at my city door and knocks.

He calls me far a-forest, where  
The twin-leaf and the blood-root bloom,  
And, circled by the amber air,  
Life sits with beauty and perfume,  
Weaving the new web of her loom.

The wind has summoned, and I go—  
To con God's meaning in each line  
The flowers write, and, walking slow,  
God's purpose, of which song is sign—  
The wind's great gusty hand in mine.

—Madison Cawein.

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## Editorials.

### THE ENTRANCE JOURNAL.

WHATEVER may be anyone's personal opinions with regard to the merits or demerits of a graded system of Public Schools, with stated examinations as the tests of fitness for promotion from one form to another, and from schools of a certain grade to those of the next higher grade, it is a fact which no teacher in Ontario can afford to ignore that we have such a system firmly rooted in this province. Of the various examinations required under this system that familiarly known as the "Entrance" is the most important, inasmuch as it affects by far the greatest number of pupils. Constituting, as it does, the straight gate of admission to the secondary or High Schools of the province, it becomes a matter of the deepest concern to every boy or girl whose ambition it is to pass even a step beyond the curriculum of the Public School. Hence no Public School teacher can afford to lose sight of it for a moment, in the work of his school. Any such teacher who should say, as we dare say not a few of them may feel, "I am ham-

pered by the rigidity of the bonds which the unyielding curriculum, and the necessities of the Entrance Examination, under the shadow of which I am always working, impose upon me. I could much better perform my duties as a teacher if left more freedom to do my work in my own way. I will, therefore, pay no attention to the special examinations, take no pains to acquaint myself with the kind and style of the questions usually set, and seek no helps from any quarter with a view to giving my pupils the best possible preparation for those examinations"—such a teacher would quickly find that he was merely running against a stone wall; committing professional suicide, so far as any prospect of success as a Public School teacher was concerned.

What is true in regard to the teacher is equally true in regard to the teacher's paper. The mission of the teacher's paper is to aid the teacher in his actual work. Both reason and experience have taught us that there is no paper so directly helpful, and, consequently, so widely acceptable, as that which keeps in close practical touch with the various examinations. Hence we have from the first given a good deal of attention to this class of subjects. It would be easy, and, in some respects, both pleasant and profitable, to give THE EDUCATIONAL JOURNAL a more distinctively literary, or literary and scientific, character, but to do so would be to neglect the first and chief wants of our constituents. We have always subordinated all other considerations to the practical, with what success let the large and growing circulation, and the frequent enlargements and improvements which the different publishers have been able to make, attest.

But, while we have always given a large amount of space and attention to the various examinations, especially the "Entrance," thus rendering welcome and efficient aid to the teacher in the school-room, as thousands have from time to time most cordially assured us, we have always felt more or less strongly the desirability of coming into more direct contact with the pupils themselves. To this end, the former publishers of THE JOURNAL tried the experiment about seven years ago, as many of our present readers will remember, of publishing in connection with THE JOURNAL a little paper, well illustrated, for the especial use of boys and girls in the Public Schools. It was called, *School Work and Play*. The aid of some of the foremost educators in the province was enlisted, and an excellent periodical was the result. But the enterprise was in advance of the time, and in

advance also of the practical experience of the publishers, and could not be made to pay expenses. Publication was, therefore, discontinued after a few months' trial. THE JOURNAL resumed its former methods, and has ever since gone on doing its best to supply, within the compass of a paper designed exclusively for teachers, the wants of both teachers and pupils. Its success has been marked, not financially—the conditions and limitations under which an educational paper must be published, if published at all, in Canada, preclude the possibility of large financial returns to any publisher—but marked as determined by the best of all evidence, the verdict of the teachers themselves.

Still, however, there has always been a felt want in the lack of direct communication with the pupil, as well as with the teacher. The matter bearing upon the Entrance and other examinations provided for the teachers, who were the readers of THE JOURNAL, could not always be given in the shape best suited to the comprehension and needs of the pupils, and, if it could have been, the necessarily high price of a paper so large and so expensively produced precluded all possibility of getting it into the hands of the children. In view of these difficulties the publishers commenced about the first of the current year the publication of a special sheet, designed exclusively for the use of pupils preparing for the Entrance and Public School Leaving Examinations. This paper has been continued in an experimental way, with successive improvements and enlargements, until it has taken what will, no doubt, be its permanent shape, as *The Entrance Journal*. In this shape we have reason to believe it will prove everything that can be desired. It is in shape a twelve-page magazine, half the size of THE EDUCATIONAL JOURNAL, attractively printed, and illustrated. Its contents are prepared specially for it by thoroughly competent teachers, who are also, as will have been evident, skilful journalists. But it is unnecessary for us to particularize. Every teacher is cordially invited to send for a copy, if one has not already been received, and examine and judge for himself. This is the best test. Surely no live teacher will fail to apply it.

There is, however, another test, which the publishers are equally desirous of having applied; that is, the judgment of every boy and girl in all the fourth and fifth classes in all the schools of Ontario. They would like this judgment to be formed by actual use of the paper for a time. In order to make this easy, the publishers have decided to send *The En-*

*trance Journal*, in clubs of five or more, to any address from June 1st to September for the nominal sum of *five cents* per copy. Surely no teacher of senior and junior fourth book classes, or senior third class, who realizes what it would mean to have such a paper coming every fortnight into the hands of every pupil in the class—the information given, the help afforded, the habit formed, the stimulus imparted—will hesitate to bring the matter before his pupils, and encourage them each to procure in some proper way the trifle required, and become a subscriber to *The Entrance Journal* without delay.

### THE MANITOBA SCHOOL QUESTION.

ANOTHER, and it is to be devoutly hoped the final, stage in the history of this troublesome question has now been reached. The result of the somewhat tedious negotiations between representatives of the Dominion and Manitoba Governments respectively has been given to the public in the shape of a memorandum of agreement between the two Governments, setting forth in outline certain amendments to the Manitoba School Act, which the Government of that Province undertakes to have passed and enacted into law at its approaching session. Assuming that most or all of our readers will have seen this memorandum in their daily or weekly newspapers, we will content ourselves with a brief resumé of its contents.

(1) Provision is to be made, under certain conditions, for religious teaching—not, strictly speaking, in the school, but after school hours, which are to be shortened accordingly—for the religious instruction of the children. The conditions referred to are the following:

Religious teaching is to be given: (a) If authorized by a resolution passed by a majority of the school trustees, or (b) if a petition be presented to the board of school trustees asking for religious teachings and signed by the parents or guardians of at least ten children attending the school in the case of a rural district, or by the parents or guardians of at least twenty-five children attending the school in a city, town, or village.

Such religious teachings to take place between the hours of 3.30 and 4 o'clock in the afternoon, and to be conducted by any Christian clergyman whose charge includes any portion of the school district, or by a person duly authorized by such clergyman, or by a teacher when so authorized.

It may be given on every day of the week, or on one or more specified days only, as agreed on.

(2) In any school in towns and cities where the average attendance of Roman Catholic children is forty or upwards, and in villages and rural districts where the average attendance of such children is twenty-five or upwards, the trustees shall, if required by the petition of the parents or guardians of such number of Roman Catholic children respectively, employ at least one duly certificated Roman Catholic teacher in such school. In any school in towns and cities where the average attendance of non-Roman Catholic children is forty or upwards, and in villages and rural districts where the average attendance of such children is twenty-five or upwards, the trustees shall, if required by the petition of the parents or guardians of such children, employ at least one duly certificated non-Roman Catholic teacher.

(3) Where ten of the pupils in any school speak the French language (or any language other than English) as their native language, the teaching of such pupils shall be conducted in French (or such other language) and English upon the bilingual system.

These three paragraphs comprise the leading features of the changes which the Manitoba Government undertakes to effect in the School Act now in force in that Province. Other items in the memorandum of agreement have to do with details of legislation necessary to the effective administration of the Act as amended. There is to be no separation of the pupils by religious denominations during the secular school work. No pupils are to be permitted to be present at any religious teaching unless the parents or guardians of such pupils desire it.

The "Settlement" is evidently a compromise. Let us hope that it will prove an acceptable and workable one, and that it will take this vexatious and dangerous question out of the arena of politics and of sectarian controversy.

What has been gained and lost by the different parties concerned?

In the first place, the arrangement, if it proves workable, will do away with the "Provincial Rights" difficulty. No legislation, no authoritative interference of any kind, on the part of the Federal Government and Parliament will be required. This is a most important matter. It removes a source of great danger. The Provincial Government naturally cherishes its constitutional right to shape and control its own educational system. The first decision of the Judicial Committee of the British Privy Council, affirming the constitutionality of the Manitoba School Act, sustained its position in respect to this right. It is, to say the least, extremely doubtful whether the second decision of that tribunal, which decided that the Roman Catholic minority had a "griev-

ance" such as gave it the right of appeal to the Federal Government, carried with it any power, not to say mandate, for authoritative interference with the constitutional right of the Province, as before affirmed, in respect to school legislation. It was clear, at any rate, that the Government and people of Manitoba were determined to maintain what they believed to be their right in this matter, to the extent of their power. Any attempt of the Dominion authorities to over-ride the will of the Province in the matter would have shaken the Confederation to its foundations.

The claim of the Roman Catholics of the right to give religious instruction to the children of that Church, as distinct from any right to control the Public Schools in which such children are in the majority, is upheld by the agreement. But the instruction must be imparted at the expense of the Church, not at that of the Province. Just the same principle is applied in the case of Protestants. This seems fair enough. So far as we can gather, a great many Catholics will approve of the retention of the control of all Public Schools by the Government, as sound in principle and conducive to efficiency. It is not to be assumed that Roman Catholic parents wish the teachers of their children to be subjected to any other or any less severe tests of scholarship and ability to teach than those to which other teachers are required to submit. If their demand for Separate Schools was merely as a means to the end of separate religious instruction, they have the substance of their demand, though not the form. If they wished the control for other purposes, their wish is not granted. It was evident from the first, in view of the firm attitude of the Manitoba people, that Separate Schools receiving public aid were not to be again had, before all the powers of resistance of the Province were exhausted. The result is that, under the new arrangement, there can be no Separate Schools.

The provision for the teaching of the French and other languages, under certain conditions, is in every way reasonable, and will hardly be objected to, save by impracticable extremists.

Let us again hope that the Manitoba School difficulty is at an end.

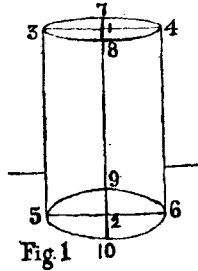
CURIOSITY is as much the parent of attention as attention is of memory. To teach one who has no curiosity to learn, is to sow a field without ploughing it.—*Whately*.

## Entrance Department.

### DRAWING.

BY A. C. CASSELMAN  
THE CYLINDER.

Get a cylinder of wood about eight inches long and about four inches in diameter. If this cannot be easily procured, a tin can of about the same dimensions will answer every purpose.

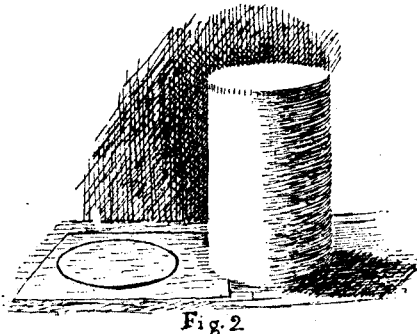


Express the cylinder in language, that is, give its definition. To get the definition describe the *kind, number, shape, and position* of the faces. Every part of the curved face is the same distance from a line joining the centres of the plane faces. This line is called the *axis* of the cylinder.

The position of the cylinder with regard to the observer is determined by the position of the axis.

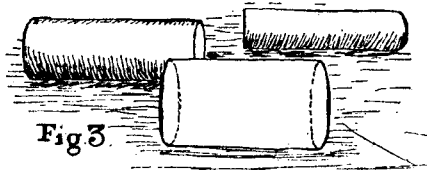
We will study the cylinder in four positions. In this paper two positions will be taken up; first, when the axis is *vertical*; second, when the axis is horizontal and at right angles to the direction in which the observer is looking.

Place the cylinder in the first position on a book so that the top is two or three inches below the *eye-level*, as in Fig. 2. Notice the length of the cylinder. Draw a line to represent this length, 1-2 in Fig. 1. This length is the unit of length in the cylinder. Notice the length of the appearance of the top face. The other plane face will appear of the same length. Through points 1 and 2 draw two lines, 3-4 and 5-6, at right angles to 1-2. These lines must bear the same proportion to 1-2 as the diameter bears to the length of the cylinder. Ob-



serve the apparent width of the top face. How much *higher* does the farthest point on this face appear than the nearest point? Draw a line, 7-8, to represent this length, taking care that it bears the proper proportion to the other lines drawn. Draw an ellipse to pass through points 3, 7, 4, and 8.

We know from the study of the hemisphere that the other plane face, could it be seen, would *appear* wider because it is farther away from the horizontal plane that passes through the eye. To find the apparent width of this face, and to make it clear to all that the *lower* face *appears* wider than the *upper* one in this case, let us make use of the following device. Place a piece of white paper under the cylinder and trace the shape of the lower face on it, Fig. 2. Move the cylinder to right of the tracing. Compare the appearance of the top face and the tracing which is the same size as the lower face. Draw a line, 9-10, to represent the width of the lower face, taking care to have it in proper proportion to the other lines drawn. Draw an ellipse to pass through 5, 9, 6, and 10. Draw 3-5 and 4-6 touching the ellipses. Rub out the lines 1-2; 3-4; 5-6; 7-8; and 9-10; and also the invisible part of the lower ellipse. These lines are called *construction lines*, and should always be drawn first, no matter how well we may know how to



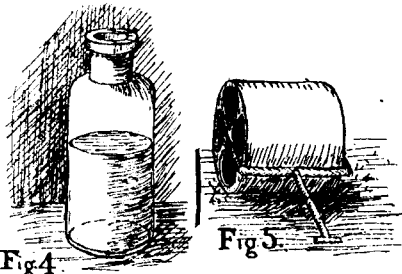
draw a cylinder. Always draw what you know must be the appearance of the invisible edge as explained above. It is *not* a waste of time, it is necessary to get the correct curve of the visible part of the edge that bounds the lower face. There must be no angle at 5 and 6.

Shade the cylinder as shown. In most school-rooms the shade and shadow will appear as shown, because the light enters from the left.

Exercises on the vertical cylinder: Draw the cylinder (1) when the top is on a level with the eye; (2) when the middle of the axis is on a level with the eye; (3) when the cylinder is suspended by a string above the eye-level. Draw any object like the vertical cylinder.

Draw the appearance of the cylinder when the axis is horizontal, and in three or four positions, as shown in Fig. 3.

Notice that no outline is shown in Fig. 2. The outline is suggested by contrast in shade between the cylinder and background.



Draw the cylinder in outline with the pencil and shade with pen and ink as shown; then erase the pencil lines. Figs. 4 and 5 are objects like the vertical and horizontal cylinders.

We would like to get drawings of the cylinder and objects like it from pupils. We will publish all the names of pupils, their school and teacher's name, and a cut of the best drawings received if sent in before going to press for next issue.

### GRAMMAR.

We this issue give another extract for analysis, parsing, etc., suitable for entrance candidates, which will be fully answered in our next issue.

Does this prove useful to you, and a saving of time to the busy teacher?

The mystic glory swims away;  
From off my bed the moonlight dies;  
And, *closing eaves* of wearied eyes,  
I sleep till dusk *is dipt* in gray.

And then I know the mist is drawn,  
A lucid *veil* from coast to coast,  
And in the dark church like a ghost  
Thy tablet *glimmers* to the dawn.

—Tennyson.

1. Analyze the extract so as to show the clauses of which it is composed, stating their kind and connection.

2. Point out the participial and verbal phrases in the extract and classify each; if there are any phrases in the extract, other than prepositional phrases and those before asked for, select and classify them.

3. Parse the italicized words.

### ANSWERS TO QUESTIONS IN OUR LAST ISSUE.

*When* on my bed the moonlight falls,  
I know *that* in *thy* place of rest,  
By *that* broad water of the west,  
*There* comes a glory on the walls:

Thy marble *bright* in *dark* appears,  
*As* slowly *steals* a silver flame  
*Along* the letters of thy name,  
And o'er the number of thy years.

#### I. ANALYSIS.

1. Clause—Stanza I.  
Kind and connection—Principal assertive.
2. Clause—When on my bed the moonlight falls.  
Kind and connection—Subordinate, adverbial of time, modifying *comes* in (3).
3. Clause—That when on my bed the moonlight falls there comes a glory on the walls in thy place of rest by that broad water of the west.  
Kind and connection—Subordinate noun, object of *know* in (1).

4. Clause—Thy marble bright in dark appears, As slowly steals a silver flame Along the letters of thy name, And o'er the number of thy years.

## New Map of the Dominion

By JOHN BARTHOLOMEW, F.R.G.S., Edinburgh, Scotland. A beautifully executed map in oil colors, showing the **latest surveys and boundaries**. This is the only map published showing the new territories of

**YUKON, MACKENZIE,  
FRANKLIN, and UNGAVA**

Size of map 80 x 49 inches. Send for it at once as the edition is being fast exhausted. **Special Discount to Schools** of from 25% to 40% on all Maps and Globes from now until the 1st of January to schools ordering direct.

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Kind and connection—Principal assertive.

5. *Clause*—As a silver flame steals slowly along the letters of thy name, and o'er the number of thy years.

Kind and connection—Subordinate adverbial of time, modifying *appears* in (4).

### II. DETAILED ANALYSIS.

In giving detailed analysis in this grade it would be enough to expect the pupils to divide the sentences into their six chief component parts.

- (a) Bare subject.
- (b) Attributive modifiers of the bare subject.
- (c) Verb or verb phrase.
- (d) Predicative modifiers of the subject.
- (e) Direct object with its modifiers.
- (f) Adverbial modifiers of the verb.

The three clauses of which the first four lines are composed would then be analyzed as follows:

1. (a) I  
(c) know  
(e) Clause (3)
2. (a) moonlight  
(b) the  
(c) falls  
(f) on my bed (when)
3. (a) glory  
(b) a  
(c) comes  
(f) 1, on the walls; 2, in thy place of rest by that broad water of the west; 3, clause (2); 4, (there).

### III. PHRASES.

1. *Phrase*—On my bed.  
Kind and relation—Adverbial of place, modifying *falls*.
2. *Phrase*—In thy place of rest by that broad water of the west.  
Kind and relation—Adverbial of place, modifying *comes*.
3. *Phrase*—Of rest.  
Kind and relation—Adjectival, modifying *blaze*.
4. *Phrase*—By that broad water of the west.  
Kind and relation—Adjectival, modifying *place*.
5. *Phrase*—Of the west.  
Kind and relation—Adjectival, modifying *water*.
6. *Phrase*—On the walls.  
Kind and relation—Adverbial of place, modifying *comes*.

### IV. OTHER PHRASES.

There are no participial, verbal, or other phrases in the extract.

### V. PARSING.

It is well in parsing words to divide the work into four parts—relation, classification, inflection, and function; so that if a pupil be asked for the "relation and function," or asked to "classify and give the function of," certain words, he will not be puzzled, but can readily omit the columns not asked for. Try this plan, and if you find it successful let us know. If you do not understand write us for explanation.

1. *When*. Relation—Know when falls.  
Classification—Conjunction, subordinating adverbial, simple.  
Function—Used to introduce an adverbial clause.
2. *That*. Relation—Know that comes.  
Classification—Conjunction, subordinating substantive, simple.  
Function—Used to introduce a noun clause.
3. *Thy*. Relation—Thy place.  
Classification—Adjective, pronominal, possessive, derived.  
Function—Used attributively to modify *place*.
4. *That*. Relation—That water.  
Classification—Adjective, pronominal, demonstrative, simple.  
Function—Used to point out *water*.
5. *There*. *There* is "an almost meaningless introductory word used to fill up a place left vacant by the transposed subject."

6. *Bright*. Relation—Appears bright.  
Classification—Adjective, predicative, simple.  
Inflection—Comparative degree (bright, brighter, brightest).  
Function—Used to complete the verb *appears* and to modify the subject *marble*.
7. *Dark*. Relation—In dark.  
Classification—Noun, common, abstract, simple.  
Inflection—Singular number, objective case.  
Function—Used as the direct object of the preposition *in*.
8. *As*. Relation—Appears as steals.  
Classification—Conjunction, subordinating, adverbial, simple.  
Function—Used to introduce an adverbial clause.
9. *Steals*. Relation—Flame steals.  
Classification—Verb, finite, intransitive, old conjugation, active voice, simple.  
Inflection—Indicative mood, present indefinite tense, third person, singular number.  
Function—Used to make an assertion about *flame*.
10. *Along*. Relation—Steals along letters.  
Classification—Preposition of place, derived.  
Function—Used to show relation between *steals* and *letters*.

### AROUND THE WORLD IN SIXTY-FIVE DAYS.

Get one of the trip tickets of the Canadian Pacific R.R. Co., and embark at Liverpool on one of the steamers of the Allan Line, and in seven days and a half you are in Quebec. You take there a river steambot to Montreal. Then you enter one of the magnificent cars of the C.P.R., and are transported to Vancouver, 2,535 miles further west, with surroundings of comfort absolutely unknown on our European railways. You arrive at Vancouver at fifteen o'clock (the company reckon time there by the twenty-four hours) and you have just time enough to go on board the huge white steamer lying at the wharf. On this fast vessel,

provided with every luxury, you reach Yokohama in ten days, and three days after you are at Shanghai. Here you leave the steamer of the C.P.R. to embark on one of the vessels of the P. and O. On the boats of this company you return to England by the way of Singapore, Colombo, Aden, and Suez.

Here is the itinerary in a few words: Liverpool to Montreal, 2,799 miles; Montreal to Vancouver, 2,535; Vancouver to Yokohama, 4,283; Yokohama to Shanghai, 1,047; Shanghai to Hongkong, 810; Hongkong to Colombo, 3,096; Colombo to Port Said, 3,488; and Port Said to London, 3,215. These figures make a total of 21,273 marine miles. Thus you pass seven days and a half on a transatlantic steamer, five days and a half on a railway, twenty-two days on the C.P.R. steamer, thirty more on the P. and O. boat, and the tour of the world is made.

For those who are more pressed for time, it is a very simple thing to go from Liverpool or Queens-town to New York and take the railway to Montreal. By that you gain a day. Then, on the return voyage, you can leave the P. and O. steamer at Brindisi, and take the mail train across France and the Pas de Calais, by which you gain eight days. Altogether, then, it requires but sixty-five days to make the circuit of the globe. It is true that the journey is not taken at the equator, and that you are cheated out of 327 miles, but nevertheless the traveller ought to be content.—*Goldthwait's Geographical Magazine*.

### ENGLISH.

The following exercises for "busy work" will be found helpful to the teacher of an ungraded school. Have one exercise copied on the blackboard by a pupil and the answers written on slates or "work" books by the Entrance class.

#### I.

Abbreviate the following words:  
Esquire, Doctor of Laws, Honorable, Professor,



This picture represents one of the most striking scenes in our history. Write the story, first preparing an outline. Send in your stories, not more than 300 words. The best will be published



Florida, Kentucky, Tennessee, Manitoba, county, hour, month, bushel, England, creditor, debtor, yards.

## II.

Arrange properly :

1. She only paid five cents. 2. Columbus discovered America when? 3. Some virtues are only seen in adversity. 4. I have thought of marrying often. 5. I desire to sometimes see her.

## III.

Write the feminine forms of

Bridegroom, beau, lord, Mr., nephew, sir, author, host, poet, governor, actor, negro, testator, hero, sultan, landlord, master, Francis, Joseph.

## IV.

Write the plurals of the following nouns :

Alley, attorney, bay, brush, chimney, church, cuff, cupful, dish, essay, head, horse, kiss, money, muff, oak, portfolio, prize, tax, cargo, gun, five, turkey, success, summons, solo, ally, daisy, echo, potato.

## V.

Write the plurals of the following nouns :

Wharf, index, penny, genius, India, mouse-trap, wagon-load, brother-in-law, postmaster-general, major-general, horseman, talisman, piano-forte, Carolina, stamen, axis, crisis, datum, oasis, vertebra, nebula, proboscis.

## VI.

Correct the following errors :

1. The mountains brow. 2. The soldiers's quarters. 3. Mens' boots. 4. The fire destroyed both Brown and Morley's stores. 5. Keats and Burns' poems.

## VII.

Write the principal parts of the following verbs :

To be, go, do, raise, rise, lie, lay, set, sit, tell, find, flow, flee, fly, try, steal, ride, love, lend, take, quit, prove, freeze, lose, loose, pay, say, send, shoot, spend, think, wear, bite, catch, may, forget, blow, give, know, write.

## VIII.

In what tense is each of the following verbs :

Run, come, did, shall go, might have gone, had been, were, am, to go, have been made, would try will have been sold, must have heard, could produce, shall be found.

## IX.

Compare the following adjectives :

Noble, wise, studious, sublime, indulgence, ill-mannered, preferable, joyful, full, green, high, remote, droll, sprightly, dry, distant, good-natured, lazy, successful, polite.

### TORONTO PUBLIC SCHOOLS—UNIFORM PROMOTION EXAMINATIONS.

#### LITERATURE—SENIOR 4TH BOOK.

## A

A cloud lay cradled near the setting sun,  
A gleam of crimson tinged its braided snow ;  
Long had I watched the glory moving on,  
O'er the still radiance of the lake below,  
Tranquil its spirit seemed, and floated slow,  
Even in its very motion there was rest ;  
While every breath of eve that chanced to blow  
Wafted the traveller to the beauteous West ;  
Emblem, methought, of the departed soul,  
To whose white robe the gleam of bliss is given ;  
And by the breath of mercy made to roll  
Right onward to the golden gates of Heaven ;  
Where, to the eye of faith, it peaceful lies,  
And tells to man his glorious destinies.

1. State clearly the subject of this poem.  
2. What is the relation in thought between the last six lines and the rest of the poem ?

3. Describe, in your own words, the scene depicted in the first eight lines.

4. Show clearly the meaning and appropriateness of "cradled," "braided snow," "tranquil," "breath of eve," "wafted," "breath of mercy," "glorious destinies."

5. "I watched the glory moving on." What was "the glory" which moved on, and where did he watch to see it ?

6. "In its motion there was rest." Explain fully the meaning of this line.

7. "Wafted the traveller." What is meant by traveller ?

8. What two things are compared in "Emblem, methought, of the departed soul" ? State fully the points of similarity between them as stated in the poem.

9. "Eye of faith." What is meant ?

10. "It peaceful lies." What is meant by "it" ?

11. Point out as clearly as you can in what the beauty of this poem consists.

## B.

They saw the vault covered, and the stone fixed down. Then, when the dusk of evening had come on, and not a soul disturbed the sacred stillness of the place, when the bright moon poured in her light on tomb and monument, on pillar, wall, and arch, and most of all, it seemed to them, upon her quiet grave—in that calm time, when outward things and inward thoughts teem with assurances of immortality, and worldly hopes and fears are humbled in the dust before them—then, with tranquil and submissive hearts they turned away, and left the child with God.

12. Give an appropriate topic for this paragraph.

13. What feelings are aroused by reading this paragraph ?

14. Describe the scene presented in the paragraph.

15. Show the appropriateness of "dusk of evening," "sacred stillness," "poured her light," "teem with assurances."

16. "Most of all upon her quiet grave." Why did it seem to them that the moon poured more of its light on the grave than on the pillar, wall, or arch ?

17. "Assurances of immortality." Explain fully what is meant.

18. "Tranquil and submissive hearts." Why were their hearts tranquil and submissive ?

19. Quote from any poem :

(a) One stanza selected for beauty and music of words.

(b) One stanza selected for nobility and loftiness of sentiment.

#### PHYSIOLOGY.

Below we give nine carefully prepared questions on the course in physiology. They will be found useful for review.

1. Name the organs of the nervous system, and fully describe the brain.

2. How do you account for the extreme difficulty with which a child learns to walk, or that is encountered by a beginner at the piano, while, later, both operations may be performed with the greatest ease ?

3. What are nerves ? Explain the terms *sensory* and *motor* as applied to nerves.

4. In case of mental overwork, what remedy would you advise ? State fully your reasons.

5. What are narcotics ? Name some of the most common. What precautions should be exercised in giving narcotics ?

6. Describe the fourth stage of drunkenness.

7. Describe the evil effects of tobacco.

8. What would you do in case of frost-bite, and in case of a child's clothes catching fire ?

#### FROM "THE DESERTED VILLAGE."

ANSWERS TO QUESTIONS IN OUR LAST ISSUE.

1. The lesson naturally divides itself into four paragraphs—the subjects of which are :

(a) The author's address to, and remembrances of, the "village of the plain," ll. 1-14.

(b) The sounds from the village as heard at evening on the neighboring hill, ll. 15-26.

(c) The village preacher, ll. 27-82.

(d) The village teacher, ll. 83-108.

2. (a) Sweet Auburn was a lovely village, where health and plenty was the lot of the laborer. Spring seemed to make its appearance here earlier than elsewhere, and summer seemed loath to part from this place of beauty.

The poet spent his boyhood days in this place and therefore everything there is endeared to him by the associations of his youth. The cottage, the farm, the stream, the mill, the church, and the hawthorn ; all are hallowed and sacred in the poet's remembrance.

(b) The poet also remembers how, in the evening, the softened sounds from the village, mellowed by the distance, came up the hill to the ear of the purposeless loiterer ; he heard the song of the milkmaid, the low of the cattle, the gabbling of the geese, the chatter of playful children, the loud voice of the watch-dog and the mirthful laugh of youth, which bespoke a mind free from care. All these, which seemed to fill in the pauses of the nightingale's song, add to the poet's loving remembrance.

(c) The village preacher was a man loved by all, and one who felt himself exceedingly rich with "forty pounds a year." His chief object in life was to do good to others and not to seek his own advantage. Misery, sorrow and pain always had his sympathy ; and the beggar, the spendthrift, and the worn-out soldier each enjoyed his hospitality ; and the good man, glowing with kind-heartedness, forgot all their vices when he beheld their troubles and sorrows.

To lead the people to a good life, to cheer and comfort the dying, he recognized as his duty, and he was always prompt in his fulfilment of it.

At church his manner and appearance were so impressive that people were convinced of the truth of what he had to say. All showed their love for him by their desire to be near him and receive from him a kind word or look ; even the little children felt this a privilege.

(d) The village teacher was a stern, dignified man, the terror of all bad boys, who had long learned to know from the looks of the master what to expect. They laughed when he joked to keep him in good humor, and looked very solemn when he frowned for fear of severe punishment.

All were astonished at the amount of learning which the master had, and this astonishment grew greater as they listened to the words of "learned length and thundering sound" which he used.

3. The description of the village preacher is separated into four divisions ; the subjects of which are :

(a) The preacher's character, or fulness of sympathy and lack of selfish ambition.

(b) The preacher's efforts to guide the living.

(c) The preacher's efforts to comfort the dying.

(d) The preacher as seen at church.

This is a most appropriate order; first, we see the man and his character, then we pass from his treatment of the living to his treatment of the dying, and end with the pulpit, which is regarded as a climax in the preacher's duties.

4. Very little is known of the village here described; it is supposed to be Lissoy, the poet's boyhood home. Of course, it is hardly necessary to point out the sad contrast between an Irish village in Goldsmith's time and the village as here described.

5. The beauties of the poem consist of:

(a) Its simplicity; what could be more simple than the description of the village, the preacher, and teacher, just what a boy would be most affected by and impressed with?

(b) Its gracefulness; notice "paused on every charm," "careless step and slow," "sought the shade," how the poet avoids everything that is unpleasing or coarse.

(c) Its seriousness; note the description of the preacher.

(d) Its melody; that is the assimilation of the sound of the word to the sound made by the object. Notice "sober herd lowed," "noisy geese gabbled," "loud laugh."

(e) Its figurativeness; notice "and as a bird, etc.," "as some tall cliff, etc."

(f) Its high moral tone; who is not better for reading this poem?

#### DIVISION I.

"Laboring swain" means working man.

"Smiling spring." In spring everything is green and beautiful, therefore said to be smiling. This figure is called "personal metaphor"; it "consists in the transfer of names, attributes, or actions that imply life or intelligence," as is shown in "muttering storm" or "sleeping moonlight," where the author's experience of human phenomena are transferred to the cloud and the moonlight.

"Earliest visit paid." Grass grew and flowers bloomed in this valley earlier than in other places. The author wishes to represent spring as in love with "sweet Auburn," and as therefore showing favors to her.

"Parting summer" is departing summer.

"Lingering blooms" are the last blossoms of the summer.

The "lingering blooms" are said to "delay" for same reason that spring is said to pay its earliest visit; the blooms linger lovingly in this beautiful spot.

"Dear lovely bowers" means the same as "sweet Auburn."

"Bowers" are resting-places. They were resting-places of "innocence," because occupied by innocent youth, and of "ease," because so comfortable.

"Seats of my youth," expressed before as "dear lovely bowers."

"Every spot could please," because he was then a boy, when everything seems pleasant.

"Loitered" means to wander without aim.

The "green" was the "village green," or open place in the village covered with grass.

The scene was made dear by "humble happiness," because people are always fonder of scenes where they have been happy than of places where they have had sorrows.

"Paused on every charm," lingered lovingly on each scene. The dash is used after charm to show a break in the sense, and to prepare us for the enumeration of the charms which is to follow.

"Sheltered" is well chosen, because it adds to the beauty of the cottage when we regard it as protected.

"Cultivated" is well chosen, because it shows us the superior character of the farm and interests us in it.

"Never-failing" is well chosen, because it gives us a more definite picture of the stream.

"Busy" is well chosen, because the mental picture of the hurry and bustle about the mill is given to us by this word.

"Decent" is well chosen, because it shows us the church as comely, unpretentious, and pleasing.

"Talking" and "whispering" are the strongest words in the last link; such words are called "ornamental epithets," they are simply pictorial, and the line would mean essentially the same if they were omitted. See H. S. Grammar, page 155, section 3.

"Age" and "lovers" add strength to the line, because poets should always use "concrete images," that is, should use if possible the "particular" instead of the "general."

Then "age" is far stronger than "people who are old" and "lovers" than "people who are in love."

Space prevents us answering the questions on Division II. this issue. They will be answered in our next.

#### ARITHMETIC.

##### TEST EXAMINATION PAPER FOR LEAVING CLASS.

Below will be found thirteen questions suitable for testing the pupils in the Leaving class. Answers will be given in our next issue. All problems will be fully solved with which any of our readers may find difficulty.

1. (a) Explain fully what the expression 246 means in our system of notation.

(b) Show that the expression 246 might have different values without changing the order of its digits.

2. (a) In dividing any number by 56 we may divide by the factors of 56. Why?

(b) In dividing 693 by the factors of 56 the final remainder is 21. Show why this is so.

3. Assuming that the 4-lb. loaf sells for 9 cents when flour is \$3 a barrel, and the cost of making and delivering bread is one-half the cost of the flour, what should the 4-lb. loaf sell for if flour advance 50 per cent., and the cost of making and delivering remain as before?

4. Mr. Jones deposits \$50 annually in the savings bank, beginning Jan. 1st, 1893. What amount will be to his credit Dec. 1st, 1895, the bank paying 4% annually, compound interest?

5. A merchant marks his goods at 50% advance on cost, but allows two successive discounts of 20% and 5%. What is the gain on sales which amount to \$2,280?

6. After paying three annual premiums on property insured at two-thirds of its value, it is entirely destroyed. What loss will the owner sustain if the rate be  $\frac{3}{4}\%$ , and the annual premium \$30?

7. A note for \$245, dated Toronto, June 1st, 1894, for four months, bearing interest at 6%, is discounted at a bank August 15th, 1894, at 6%. Find proceeds.

8. What income is derived from investing \$12,000 in stock, two-thirds of the amount in the 3 per cents. at 20% discount, and the remainder in the 4 per cents. at par?

9. What is the rate of exchange between Toronto and London, England, when a bill of £720 costs \$3,508, the broker's commission being  $\frac{1}{8}\%$ ?

10. What is the tax on 50 feet of vacant property assessed at \$45 a foot, if the general rate is  $16\frac{1}{4}$  mills on the dollar, and the local improvement rate 25 cents per foot frontage:

11. On what scale is a map drawn where 240,000 square miles of territory is represented on the map by a space 6 inches long and 4 inches wide.

12. The imperial gallon contains 277.2 cubic inches, and holds 10 lbs. of water. Find the weight of water which would fill a cylindrical boiler whose height is 6 feet and diameter 15.4 inches.

13. Find the volume of the largest sphere that can be formed from a cube whose volume is 2.744 cubic feet.

#### Intermediate D.S. Department.

Designed specially for teachers of Second and Third Class. Edited by M. A. WATT.

#### THE READING LESSON.

BY MYRA.

Probably the principal cause of poor reading in junior classes is that the pupils do not realize that good reading is just the correct expression of thought. In conversation the child talks of that which he has seen or heard, using as a medium for conveying his ideas words with which he is perfectly familiar; hence he has no trouble in expressing himself naturally and intelligently. Now, if the child becomes as thoroughly conversant with the language of the author, and grasps his thought as clearly, the chief difficulties in reading are overcome.

With these two objects in view, I have used with good effect, in second and junior third classes, the following method:

When a new lesson is to be taken up the pupils are required to read it at their desks, making note of all new words. A list of these is then put on the blackboard, and a thorough drill given on their pronunciation. The meaning of the words can generally be drawn from the children by calling their attention to context and use. The pupils then write sentences containing these words used in a way that will clearly show their meaning.

If the language of the lesson is now mastered, we are ready to study the subject-matter. The pupils silently read the lesson again, and understanding now the language in which it is expressed they gain a much clearer knowledge of its meaning. If it is a story, the main points with the lessons which it is intended to teach can, by skilful questioning, be drawn from the pupils, and topics for the various paragraphs may be systematically arranged on the blackboard. If the lesson is descriptive of a place, an animal, or a plant, the leading facts regarding the same can be obtained in like manner.

The children are now ready to write in their own words the story or description, as the case may be. They are allowed to use the headings on the blackboard, and are encouraged to make use of as many as possible of the new words in the list which is still before them. These stories are to be read aloud in the class by the pupils.

A pupil thus reading is giving expression in his own language to his own conception of the subject under consideration, and as he knows that his teacher and fellow-pupils will judge of his knowledge of it from what they are hearing he is sure to try, by emphasis and inflection, to make his meaning clear to them. If the child has formed any mistaken opinions respecting the meaning of the lesson the teacher can now readily detect and correct them. When each pupil has in this way independently expressed himself, and has heard each of his classmates giving utterance to the same thoughts in a different form, he is prepared to put

himself in the author's place and read, as still another rendering of the same story, the lessons that is given in his book.

Of course, all this takes time, but then, besides our reading lesson, we have had lessons in literature, composition, and dictation. Moreover, the pupils take great interest in the work, and seem to be very anxious that their reading shall do full justice to their own productions.

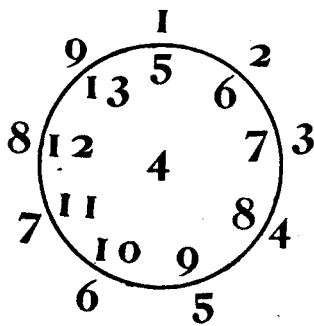
It is well to collect papers at the close of the lesson, and see that writing, spelling, and punctuation are satisfactory.

PRACTICE WORK IN SUBTRACTION.

BY WILLIAM M'KENZIE, BALDOON

In our last paper we discussed practice work in addition. I think the method which I tried to make plain has some advantages, the chief of which are these: (1) The work can be put on the board as quickly as any straight work in addition. (2) The work that would keep twenty or more pupils actively employed for half an hour or more can be corrected by the teacher in two minutes.

Now, my class have thoroughly mastered the principles of subtraction. They understand how to do the work, but require a vast amount of practice in order that they may acquire the power to subtract rapidly and accurately. They must work a great many examples in subtraction every day, and these must all be corrected and marked. They must get credit for the answers which are right, and must be asked to "work over again" those examples which have not been correctly done. As they go along they must be drilled on the subtraction tables—one table a day will be sufficient. These tables must be gone over and over a great many times. Just here, let me say a word or two on the teaching of the tables. Some employ a device something like the following:



A circle is drawn on the board, and if the table be, say, "four times," the figure 4 is placed in the centre. The figures 1 to 9 are placed just outside the circumference, and the sum of 4, and each of these figures just inside. The pupils copy the table on their slates and study it. When they come to their class the teacher erases the outside figures and the pupils go over the table in any order that the teacher may require. I have found it a better plan, however, to put the table down like this:

- 4 from 9 and—
- 4 " 12 " —
- 4 " 7 " —
- 4 " 4 " —
- 4 " 13 " —
- 4 " 6 " —
- 4 " 11 " —
- 4 " 8 " —
- 4 " 10 " —

Then the teacher need not point to the figures; he may even be attending to some other work while the members of the class, one after another, repeat the table as they look at the board.

We can easily furnish our class with any amount of seat work by letting the questions take the following form:

- 1. 5683748  
0568374 (9 times)
- 2. 4638275  
0463827 (7 times)
- 3. 92789749  
04639487 (15 times)
- 4. 713096256  
023769875 (20 times)

In the first the minuend is 10 times the subtrahend + 8, therefore the answer will be once the subtrahend + 8. In the second, the answer will be 3 times the subtrahend + 5. In the third, the minuend is 20 times the subtrahend + 9, therefore the answer will be 5 times the subtrahend + 9. In the fourth the minuend is 30 times the subtrahend + 6, therefore the answer will be 10 times the subtrahend + 6.

Let the work be easy at first so that the pupils may not be discouraged. Carefully explain how the work is to be done. It is surprising how quickly the little ones will get in the way of working out these long examples, and it is gratifying to notice how ardently they will apply themselves to the work till it is finished. When the answer is correct, as it generally is after they have had a few days' practice, they will look at the work feeling that they have overthrown a giant, so that subtraction is not the only lesson they are learning.

DRAWING IN RURAL SCHOOLS.

W. G. WARD.

Drawing is one of the subjects that is gradually coming to the front in the educational curriculum. But where to begin and how are still, perhaps, the perplexing questions, especially in rural schools.

The following, which may or may not be original, has given me so much satisfaction and my pupils so much evident pleasure that I offer it to THE JOURNAL readers, with the request that if they have never thought of it they will give it a trial, and with the hope that it may suggest a new way of providing suitable drawing work for busy fingers.

The cause of much of the inferior drawing of older pupils can be traced to inaccuracy of observation of the correct form in the early stages, especially in the simple geometrical forms. Therefore in drawing there must be exact observation, then correct expression.

We might coin a new pedagogical principle for drawing, viz., "We learn to draw by seeing, and we learn to see by drawing."

*Exercise 1.* Beg some card-board from the nearest store and divide it into one-and-a-half-inch squares, one for each pupil. Using a card-board square, show pupils how to trace its outline on the board. Pupils draw at seats as many squares as time or space permit. Ask pupils to draw carefully, but tell them that if the corners happen be blunt or rounded they are to make them square. (N.B.—Two uses have been made of the wood square. These might suggest a definition.)

By this method it will be noticed the pupil will see the correct form and will begin at once to criticize the form and his own work—the secret of good drawing.

With one of these little cards a pupil can draw: (a) a large square—formed of four smaller ones; (b) a cross with base formed of two squares; (c) a border—formed of squares on their corners and completed by lines above and below; (d) a border—formed by overlapping squares standing on their corners and completed as in (c); (e) a house front; (f) a cube—with but little suggestion.

Some of these might be drawn on the board by

the teacher, and the others suggested. Many other figures will be thought of, but the constructiveness of the little ones will be a genuine surprise.

*Exercise 2.* Give pupils a card-board square and ask them to draw all they remember of last lesson and as many new pictures as they can think of.

*Exercise 3.* Draw some of the pictures in Part I. Reader, using card.

Those who have tried other plans will notice—that by this method the arrangement of the work is improved, the number of pictures drawn increased, the form of the figures improved, and a feeling of satisfaction on the part of teacher and pupil created.

The children become interested in drawing because they can draw, and will not only draw a regular lessons, but ask for the cards at leisure moments.

(To be continued.)

RELIEF MAPS.

To teach the geography of Canada nowadays is a task of no small difficulty, and there is nothing which will give greater help than a good relief map. But we cannot get a good relief map. The trustees would never get us one, they cost too much. Then we must make one. Look about your schoolroom. Is there an old blackboard of no further value as a blackboard? Is there a wall space between two windows, say four feet by three feet or thereabouts? Or could you get your boys to fasten together boards (planed or unplaned, so long as the surface is pretty level it does not matter), to form an oblong, its dimensions proportionate to the map of Canada in your atlas? If so, you are ready for your work on the relief map. On your board get a good outline of Canada drawn (let all the work be done in school, your class will gain by it). Study as many relief maps or pictures as you can get, then mark out the highlands of Canada, the low spots (lakes, bays, etc.), then set your tiresome boy at work sticking on the putty which you have been accumulating since first the class heard of the relief map. When this boy has sufficiently realized the honor conferred upon him, let him retire in favor of some other aspirant, telling him that if he is good and works well he may stick some more putty on the map some other time. (*Vide* "Tom Sawyer.") This will teach him more about the outline of Canada than he has learnt previously in two months. The other children will keep a critical watch upon the workers, and references will be made to lakes, peninsulas, etc., by name, and their maps in the atlas will be often consulted. Keep on until you have the best relief map you can make, and, even if it is but imperfect, it is a hundred times better than a flat one. When you come to painting it, you can teach the provinces, districts, and territories as never before. Oil paints are the best, but chalk colored with Diamond Dyes and wet with glue water wears very well. Paint the oceans and other boundary waters in dark-blue. After a time, if you wish, products may be glued on, gold leaf, silver leaf, coal, copper-ore, wheat-grains, etc., marking the natural productions of the Dominion. But it is not well to put too much on it, as it becomes so ornamental one is afraid to let a child put a pointer to it lest the trimmings be destroyed. Let it be for use every day you need it.

No one need be without a relief map, if she has a head and hands and tact to enlist the children's help; the labor is not great and the result is good. M. A. W.

There is nothing more frightful than for a teacher to know only what his scholars are intended to know.—Goethe.

HISTORY.

In the Junior Classes, history should be taught, not, perhaps, in the same way as in the Fourth Classes, but yet taught with facts correctly placed in relation to time and place.

In the Second Class, stories of Canadian events should be taught in conversations. Certain stories should be selected, such as "Cartier's Voyages of Discovery," giving his starting place, his landing place, with dates, with such little interesting points as the naming of the islands, capes, and rivers, and the conduct of the natives towards him, etc. The map should be used always. Following that might come two stories of Frontenac's government, "The Heroine of Vercheres" and "The Heroes of the Long Sault." Then the "Taking of Quebec by Wolfe" will introduce the English period. Following that comes the period of law-making, which is not very interesting to young children, but the story of Dominion Day should be told, the date fixed, and the names of the first provinces united in the new Dominion should be memorized by the aid of the map. The story of "Queenston Heights" should follow to mark the war of 1812, and the years 1837 and 1885 should also be noticed, as they are milestones in Canada's progress.

When the Third Class is studying history these stories will serve as points, between which new material may be placed. A skeleton outline of the periods should be made for this class, and this should be memorized. When this outline is being studied, before memorizing, the teacher tells stories as she goes of the events indicated in the outline, drawing the class on to feel the sequence of events, how one grew out of another; she mentions books she has read, tells of having seen this or that fact more fully told in such and such a book of history; speaks of what was going on in Great Britain or the United States at the same time, but does not require the class to memorize anything but the outline, but this she does require. She will find that what she does not ask them to do will be done, and that the filling in of the outline is well remembered. When they come to the Fourth Class, the reading of history which they must do there will not be so distasteful as it appears to a child who has never heard of the events of history other than in a desultory and irregular fashion. They will also be more ready to enter upon contemporary history, and will, very likely, have acquired a taste for reading historical books. What patriotism can be expected from a person who does not know anything of his own country? yet many boys leave school before reaching the Fourth Class, never having the least idea of their country's history—fit subjects for the demagogue's arts when they go into the world.

M.A.W.

Mathematics.

Communications intended for this department should be written on one side only, and with great distinctness; they should give all questions in full, and refer definitely to the books or other sources of the problems, and they should be addressed to the Editor,

C. CLARKSON, B.A.,  
Seaforth, Ont.

SOLUTIONS.

NOTE.—The problems are repeated from page 90 for the benefit of new subscribers.

79. The length of the base of a parallelogram is 45 feet, the length of the perpendicular on the base

from the opposite sides is 28 feet; the length of a side adjacent to the base is 35 feet. Find the length of the perpendicular on this side from the side opposite to it. (P.S.A., p. 191, No. 9.)

Area of parallelogram =  $45 \times 28 = 35 \times x$ ;  $\therefore x = 36$  ft.

80. A town borrows \$12,000, to be repaid, principal and interest, in 4 equal annual payments. Find the annual payment, money being worth 6% per annum.

$x(1.06^3 + 1.06^2 + 1.06 + 1) = 12000(1.06)^4$

$\therefore x \cdot \frac{1.06^4 - 1}{1.06 - 1} = 12000 \times 1.06^4$

$x \cdot \frac{.26248}{.06} = 12000 \times 1.26248$

$x = 12000 \times 1.26248 \div 4.3746 = \text{etc.}$

81. A mortgage of \$5,000, bearing interest at 6% per annum, payable yearly, has 10 years to run. Find its present value, money being worth 4% per annum, payable half-yearly.

Let P = present worth of mortgage, and assume 4% per annum = 2% half-yearly

$\therefore P(1.02)^{20} = 300(1 + 1.04 + 1.04^2 + \dots + 1.04^8 + 1.04^9) + 5000$

*i.e.*,  $P \times 1.48595 = 300 \frac{1.04^{10} - 1}{1.04 - 1} + 5000$

$= 300 \times \frac{.48024}{.04} + 500 = \text{etc.}$

Whence P = this sum  $\div 1.48595 = \text{etc.}$

82. The parallel sides of a trapezoid are respectively 27 ft. and 35 ft. in length, and the non-parallel sides are respectively 18 ft. 7 in. and 23 ft. 11 in. long. The latter sides are produced to meet. Find the respective lengths of the produced sides between the point of meeting and the shorter of the parallel sides of the trapezoid. (P.S.A., p. 190.)

Draw the figure and produce the sides to meet. Call the produced parts x and y. Then the 27 ft. line is parallel to the base of a triangle. See Euc. VI. 2.

$\therefore x : 27 = 18\frac{7}{2} + x : 35$ ;

or,  $35x = 27(18\frac{7}{2} + x)$ ;  $x = \frac{27 + 223}{8 \times 12} = \text{etc.}$

Similarly for y.

83. Taking the diameter of the sun to be 880,000 miles, and the sun's distance from the earth to be 92,400,000 miles, what must be the diameter of a circular disk that it may just hide the sun when held between the eye and the sun, and 21 inches in front of the eye? (P.S.A., p. 191.)

Draw an isosceles triangle ABC, of which the base BC represents the diameter of the sun, and AD the perpendicular, its distance from the eye at A. Draw DE parallel to BC, to represent the disk near A, and let its diameter be x. Then by similar triangles,

$x : 21 = 880,000 : 92,400,000$

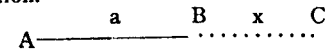
$\therefore x = \frac{1}{2}$  inch.

84. Produce a given straight line so that the rectangle contained by the whole line thus produced and the part produced may be equal to the square on another given line.

This was solved Dec. 1st, 1895, No. 119, p. 218, which see, or send for private answer.

85. Produce a given straight line so that the rectangle contained by the whole line thus produced and the given line shall be equal to the square on the part produced.

The algebraic method gives the simplest solution.



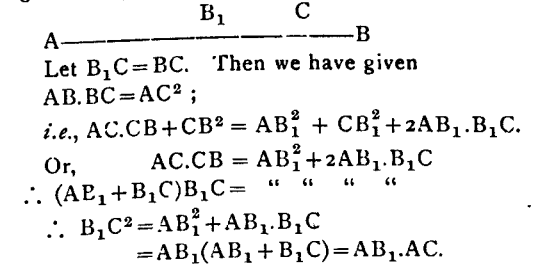
Let AB = a, be the given line. Suppose it produced as required to C, so that BC = x. Then we have the equation:

$a(a+x) = x^2$ ,  $\therefore x = \frac{1}{2}[a \pm \sqrt{5a^2}]$ . We require the geometrical interpretation of this result, which is easily obtained thus: From B draw BD perpendicular to AB and = 2a. Join DA =  $\sqrt{5a^2}$  (I. 47). Produce AB so that the produced part = DA. Bisect the whole line thus produced, and one-half = x or BC, the required part.

86. Divide a straight line, AB, into two parts at C, such that the rectangle contained by BC and another line, X, may be equal to the square on AC.

Take the negative root in 85. From AB cut off a part = DA, and bisect the remainder; the half of the line thus found is the length of the segment required.

87. If a straight line is divided internally in medial section, and from the greater segment a part be taken equal to the less, show that the greater segment is also divided in medial section.



88. Let the following diagram be that of Proposition 11, Book II.: AK, FD, and GB are joined. It is required to prove that they are parallel to one another.

In the figure of Euc. II. 11,  $AH = CK = AF$ ;  $AB = CA$ ;  $BH = DK$ .

But  $AB \cdot BH = AH^2$

$\therefore CA \cdot KD = AF \cdot CK$ , by substitution;

$\therefore CA : AF = CK : KD$ . Euc. VI. 16.

$\therefore AK$  is parallel to  $FD$ . Euc. VI. 2.

Produce FC and BD to meet in M, and we have similarly

$AB \cdot BH = AH^2$ ;  $\therefore BD \cdot CM = FG \cdot MB$

$\therefore BD : MB = FG : GM$

and hence GB is also parallel to FD, and hence to AK.

89. A., B., and C. form a partnership, with capitals of \$7,500, \$15,000, and \$12,500 respectively. A. draws out at the end of each year \$750; B., \$1,200; and C., \$1,350. At the end of 5 years their capital is \$42,900. How much of it belongs to B.? (H.S.A., p. 190, No. 17.)

This was solved in February number. See p. 284 for an elegant solution by W. M. GOVENLOCK, B.A., Ingersoll Coll. Inst., or send for private answer.

90. If I can walk a certain distance in 114 days when I rest 5 hours each day, how long will it take me to walk twice as far if I walk twice as fast and rest twice as long each day?

Solution by W. E. COBBAN, Toronto.

First time he walks 19 hrs. daily; second time 14 hrs.;

$\therefore$  time will be  $114 \times \frac{1}{2} \times \frac{2}{2} = 154\frac{1}{2}$  days.

91. The sum of three numbers is 24; and six times the first, three times the second, and twice the third give the same result. Find the numbers.

Solution by W. E. COBBAN.

$x + y + z = 24$  (1)

$6x = 3y = 2z$  (2)

$z = 3x$

$y = 2x$

$\therefore$  from (1)  $x + 2x + 3x = 24$

$6x = 24$

$x = 4$

$y = 8$

$z = 12$ .

92. Out of a purse I take \$100 more than one-half of the whole sum which it contained; then \$30 more than  $\frac{1}{3}$  of what then remained, and then \$20 more than  $\frac{1}{4}$  of what then remained; after this \$10 remained. What did the purse contain at first?

Solution by M. BRADY, North Augusta.

At the last \$10 remained.

\$10 + \$20 = \$30, and  $\frac{1}{3}$  of this = \$40.

\$40 + \$30 = \$70, and  $\frac{1}{4}$  " = \$87.50.

\$87.50 + \$100 = \$187.50, and twice this = \$375, the sum at first.

93. If from a point without a parallelogram there be drawn two straight lines to the extremities of the two opposite sides, between which, when produced, the point does not lie, the difference of the triangles thus formed is equal to half the parallelogram.

Let ABCD be the given parallelogram, and P the given point opposite the sides AB, DC. Join PA and PB; PD and PC. Draw Px perp. to AB, Pz perp. to DC, and Cy perp. to AB.

Then Pz = Px + Cy; or Pz - Px = Cy

$\therefore \frac{1}{2}$  Pz.DC -  $\frac{1}{2}$  Px.AB =  $\frac{1}{2}$  Cy.AB.

94. Construct a parallelogram equal to a given triangle, and such that the sum of its sides shall be equal to the sum of the sides of the triangle.

The three sides of the triangle are given, hence the area = A, say. Let  $s = \frac{1}{2}$  (sum of the sides);  $\therefore s =$  sum of two adjacent sides of the equivalent rectangle. Call these two sides  $x$  and  $s - x$ , where  $x$  is the side as yet undetermined. Then  $x(s - x) = A$ , whence  $x = \frac{1}{2}(s + \sqrt{s^2 - 4A})$ . From this we get determinate solutions by giving explicit numerical values to the three sides, e.g., when the sides are 3, 4, 5, the sides of the required rectangle are  $3 - \sqrt{3}$  and  $3 + \sqrt{3}$ ; when the sides are 5, 12, 13, the adjacent sides of the rectangle are  $7\frac{1}{2} - \frac{1}{2}\sqrt{105}$  and  $7\frac{1}{2} + \frac{1}{2}\sqrt{105}$ , etc.

Solution II. By H. S. ROBERTSON, B.A., Seaford Coll. Inst.

Let ABC be the given triangle. Bisect BC in D; draw AE parallel to BC. With centre D and radius =  $\frac{1}{2}(AB + AC)$ , describe a circle cutting AE in G. The parallelogram BFGD is the required figure. The proof is very simple.

95. "Kindly solve the following algebraical equation in next issue, if possible."

$$x^2 + y = 7$$

$$x + y^2 = 11.$$

N.B.—This problem is older than the century. It has been dealt with three times in THE JOURNAL—once by Prof. Baker, and twice by the present Editor. See page 218, Dec. 1st, 1895, or send for private answer.

96. Find volume of earth (diameter 8,000 miles) and compare with volume of atmosphere 200 miles in height from surface of the earth.

Volume of earth =  $\frac{4}{3}\pi \times 4000^3 = \frac{4}{3}\pi \times 100^3 \times 40^3$

Volume of air and earth =  $\frac{4}{3}\pi \times 4200^3 = \frac{4}{3}\pi \times 100^3 \times 42^3$

$\therefore$  volume of air alone =  $\frac{4}{3}\pi \times 100^3(42^3 - 40^3)$ .

Hence earth : atmosphere

$$= 40^3 : (42^3 - 40^3)$$

$$= 64,000 : 10,088 = 8,000 : 1,261.$$

97. ABC is a right-angled triangle. AB is the perpendicular and BC the base. AB is trisected at E and D. Through E and D straight lines EG and DF are drawn to G and F in AC, and are parallel to BC. AB = 42 feet; BC = 30 feet.

(a) Find the area of DEGF.

(b) Find each of the four sides of DEGF.

AE = 14 = ED = DB. Let EG = x, DF = y;

$\therefore 42 : 30 = 14 : x$ , since the triangles are similar, VI. 4.

Also  $42 : 30 = 28 : y$ , since the triangles are similar.

EG = 10, DF = 20.

Hence AG = 17.2046 = GF = FC. Euc. VI. 2.

Area of DEGF =  $\frac{1}{2}(10 + 20)14 = 210$ .

98. (a) Through a pipe 20 inches in diameter the water flows at the rate of 10 miles per hour. Find the cubic contents passing in 15 minutes.

(b) Find the time required to fill a reservoir, in shape the half of a sphere, with a circumference of 100 yards.

(a) The quantity of water is = a cylinder  $2\frac{1}{2}$  mls. long and  $\frac{5}{8}$  ft. in diameter

$\therefore$  cubic contents =  $\frac{5}{8} \times 5280 \times .7854 \times \frac{2.5}{8}$  cub. ft. of water = x, say.

(b) Circumference = 100 yds. = 300 ft. =  $2\pi r$ ;  $\therefore r = \frac{1}{\pi} \times 75$ .

Volume of hemisphere =  $\frac{2}{3}\pi r^3 = \frac{2}{3}\pi r \times r^2 = 200 \times \frac{1}{\pi^2} \times 5625 = y$ , say.

$\therefore$  time in minutes =  $\frac{Y}{x} \times 15$ .

99. A fir tree is 200 feet long to the top point from the base, which is 8 feet in diameter. How many cords of wood in the tree?

Solution by R. W. DAVIES, Sunderland.

The tree is a cone, 200 feet high, with diameter of base = 8 ft. Area of base =  $2^2 \times 4^2$

Number of cords =  $2^2 \times 4^2 \times 16 \div 128 = 26\frac{2}{3}$  cords.

100. Find the area of a trapezoid with the two parallel sides 48 and 60 feet respectively. The distance between the two sides is 20 feet.

Solution by R. W. D.

Area =  $\frac{60 + 48}{2} \times 20 = 1080$  sq. ft.

101. ABC is an equilateral triangle; BC = 10 feet. Pass an indefinite straight line through the apex A and parallel to base BC. Take a point D in MN 6 feet from the apex A. Join DB and DC. Find the area of the figure DBC.

The triangle DBC is on the same base and between the same parallels as the triangle ABC, and, therefore, has the same area =  $.433 \times 10^2$ .

102. Given a circle with radius 10 feet:

(a) Find area of inscribed regular octagon.

(b) Find volume of a regular octagonal pyramid erected on the inscribed octagon. Height of pyramid, 24 feet.

(a) If  $s$  be the side of a regular octagon inscribed in a circle whose radius is R, then it is easy to prove by Euclid, Book VI., that  $s^2 = R^2(2 - \sqrt{2})$ . But when  $s$  is the side, the area of the octagon is  $2s^2(1 + \sqrt{2})$ , as may be easily proved, =  $2R^2(2 - \sqrt{2})(1 + \sqrt{2}) = R^2 2\sqrt{2} = 200\sqrt{2}$  sq. ft.

(b) Volume of pyramid =  $\frac{2}{3} \times 200\sqrt{2} \times 24 = 1600\sqrt{2}$  cub. ft.

For proofs see text-books, or send for private answer.

103. ABCD is a trapezium. The diagonal AC = 560 feet. DE is a perpendicular let fall from angle D upon AC. BF is a perpendicular let fall upon AC from the angle B. DE = 240 feet; BF = 300 feet. Find area of ABCD.

Area of trapezium =  $\frac{240 + 300}{2} \times 560 = \text{etc.}$

104. Find volume of a mountain peak, cone-shaped,  $\frac{1}{2}$  mile high, with a base  $1\frac{1}{2}$  miles in diameter.

Radius of base =  $\frac{3}{4}$  mile; area =  $2^2 \times \frac{9}{16}$  cub. mile.

Volume of mountain =  $\frac{1}{3} \times 2^2 \times \frac{9}{16} \times \frac{1}{2}$  cub. miles = etc.

A good deal of what we are pleased to call out goodness is only another name for methods of behaving that we have had drilled into us till they have become habits.—Rev. Dr. Parkhurst, in the Forum.

## A TEACHER'S DREAM.

Usually I was in a hurry to leave the school-room, but this had been one of the noisy, restless days, when teaching seems uphill work, when a teacher feels like calling himself to account to see whether he has not missed his calling, whether he had not better resign at once, and study medicine, or go as a missionary to China. So, after school, I sunk back in my armchair to sit in judgment on myself.

What a lovely June day it had been! No wonder the children were longing for the holidays. They must have felt like that imprisoned bumble-bee now buzzing in the west window. That bumble-bee, too, had added to my annoyance this afternoon. Twice I had called Johnny Short's attention from him to the spelling lesson that I felt sure he would miss. But now, in the quiet of the schoolroom, his monotonous humming, as he strove to escape through the window-pane, had rather a soothing effect, so I determined to let him remain a prisoner, that he might atone for some of the trouble he had caused.

Oh, thought I, if school could only be as quiet as this; and I was half resolving to spend the night in the schoolroom, when all at once my attention was called to a great commotion among the books that lay on my table. There was, at first, a babble of voices; then a modest little exercise book slid to the front, and, in a somewhat trembling but distinct voice, said: "I would like to nominate Webster's Unabridged for chairman. All in favor will manifest it by the usual sign."

There was a general slapping of covers, and a cry of "Chair, chair."

Weil, thought I, this is something new. Many are the hours that I have pored over you, never dreaming that you were gifted with living voices. Perhaps, after all, Mr. Stead is right, and you are the "mediums," and your "controls" the spirits of your authors. I will keep quiet, and listen.

Webster's Unabridged slowly moved its ponderous form, stood erect, swung back its covers, and said: "Fellow schoolbooks, I cannot truthfully say, perhaps, that I haven't words to express my thanks for the honor you have placed upon me; but I shall not attempt a lengthy speech, for I have so often heard the teacher say to the composition class, 'Don't use dictionary words,' that I feel somewhat embarrassed in attempting to speak in public. I feel, too, that I am getting old. My back is not so strong as it used to be, and yesterday Sally Jones let me fall, which shook me up, and grazed the skin on my right side. I could have borne this, but it *did* hurt when she called me an antediluvian because she couldn't find 'bicycle' without looking in my supplement.

"The object of this meeting is to determine which of us contributes most to the education of the young. I shall, therefore, call on the Public School History to set forth his claims in this matter."

During the applause that followed the History came forward and began: "I hardly expected to be the first called upon, but I do think my pages contribute more to the true intellectual development of the youth of our country than any other book on the table. I would not rob any of you of the honor due you; but none of you offers such topics for conversation in after life; none of you contributes more to the liberal education of the people than I do. Think of my age! Long before you, Mr. Chairman, or any of you, my fellows, existed, or were even dreamed of, I was hoary with years. The morning that Adam and Eve were turned forth fresh from the hand of their

Maker I sprang into existence. True, many of my pages are stained with dark deeds, many are red with bloody wars; but what of that? These are but the trumpet sounds warning men of to-day to be active in doing all they can to hasten the reign of the Prince of Peace. Every thoughtful boy must sometimes ask himself: 'Whence am I?' He turns to revelation for his origin, but pores over my pages to learn the growth and development of mankind.

"I am especially prepared, however, for the boys and girls of Canada. True, the Education Department of Ontario were slow to understand my worth, and place me on the Public School programme; yet, in the ten or fifteen years I have been with you, I have done more than you all to make loyal Canadians. How? you may ask. Have we not often heard boys and girls say they fairly hated history? Yes, no doubt, you have, but that was because I was not properly taught. Some teacher wanted to cram all my facts and dates into a little head for an examination. But when I am well presented, children love to hear my account of those faithful Jesuits, who bore fatigue and hunger, and braved every danger, that they might plant the cross among the Indians of North America. There is not a boy who will not listen eagerly as the teacher reads my account of the United Empire Loyalists, and each feels a glow of pride that Canada's sons have such a glorious parentage. Yes, Mr. Chairman, in conclusion, I feel sure a large measure of Canada's prosperity, the contentment and loyalty of her people, is due to the fact that I am taught in the Public School."

There was prolonged applause as History resumed his place, and one little red-covered History-Notes actually danced about the table till all clapping had ceased.

In a few appropriate words the Arithmetic was introduced. He began by saying: "I must admit the truthfulness of many of the remarks of the previous speaker, although I cannot agree with him as to his importance. He spoke of his age, but if age counts for anything, you must surely yield the palm to me; for when the Great Architect planned the universe, he made use of me. Long before the creation of man, when He 'weighed the mountains in scales and the hills in a balance, when he meted out heaven with a span, and comprehended the dust of the earth in a measure,' I was there. I am co-existent with the mind of the Eternal, and shall be in use after the final consummation; and while I am the servant of the Highest, I am the friend of the lowly. His love for me has raised many a man from the humbler walks of life to fill the highest positions in the world. Euclid, Napoleon, Newton, and a host of others have admitted that to me they owed in a large measure their greatness. I think, too, you must all agree that I am of more practical use than any of you. No successful business man can be ignorant of me. He relies on me to tell him the state of his business from year to year, and to show him his gains and losses. My worth is acknowledged by all. Read the advertisements in a daily paper, and you will find many like this: 'Wanted, a boy; must be quick at figures.' In every walk of life, in every business transaction, from the schoolboy's marble trade to the dealings of the Bank of England, I play a part. When you have given it careful consideration, I think you must all conclude that I am by far the most important subject on the programme."

The Grammar was the next speaker. "I think I can convince you all that I am the subject of the greatest utility. Many a man well versed in history, many a very giant in arithmetic, has found

himself to be a sad failure because he was unacquainted with me. The power to solve knotty problems or catch questions in arithmetic is of little practical use after all. I know it is claimed that mathematics unfold and mature the mental powers, but the same amount of study devoted to me will not only do as much in that line, but will give the student grace and ease in conversation, and fit him for refined society. It is a fact that I am not so easy to learn as some of you. It cannot be denied that more candidates fail at examinations in grammar than in any other subject. But what of that? The precious metals lie deep. The fact that I call for close application is only proof of my worth. Think how necessary I am. There are times when each of you is very useful, but I am needed at every utterance of the human voice. Yes, and back of that you cannot even think correctly without me. I ask you to consider these things before rendering your judgment."

The Fourth Reader, on being introduced, began: "It has been agreed that I should speak in behalf of my three younger brothers as well as for myself. We cannot claim antiquity. Adam and Eve were unacquainted with us. But great age is no proof of usefulness. Many of the most useful inventions of the day are the product of modern thought. The history would have us consider him useful because of his age. As well might the tallow dip stand before the electric light and demand homage because its feeble spark lightened the darkness centuries before the other began to shine. Then I am not so sure that the history's claim to years is a just one. I think the chairman would inform you that there was no history until men could read; that all before was tradition; and that tradition like his offspring, was not always reliable. But admitting the claims of the former speakers, how is a knowledge of any of them to be obtained without an acquaintance being first had with me? Who ever heard of a person versed in history, grammar, or arithmetic, without having first learned to read? I am the first subject taught, and, while each of you may be a storehouse containing untold wealth, remember I am the key that unlocks you all and brings forth your treasures for the good of men. Let me quote for my friend, the History, what Gibbon, the great historian, said of me, 'Reading is, in fact, the nourishment of the mind, for by reading we know our Creator, His works, ourselves, and chiefly our fellow-creatures.' The Arithmetic, too, prides himself that he is a servant of the Most High, but if he has reasons to boast how much more have I? His laws, His will, His promises, He gives to the world in a book and says, 'Search (read) the Scriptures, for they are they that testify of me.' What a blessing I am to mankind! Think of the thousands who know nothing of any of you, yet through me bring forth daily from the treasure-house of God things new and old! I give to all who love me knowledge and pleasure, and I feel sure the world would give you all up rather than part with me."

As the reader concluded, a paper-covered volume, the Report of the Minister of Education, that had been lying on my table for a few days, asked permission to briefly address the meeting. There seemed a very general willingness, but the Spelling-book shouted to the chairman, "Don't let him, Grandpa; he isn't in it." The chairman thought it would be only courteous to listen to what the stranger might have to say, and the Report began by saying: "I would not for a moment have any of you think I did not fully appreciate you. Mines of wealth indeed you are, and so necessary is each to a liberal education that I am not surprised to find you filled with large

ideas of your own importance. But have any of you ever stopped to consider what you would be without another important factor of the school-room, the teacher? One of the speakers said, 'Precious metals lie deep.' That is true, and so deep are your veins of knowledge that they would be forever hidden from the minds of the young, if the patient teacher day after day did not bring forth your wealth and set it before his pupils in the most attractive form. The true teacher—remember I am not speaking of the many boys and girls who are using teaching as the stepping-stone to some other profession—always appreciate your worth. He loves you, and it gives him pleasure to make others acquainted with you. But children are loath to make your acquaintance, and indeed it is not until after several years of school life that even the cleverest pupils find any joy in your perusal. If a child wishes to know the meaning of a word, or the location of a town, or to obtain any other information, he at once goes to his teacher, and the teacher is to him a great fountain of wisdom, where all knowledge may be had for the asking. What resources the teacher should have at hand! His home should be filled with choicest books, with the leading daily papers, with the latest and best magazines. But, alas, how often is this impossible, owing to the meagre salary he receives! His necessary living expenses take it all, and nothing is left to provide the reading matter which would make him a tenfold more efficient workman. I am pleased to say, however, that there is a general awakening in this among the people of Canada, and that the time is not far distant when trustees shall have learned there is nothing to be gained by pinching a teacher down to the last cent. Yes, the ratepayers are learning that a liberal salary is a good investment, one that pays a hundredfold in the advancement of the young people of the section."

What the rest of this speech would have been I cannot tell, for I raised my hands to applaud this last remark, and the effort awoke me, and I found I had been dreaming dreams.

## Teachers' Miscellany.

### TEACHING ON THE OLD BLIND LINE.

BY THOMAS C. ROBSON, MINDEN, ONT.

Old memories are the best portions of existence. In the springtime of life we look forward to the aims to be achieved and the honors to be won. The aims become the gaudy butterflies of the hour, and the honors, like the apples of the Dead Sea, turn to ashes in the act of fruition.

Memory plays us no such tricks. Whatever else may happen to us, fate cannot rob us of the memory of the sunny hours of childhood, of the many fancies of our schoolboy life, nor of the happy times we had when teaching on "The Old Blind Line."

It was no city, famous for its aged, piled stones, yet reeking with its sin, in which we first taught school. Our scholars were not dapper little models, just turned out of a departmental store, with the gloss of the "ready-made" still upon them. It was a rural section away in the woods back of Minden. When first told of our appointment we were recommended to study the art of self-defence, and, by all means, to take a six-shooter with us. The learned and revered Inspector hinted at the ignorance of the section of school law and of the contempt of the scholars for all discipline. Even the genial Methodist parson thought it necessary to advise us to take "lots of grub," as the place was full fifty miles from the county town, with very bad roads, and intervals of uninhabited districts stretching for ten miles at a time. In fact, it was one of those settlements that had pushed into our county from a neighboring one, and, although in the inspectorate of a well-

known and highly respected follower of Esculapius, it was far removed from the centre of his operations.

We were anxious to teach, and our experience as an amateur city missionary had qualified us to guide and control a certain amount of roughness in our scholars.

The difficulty of reaching the scene of our operations was not exaggerated by the reverend gentleman already mentioned, who had been up holding his first quarterly meeting in the district. It was a poor road, even in winter, when haply the Great Road-Maker sends forth His edict and myriads of white-robed messengers at His bidding speed to make the rough places of the earth smooth and passable. It would be useless to compare the winter road with that of the summer, because in the latter season there was no road. The oldest inhabitant asserted that there had been a road, but, long ago, by the joint action of the elements and the river-drivers, the crossways had departed, and it is probable that remnants of them might have been seen around Minden, Bobcaygeon, or even the Bay of Quinte itself.

It was, however, in the spring that we received the commission to go north, and we hastened to obey, knowing that delay was dangerous, for the balmy south wind might change the road of adamant into a liquid highway, available only for canoes. So indeed it happened. We had got over about thirty miles of our journey when we met a young Methodist student, who informed us that the ice was out, and his appearance confirmed his assertion, for evidently he had been in. He explained that his remarkable resemblance to the uncompromising Baptist of old was the result of his making a raft and thus voyaging over a lake of broken ice, in the last state of decomposition. His knowledge of river-driving was far below par, and, in consequence, he had been immersed several times.

Forewarned by him, our mind turned to canoes as our only means of progression. Haply a passing trapper, hunting up a lost hound, came in our way, and we appealed to him for help. Dismissing the team, we took up our abode with the trapper, whose dwelling-place was extremely primitive, consisting of a "dug out," without stove or window, but with a large hearth, on which glowed a fire of maple brands.

We slept on a shelf, which was so conveniently placed that without leaving our couch we could replenish the fire, and, if inclined to study, we had a capital view of the heavenly bodies by way of the wooden chimney, which was both wide and large.

We did not study long, but dropped off into a very refreshing sleep, from which we were aroused by the repeated pop, pop, pop, of a Winchester. We appealed to our sleepy nost for an explanation, which he gave in a single word, "deer," adding with a natural sigh, as he turned over for another sleep, "the boys are missing them."

In the early morning we arranged our plans. Our friend, the trapper, had some reason to believe that the stray hound would be found in the neighborhood of the schoolhouse, and for a slight compensation he agreed to guide us to the desired haven. We further agreed that he should carry the canoe, and we should carry his rifle and both our "turkeys," as a bundle of clothes and other necessities is generally termed. We relied on the height of the water allowing us to paddle over the immersed crossways, and contemplated an easy and comfortable voyage, broken with a few short portages. Thus with hope elated we dream of sailing up a series of small woodland lakes to our new home in the forest; but on reaching our first crossway our dreams were rudely dispelled, for the greater portion of what was left of the crossway was floating, and paddling a canoe was out of the question.

We at once held a council of war, in which we were joined by a youthful river-driver. This young man was one of fifty who had already commenced to conduct the logs cut in the forest to the saw-mills "at the float." His opinion, which he gave freely and without any charge, or even invitation, was that the "school-mam" should double up his pants and "wade in." We were at first inclined to resent his officiousness, and to treat his advice with disdain, because of the gender he had applied to us, notwithstanding our fairly developed whiskers and beard; but, later in the day, when enjoying a cup of tea in the camp, we found that the word "school-mam" was used irrespective of gen-

der. In fact, we were, in the language of these children of the woods, described as a "school-mam jumping back," although we had never been there before.

With the exception of our bark canoe spreading out and leaving us in the water for a few minutes, our journey from this point was uneventful. A chain of beautiful lakes connected the camp of river-drivers with our school section, and as the sun was going down we arrived at our destination.

(To be concluded.)

## School-Room Methods

### A LESSON IN CORRELATION.

BY DORA WELLS.

The subject was the angle worm, and it appeared that the teacher was a believer in the new education. At any rate she believed in correlation, and she correlated.

I looked over the children's language papers, and was charmed with the drawings that ornamented them. There were angle worms straight and angle worms curved. There were angle worms just emerging from the ground and angle worms stretched almost to breaking by vigorous and hungry robins. One child had given loose rein to his fancy and represented his worm coiling about a twig like a miniature boa constrictor. On nearly every paper the surroundings of the worm were artistic and pleasing. Grass and flowers waved over his form and butterflies danced in the air above him. Leaves such as he might be supposed to feed upon were placed near him. Nothing was omitted that might make life agreeable to him unless it was water, but then it is hard to represent water in a drawing.

I read some of the papers; the children were familiar with the burrowing habits of the angle worm. They knew how many tons of earth per acre passed through the bodies of angle worms yearly. They knew the depth to which they burrow, the effect of their burrowings upon the soil, and upon the submergence of large stones and heavy masonry. "Truly," thought I, "wonderful is nature study to develop a child's powers of observation."

They spoke of the curious little casts of earth found at the mouth of a worm hole. They described the food of the worms and their eagerness for water. The fact that angle worms are good for bait was not unnoticed, and their appearance during a rain was commented upon by all. "Truly," thought I again, "many are the valuable and useful facts to be learned from a systematic study of nature."

Several of the papers were read aloud. One youngster asserted that if you cut an angle worm into two pieces there will be as many angle worms as there are pieces, and I retired to my pocket-handkerchief when a bright-eyed little fellow waved his hand frantically and cried, "Teacher, is that the way the little angle worms get borned?"

A third child wanted to see the carving operation performed then and there, but the teacher demurred. She was a strong anti vivisectionist, and believed that angle worms should not be cut in pieces even to satisfy her pupils' interest in biology.

The beauties of correlation work began to glow before the eyes of my untutored mind when we came to the arithmetic lesson—I mean the number work, and my heart grew sad as I thought of the thousands upon thousands of children who have gone through their entire school life untrained by the method of our New Education.

"If three angle worms are found in one cubic foot of earth, how many angle worms will be found in four cubic feet of earth?" was the first question. "If a boy can dig five angle worms in ten minutes, how many angle worms can he dig in twenty minutes?" was the second. "Wonderful! wonderful! wonderful!" thought I. "Not only is the child's mind held steadily to thought about the angle worm till the subject has time to permeate his very being, but he is also learning the important facts that there are three angle worms in every cubic foot of earth, and that a boy can dig twice as many angle worms in twenty minutes as he can in ten. How warm and vital become the stupid four times three and two times five under such treatment as this!" I listened

breathlessly for the next. It was this: "One rainy morning Mary found twenty-one angle worms on the sidewalk in front of her father's house. The house was situated on a lot fifty feet wide. How many angle worms could she find by walking the length of a block, if the block contained fourteen lots?" Here again was useful information reaching into the domain of geographical division, and by still subtler processes of correlation into the realm of municipal government. I could readily see how coherent and, so to speak, unified would be the mental action of a child trained after this fashion from the first grade through the twelfth.

And again: John and Henry went fishing. John had seventeen angle worms in his bait box and Henry had none, so John gave him eight of his. How many did he have left? At this point I marvelled greatly that the teacher did not improve the opportunity to impress upon the children the beauty of giving, or she might have commented upon Henry's lack of thrift and foresight in starting on a fishing excursion without previously laying in a stock of worms; but she let the golden moment pass unimproved and told the children to put away their books and prepare for music.

I was obliged to leave to catch a train, but as I passed through the hall I caught the musical refrain,

There once was a funny, little, soft, brown worm,  
Who lived in the earth so dark. —

Verily upon the children of this generation three blessings have fallen—nature study, child study, and correlation, and the greatest of these is correlation.—*School Education.*

### A HAPPY FAMILY.

'Twas a bitter co'd morning, the new-fallen snow  
Had pierced every crack where a snowflake could  
go;  
The streams were all solid, the ice sharp and  
clear;  
And even the fishes were chilly, I fear.

Almost all the wild creatures were troubled and  
cold,  
And sighed for sweet summer, the shy and the  
bold;  
But one thrifty family, as you must know,  
Was breakfasting merrily under the snow.

Close by a tall tree, in a hole in the ground,  
Which led to a parlor; with leaves cushioned  
round,  
Five jolly red squirrels were sitting at ease,  
And eating their breakfast as gay as you please.  
—D. H. R. Goodale.

### THE GREEK'S STUDY OF HOMER.

What did the Greek teacher expect his pupils to get from their study of Homer? Probably two sets of good results, one affecting the mind, the other the soul. From the Iliad and the Odyssey the Greek boy could derive much information with regard to mythology, genealogy, and so-called history. They served also as reading-books, and took the place for a long while of formal grammars and rhetorical treatises. In other words they were to him a storehouse of facts. But they also filled him with emotions of pleasure. They charmed his ear by their cadences; they charmed his inner eye by their pictures; they charmed his moral nature by the examples they offered him of sublime beauty and bravery and patriotism. In short, they were to him a storehouse of ideas, and this, in the eyes of his teacher, was doubtless their chief value. But nowadays we need not use poetry as a storehouse of facts, and we need to use literature for this purpose, only so far as a good style helps in the presentation of facts, as, for example, in the case of history. With our long list of sciences, natural and linguistic and moral, we are in no danger of ignoring the world of facts, and are therefore free to use literature, especially poetry, in order to appeal to the emotions of youth. Hence, in inquiring how we may best teach literature, we are really inquiring how we may best teach the literature of the imagination: that is, poetry in a wide sense; for it would seem that literature used as a storehouse of facts might be taught as any other subject in the domain of facts.—*Prof. W. P. Trent, in the Atlantic.*

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## Literary Notes.

The editor of the *Arena*, Mr. B. O. Flower, has in the December number of that review a very interesting paper on the late William Morris. The two phases of Morris' life are made to appear each distinct, and the two in contrast to each other—the earlier time when he was the "idle singer of an empty day," and the later years when he had developed into the measure of the stature of a full-grown man, and his brain and heart were busy with the all-absorbing social problem. Morris' was a striking personality, and we are given a very good idea of it in this delightful paper.

"What Language did Christ Speak?" is the title of a valuable and suggestive paper in the Christmas *Century* by Mrs. Agnes Smith Lewis, who, according to Dr. Wm. Hayes Ward, in his preface to this paper, "made one of the greatest biblical discoveries of the century" when she found at Mt. Sinai an ancient Syriac text of the four Gospels. Mrs. Lewis found the leaves stuck together, "but she separated them by the steam of a tea-kettle, and took four hundred photographs, which she brought to England." The present article contains some facts which are not popularly known, on the subject of the language spoken by Christ and his apostles.

A series of articles of unique interest has been undertaken by *The Ladies' Home Journal*. It is to be called "Great Personal Events," and will sketch the most wonderful scenes of popular enthusiasm and thrilling historic interest which have occurred in America during the past fifty years. The series was started in the November number of the magazine, Hon. A. Oakey Hall, ex-mayor of New York city, sketching the scene, "When Jenny Lind Sang in Castle Garden." Mrs. Henry Ward Beecher, in the December issue, will tell of a remarkable scene in which her husband was the central figure: "When Mr. Beecher Sold Slaves in Plymouth Pulpit." Then Stephen Fiske will portray the furore and excitement "When the Prince of Wales was in America." Parke Godwin will follow this in a succeeding number with an account of the unparalleled excitement in New York "When Louis Kossuth Rode up Broadway." Hon. John Russell Young will sketch "When Grant Went Around the World," Mr. Young being of General Grant's



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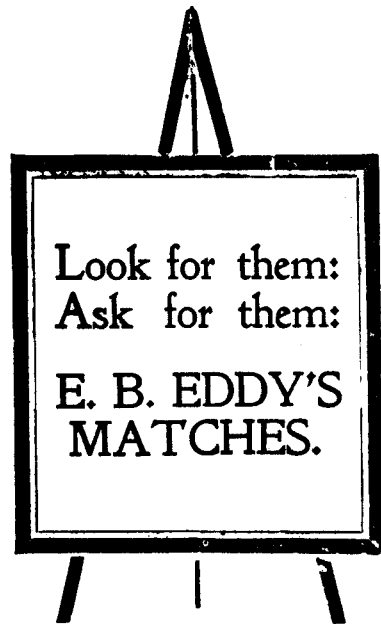
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party. The great scene in the Senate Chamber "When Henry Clay said Farewell to the Senate" will follow. Lincoln will figure twice in the series: first, in a description of "When Lincoln was First Inaugurated," and next, "When Lincoln was Buried." The series will extend through all the numbers of *The Ladies' Home Journal* during 1897.

We do not know how better to comply with the request of one or two subscribers, who have recently asked us to name an advanced work in bookkeeping which might be used as supplementary to the authorized text-books, than by calling attention to the announcement in our advertising columns of the eleventh edition of "The Canadian Accountant," by M. J. W. Johnson, F.C.A., of the Ontario Business College, Belleville. The simple fact that this is the *eleventh* edition, within the comparatively few years since this work was published, speaks volumes. A large amount of new and valuable matter has, we are told, been added in this edition, to what was before known as a thorough and valuable work. It is a practical book by one who is at the same time a practical accountant and a practical teacher. It has the great advantage for Canadians of being a Canadian book.

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