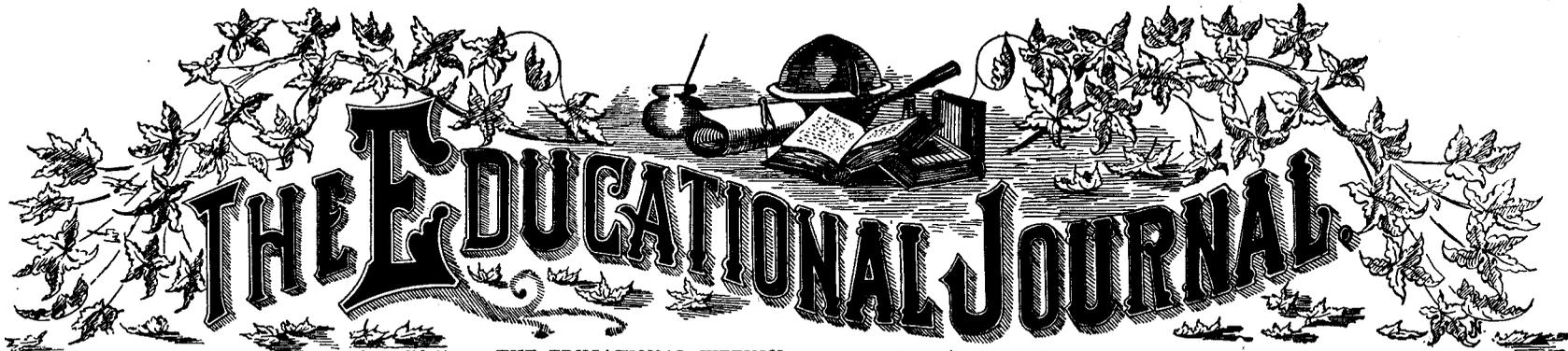


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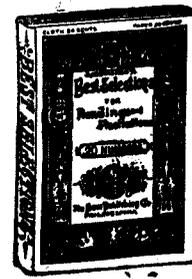
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March

- Minutes of County Council to Department, due, [P.S. Act, sec. 114.]
- Inspectors' Annual Reports to Department, due, [P.S. Act, sec 155 (5).]
- Inspectors' summary, township and village reports to Department, due.
- Auditors' Reports on the School Accounts of High School Boards, and the Boards of cities, towns, villages and townships to Department, due.
- Financial Statements of Teachers' Associations to Department, due.
- Separate School Supporters to notify Municipal Clerk. [S.S. Act, sec. 40.]

EXAMINATIONS 1893.

February :

23. Art School Examinations begin.

March :

15. Last day for receiving applications for Examination from candidates not in attendance at the School of Pedagogy.

April :

1. Applications for Specialists' certificates due.
24. Written Examination of School of Pedagogy begins.

May :

1. Specialists' Examination at University of Toronto. Notice by candidates for the High School entrance, and Public School Leaving Examinations to Inspectors, due.
24. Notice by candidates for the Primary High School Leaving, and University Matriculation Examinations, to Inspectors, due.

June :

1. Applications for Kindergarten Examinations, due.
5. Normal School Examinations begin. Practical Examination of the School of Pedagogy begins.
26. Examinations in Oral Reading, Drawing and the Commercial course in High, Public and Separate Schools begin.
28. High School Entrance Examinations begin. Public School Leaving Examinations begin.
29. Kindergarten Examinations at Hamilton, Ottawa and Toronto.

July :

4. Primary and High School Junior Leaving and University Pass Matriculation Examinations begin.
5. Examination for Commercial Specialists' Certificates at Toronto.
13. High School Senior Leaving and University Honor Matriculation Examinations begin.

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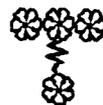
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Vol. VI.
No. 19

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* Editorial Notes. *

By the way, when on every hand is being felt the need of awakening a deeper interest in agriculture, and an enthusiasm for rural life, why is it that the attention of Government, educators, journals, and the public generally is fixed so exclusively upon the rural schools? Why should not a hopeful effort be made to interest the thousands of children who crowd the city schools, the great majority of whom have no definite life-work before them, in rural life and its pursuits? We are inclined to believe that a more hopeful work might be done in the way of giving city children a healthful bias in the direction of country life, than in inducing country children to remain on the farms. Movement, circulation, seems to be the law of modern times. Why not encourage it in this way?

We need not now express an opinion upon the adequacy, or otherwise, of the plan proposed by the Minister of Agriculture, described in another note, for aiding teachers in preparing themselves for the work of interesting children in the schools on the subject of agriculture. The plan may perhaps be the best at present practicable. We cannot, however, refrain from expressing the hope that when teachers return to their schools, and begin to put to practical use what they have learned, they may have something better in the way of help put into their hands, than the dry-as-dust text-

book which has been adopted by the Education Department. In these days of inductive and Socratic methods in education, the very appearance of such a text-book, is sufficient to dampen the ardor of any teacher or pupil.

A WRITER and educator who modestly wishes his name withheld, sends us the admirable article which appears elsewhere, on the desirability of culling freely from the great treasure-house of literature, and committing the choicest extracts to the keeping of faithful memory. In so doing we greatly enrich our own minds without reducing the stock or impoverishing any one else. We wish every teacher would read the article referred to—it is entitled "Commit to Memory," and get a strong conception of the great educational and moral blessing he or she may confer on the coming men and women now in the schools, by leading them to store their memories with choice and noble passages from the best authors, suited to their capacities. Which of us does not even now derive pleasure, and comfort, and blessing almost daily in recalling what was thus committed to memory in the days of childhood and youth?

OUR thanks are due to Mr. Ford for his interesting letter in another column, touching the progress of University extension work in Detroit. With reference to the excellent organization which was formed in Toronto, to which he refers, we fear that the symmetrical machine is dead and useless for want of the vital spark of enthusiasm to kindle it into warmth and set it at work. At least, if it is living and working, we are unable to learn anything about it. We fear our University professors are all too hard at work in catering for the wants of the few within college walls to be able to pay much attention to the wants of the many without. We feared at the first that a mistake was being made in identifying the work too closely with the Universities, and observation strengthens this fear. A few competent and enthusiastic educators, not identified with any particular institution, full of faith and love, might do a noble work in Canada.

SOME facts in the last annual report of Mr. Massie, warden of the Toronto Central

Prison, should be most seriously pondered *e. g.*, the fact that 1261 boys and 101 girls were during the year before the Police Magistrate. Mr. Massie's proposal that the State should take charge of every child which it can be shown is growing up under evil and dangerous influences, is scouted by many as too radical and socialistic to be entertained. It is probably too far ahead of the present progress of the science of Sociology to be immediately practicable, but, to our thinking, there can be little doubt that it is one of the great coming reforms. To look helplessly on while children are being trained up by thousands to become vicious and criminal men and women, reserving all our money and energy for their apprehension and punishment when they shall have become full-fledged, is too shortsighted and ruinous a policy to be perpetuated by an intelligent community. Of course the State must take hold of parents as well as child, and compel them to pay for the proper care and training of their children.

THE strong resolution passed at the recent meeting of the Farmers' Central Institute, in favor of making the subject of agriculture compulsory for Public School leaving and High School entrance examinations, is a sign of the times. An important announcement bearing upon the subject, was made by Hon. John Dryden, the Minister of Agriculture for Ontario, in his address to the same Institute. He announces that the local Government has decided to open a summer school at Guelph, which the teachers of rural schools will be invited to attend during the summer holidays. There will be given a series of forty or fifty lectures on subjects appertaining to agriculture, including chemistry, botany and geology, not with a view of fitting students in that short time to teach technical agriculture, but to prepare them to give a series of popular talks to the children on plant and animal life, nature of the soil with special reference to their immediate surroundings, and other kindred subjects which naturally present themselves in this connection. No additional subjects will be placed upon the school curriculum, which is already fully loaded, but the teachers will be advised to take up some of these subjects, say on Friday afternoon, a part of which is now usually devoted to readings, recitations, etc.

* Hints and Helps. *

THE VOICE.

VOICE, like carriage of the body, should be an indication of character, rank, culture. The spirit should compel the tones or speech to interpret it correctly. It is, moreover, a scientific fact that if you seek, mechanically even, to cultivate life in tone, brightness in speech, you will produce the structural growths of body and soul at first only suggested. Thus, if a woman, worn and debilitated, refrains from expressing in her voice the weariness of which she is conscious, and seeks, instead, to make her tones expressive of the happiness she does not possess, she will, as the result of her effort, be spiritually and physically refreshed.

The effect that the cultivation of a joyous tone has upon all life should be impressed upon the mind during the early years. The cultivation of the speaking voice is one of the imperative needs of the day, and no young lady's education is complete whose tones are harsh and discordant, or flat and tuneless. Study of the voice ought not to be delayed until other studies are completed. As soon as a child begins to read, an idea of how the voice should be used should be given him. Children naturally use their voices correctly, but they are ready imitators, and if the tones about them are harsh, throaty, and guttural, theirs soon become so. Very few teachers, even in the best schools, have any scientific knowledge of the voice. The importance of speaking distinctly is impressed upon the youthful mind, and, as his idea of distinctness is applied to that sound, sharp, disagreeable tones are cultivated.

A teacher's voice will often express the irritation she refrains from manifesting in other ways, and the moral results and influences of such action are hardly less serious than the physiological.

A child should be taught to have the voice always sweet, and this teaching should be more by example than by precept. Breathing exercises should be early given, and the voices and bodies allowed to develop naturally.

To keep the bright, happy, joyous ring of youth in the voice, is to keep the heart as well as the body young.

The kindergartners, those wisest of all people regarding the education of the young, say that at a very early age the musical ear of the child should be cultivated; and if it could be trained to detect false notes in the speaking as well as singing voice, new possibilities in the art of speech would unfold themselves.

Reading or reciting certain lines of poetry in various keys is an excellent way to cultivate music and variety of tone. Speaking on every note of the scale, alternately increasing and decreasing the volume of the voice, is also commendable practice.

Often marvellous changes can be effected in the voice by simple exercises calculated to free restricted muscles, and one is never too old to take these exercises. Faults in the voice are due to physical reasons which can and should be known, and it not infrequently happens that a course of lessons in vocal culture is a means of revivification to the entire system.—*Penn. School Journal.*

A COUNTRY READING CLASS.

THANKSGIVING was over, and the "big" boys and girls were coming in for the winter. The teacher, young and inexperienced, watched them shyly. They were rough, honest, simple-hearted, ignorant, fresh from the fields and farm-houses, eager for a little knowledge and a great deal of fun.

Still they brought an added interest into the school life, even if the work and discipline seemed harder, and soon nearly all the lessons, grammar, arithmetic, geography, etc., began to work in quite smoothly. All but the reading class! That was a weary time, as the little assembly of men and women, for in thought and manner some of them were truly mature, gathered around the well-worn Sixth Readers, and with the patience of indifference ground out the prose and poetry and historical selections they had read for the last two winters; then the heart of the teacher sank.

She must do something, but what should she do?

One evening, as she sat alone reading her Shakespeare, an inspiration came. They should know Shakespeare, too. She would get the "Merchant of Venice" and let them read it. Then she wavered—was it sacrilege? Would they understand it? Perhaps not, and they might lose even the little interest they now possessed. Finally, she determined to try, and invested in a number of little paper school editions—for the committee absolutely refused to pay for "such extravagances"—and brought them to school one winter's day. She gave them, first, a little talk. Told them of the great master who lived so long ago in the little town on the Avon. Of his life, his boyish scrapes, his after troubles and triumphs, and the immortality he has left behind him.

The next day they began to read the play. The story pleased them, the notes carefully explained by the teacher showed the meanings of the queer, old-fashioned words. The constant dialogue movement kept up the interest. In a little while the reading hour became one of the events of the day. How the big boys learned quotations and quoted them to the Jessicas of their fancy! And the big girls, how they laughed with pride and amusement at Portia's devices! There was wild excitement the day they read the "Trial Scene." When the dear little books were finished, the class eagerly asked for more, and this time the teacher did not have to buy them. They now entered the "Palace Wood" and met Titania in the "Midsummer Night's Dream."

By the time that was finished, the three months allowed by law were over. Spring had come, the boys were off to the fields, the girls to the farm kitchens. But the power of the little books still lingered, and the teacher noticed on her spring round of visits, the familiar volumes resting in state on parlor tables in many a farmhouse. Surely, she thought, some good had been gained. It had seemed ridiculous at first, a Shakespeare class in Green Meadow schoolhouse. But those boys and girls had felt even if dimly, the beauty of literature's greatest master.

Was it not something that she had pushed open a little wider the door that leads into the realm of "sweetness and light?"—*Florence E. Stryker, in N. Y. School Journal.*

A WINNING WAY.

A LADY whose writings are before a wide public, says: "I remember the first day I went to school; I had learned to read at home and it was felt I must have a teacher. A school was opened and I was sent. I ventured in the door. A lady sat at a table, and turned with a smile to me. I was completely surprised. I supposed I should see a sour-faced person. I sometimes think I loved that teacher as much as I did my mother, I could not be hired to stay away."

What very many lack is a personal interest in their pupils. They are wholly taken up with the subject matter—the geometry, the chemistry, the pupil is a human being, who is, for the time being, to give attention to geometry or chemistry, and that is all. But the human side is larger than the scholar side; and yet no attention is paid to the human interests, the affections, the hopes or disappointments. In many cases the key to advancement hoped for lies in the teacher's comprehending what is going on in that part of the child's mind not reached by the arithmetic or grammar.

There is something in us that can repel, there is something in us that can attract; the teaching process is not complete without an effort to win the pupil over to our standpoint. The teacher stands for a good deal more than 4+6; or 7-2, etc. Not only is he to inculcate these, but he is to make it appear that it is better to know them than not to know them; he is to show that those knowing them are *lovelier to live with*. The great end of education, unquestionably, is to make the world better; does the teacher exemplify the fact that he is one of the best ones in it—made so by education? Is not this expected of him by the pupil?

* * * * *

The great conquest made by the kindergarten never could have been made if its disciples had not had a winning way. The first thing that strikes the visitor in the kindergarten, is the effort of the teacher to attract the child. Very much of the procedure is planned to give an opportunity to the

teacher to show the child that she aims at his happiness.

If a journey is made to the colleges, an almost total absence of personal interest of teacher in pupil will be noted; and thus, too, is the institution marked by "scrapes" that are too often too disgraceful to speak of. President Hopkins, of Williams College, explained them as arising from the lack of the centripetal influence exerted by the family and friends. The student, heretofore, has felt moral and social forces operating on him; there was some one to please, some one who felt a personal interest in him. A student who has had President Harper, of the Chicago University, for a teacher, feels at once he is not satisfied with the correct repetition of a declension, but that he has a heart in his breast that wishes him well, that admires him because he is a student in search of knowledge and is trying to do his best.

The old day when the master went round with a whip or a ruler under his arm, has gone never to return; the new day is marked by an extraordinary effort to render the school-room attractive and all the school hours delightful. "Wisdom is better than rubies, and all the things that may be desired are not to be compared to it." The new effort is to show that we practically believe this to be true. We cannot make school-rooms and school exercises too attractive. *N. Y. School Journal.*

THE RECITATION.

No suggestion that I can make is more important than that teachers study how to get more done in the few minutes given to recitation, the purposes of which are to find out whether the work assigned has been done, and, if not, why not; to train the entire class to a more thorough understanding and expression of what they have learned, to apply what they have learned in new directions, and then prepare the way for the work of another day. All this must be done for ten or twenty different pupils with but thirty precious minutes in which to do it. I have often seen a teacher spend most of the time in getting at his work, standing idly by while pupils were at work at the board, or at work with one pupil while a dozen were unemployed and listless, or teaching as if he were helping the pupils learn their lesson, and using other devices apparently to kill time.

The problem of the recitation is, how to lay out work for pupils so that they will bring the necessary material to the recitation, and then for thirty minutes keep every boy and girl intensely busy and interested in listening, thinking and doing, in handling the matter of the lesson. At the close of such a lesson the pupils leave the room like young gymnasts, energized and strengthened intellectually by the vigor of the training. On the other hand, a sluggish recitation not only furnishes no good results, but trains to sluggish habits that make it impossible for a boy to gather himself upon occasion, as at an examination, and work vigorously and with effect.—*Superintendent Kiehle.*

WHY IT WAS CALLED SO.

EVERYBODY knows what "foolscap" paper is, but everybody does not know how it came to bear that name. In order to increase his revenues, Charles I. granted certain privileges, amounting to monopolies, and among these was the manufacture of paper, the exclusive right of which was sold to certain parties, who grew rich and enriched the Government at the expense of those who were obliged to use paper. At that time all English paper bore the royal arms in water-marks. The Parliament under Cromwell made sport of this law in every possible manner, and, among other indignities to the memory of Charles, it was ordered that the royal arms be removed from the paper, and that the fool's cap and bells should be used as a substitute. When the Rump Parliament was prorogued these were also removed; but paper of the size of the Parliamentary journals, which are usually about seventeen by fourteen inches, still bears the name of "foolscap."—*Ex.*

WHERE pity dwells the peace of God is there,

To worship rightly is to love each other,
Each smile a hymn, each kindly deed a prayer.

—Whittier.

Primary Department.

MUSIC IN PRIMARY CLASSES.

RHODA LEE.

At one time the singing in junior classes consisted solely of songs taught by rote. Occasionally attempts were made to introduce sight-singing by means of the staff-notation, but with little success. Happily the tonic-sol-fa system was made known to us, and it is now within our power to get excellent results in music from little children, making the subject just as reasonable, intelligible and pleasurable as any other in the school curriculum. This was not always the case.

It is probably due to the presumption that pre-historic man got his first ideas of music from the merry songsters, that we associate the thought of birds with the singing in teaching little children. Nature was doubtless the first music-teacher, and it is not at all improbable that man first learnt to sing by imitating the song-birds, many of which give us perfect intervals of our diatonic scale. Of course we always bring into prominence the sweet-voiced birds, and impress upon the children the vast difference between noise and music. Illustrations for this are the tuning-fork and a falling pointer, or a mouth-organ and a closing door. These are all sounds, but they are not all music. It is necessary, also, at the outset, to explain the manner in which a pure, full tone is produced. The lips rounded and slightly protruded, not drawn tightly over the teeth, the tone coming from between the lips and not through the nasal passages. The position of the body should be an easy one. Avoid any such strain as "hands behind" or folded arms. Instead, let the hands be clasped easily in the lap, or allowed to rest lightly on the edge of the desk.

Music may be divided broadly into tune and time. The first lesson should, of course, be in tune. My aim in this lesson is to introduce the three principal tones, *doh*, *me* and *soh*, with which the whole diatonic scale may be constructed.

In beginning I use the syllable *ah* instead of the musical names of the tones. I sing *doh*, class imitate. Just here let me say that imitative exercises must be used largely in beginning music. A great deal of ear training will be necessary, and there is nothing better for this than good imitative exercises. After singing one *doh*, sing two or three in succession. Children tell me in answer to my question that these tones that I sing are all alike. I then sing *doh* and *soh*, class note the difference, second higher than first. I then give the names for these two tones. After some exercise with these, *me* is introduced in something the same way. At first we use the vertical position for the notes, placing them thus:

soh
me
doh

The next step is, by careful questioning, to lead the children to observe the mental effect of the notes. They readily tell me that they are not alike, but cannot

quite explain the difference. After singing *doh* and *soh*, emphasizing them slightly to bring out the effect, I compared these two to a solid block of ice, and a bright, sparkling fountain. But which is the fountain? They almost all agree on *soh*. *Doh* the firm tone, *soh* the bright. Studying *me*, in the same way we find it to be a quiet, calm, lulling tone.

After the mental effects of these three tones have been fixed, we introduce ear-exercises, the value of which cannot easily be over-estimated. If a child is able to *think* music, he will not have much difficulty with the execution. The object of ear-exercise is to enable one to recognize a single tone or succession of tones as soon as heard. Exercise for this purpose may be given in a variety of ways. I place the numbers, 1, 2, 3, 4, 5, on the blackboard; pointing to these figures, and using the syllable *lah*, I sing to each a different note, telling the children to watch for *me*, the quiet tone, or again for *doh*, the firm and strong one. Class then indicate the number either by hand signs, writing or pointing. Occasionally, in place of the number 5, we have a bird or bird-house. The children then tell me what note the bird sings. A very good way of taking answers in ear-exercises is to supply the children with a set of cards, each of which bears the name of one tone. When an answer is called for, the children select the right card and hold it up for the teacher to see. Answers must be very promptly given if taken in this way.

I have already outlined sufficient work for three or four lessons, but before closing let me offer a few general suggestions: Sing for the children, but do not sing with them in the music lesson. Change the key-note frequently. In modulator drill or scale practice, occasionally ask another teacher in the school, or a pupil, to do the pointing, as there is a very great tendency to fall into grooves when only one person gives the exercises. Encourage individual singing. There is nothing better than this for cultivating self-dependence, observation and attention in sight-singing. At first a little timidity and self-consciousness will prevent children volunteering to sing, but they soon overcome this. Above all things have a definite aim in every lesson. Even with a fifteen minute lesson of this kind every day a class will make wonderful progress.

STORY-WRITING.

RHODA LEE.

WHEN children have acquired the necessary power over written language, there is nothing more delightful to them than story-writing. And no small part of the pleasure is in hearing the stories read.

The thought or inspiration for the stories may be given in a great many different ways. The simplest is to relate or read a short story, and sometime after, ask for a reproduction. Another plan is to require the pupils to write in their own words a story they have read. Very good compositions are suggested by pictures, and for this purpose it is a good plan to have a

collection of prints, colored or otherwise, such as appear with the *Graphic*, *London News*, *Dominion Illustrated*, etc. This exercise is a good one, but there is another which I have found to be still better, and that is the word-picture. For example, I say to my children, "I see a little boy standing on a street corner; it is a cold night, wind blowing furiously down the street, and snow falling, but the bundle of newspapers under his arm is still large." Every child weaves his story in his own way, supplying all the particulars himself. Another picture I gave a few days ago, was of a bright farm-house kitchen; two little children anxiously looking down the long white road. Just at that moment they are delighted by the sight of a sleigh turning into the road on which their house stands. The picture, although very scant, seemed to appeal to my little folks, and there was no lack of interest during that half-hour.

QUESTIONS ON POINTS OF THE COMPASS.

WHERE is the east? (Where the sun rises.)

Point to the east.

Who sits east of you?

Who east of him or her?

Stand facing the east.

Name some object on the east side of the room.

Where is the west? (Where the sun sets.)

Point to the west.

Point to the south.

Face the north.

Who sits west of you?

Who sits south of you?

Who sits north of you?

Name some object on the north side of the room.

Name some object on the west side.

Name some object on the south side.

What street (or lane) is on the east side of the school-house?

What street (or lane) is on the north side of the school-house?

What street (or lane) is on the west side of the school-house?

What street (or lane) is on the south side of the school-house?

If you face east, where is the north?

(Teach, north, south, east, and west are called points of the compass.)

In what direction is the clock from you?
In what direction is the teacher's desk from you?

On what side of the room are the windows?

On what side (or sides) are the blackboards?

On what street (or streets) is your school located?

Name some streets that run east and west.

(Teach a list of six or eight in the neighborhood of the school.)

Name some streets running north and south.

Name a street parallel to the one on which the school is.—*Oral Instruction in Primary Geography.*

The Educational Journal.

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PROFESSION IN CANADA.

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

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* Editorials. *

TORONTO, FEBRUARY 15, 1893.

Subscribers to the "Educational Journal" who do not receive recognition of remittances promptly will please excuse the delay, as we have to make extensive changes in our list in order to conform to the P.O. regulations. This will be completed in a few days, and acknowledgments will then be sent.

OUR PRIZE COMPETITION.

AS before announced, we received, in response to our offer of a series of prizes for the best model lessons on specified subjects, by Canadian public school teachers, about fifty manuscripts. These we placed, as soon as we could conveniently do so, in the hands of Inspectors J. H. Smith, of Hamilton, and J. Dearness, of London, who very kindly consented to examine the papers, and report upon their merits. We feel sure that the high character and attainments of these gentlemen, together with their thorough professional and practical knowledge of the wants of pupils in the public schools, and of the best educational methods of the day, will be accepted by all the competitors as guaranteeing the justice and impartiality of the awards. It will be

remembered that the examiners had before them only the pen-names or mottoes used by the different competitors, and did not, and do not, until they see this announcement, have any means of knowing the names or localities of the competitors.

Their report is now before us, and referring to the envelopes which accompanied the MSS., and which we have but now opened, we find that the successful competitors are the following:

TEMPERANCE.—*First Prize*, (Maple Leaf II.), Thomas Hammond, Principal Public School, Aylmer, Ont. *Second Prize*, (Marzyanna), Mary Agnes Watt, London South.

COMPOSITION.—*First Prize*, (Marzyanna), as above. *Second Prize*, (Barda), Barbara Stratton, Grassmere, Manitoba.

HISTORY.—*First Prize*, (Helen), Hattie Andrews, Goderich, Ont. *Second Prize*, (Rayne), James Grant, Guelph, Ont. (*Honorable Mention*, (Micawber), Marguerite B. Harrison, Granton, Ont. (Look Up), Emily Howard, School Section No. 17, Westminster, Ont.

GEOGRAPHY.—*First Prize*, (Nemo), C. N. Clow, Athens, Ont. *Second Prize*, (Rayne), as above. *Honorable Mention*, (Poesis Amicus), Jas. J. W. Simpson, Whitechurch, Ont.; (Green Leaf), Miss A. S. Hendry, Hamilton, Ont.

ARITHMETIC.—*First Prize*, (Maple Leaf II.), as above. *Second Prize*, (Bridget), Elizabeth Murray, Kingston, Ont. *Honorable Mention*, (Wolverton), Dora J. Bawtinheimer, Wolverton, Ont.; (A. L. Ive), Wm. R. Brown, Hallowell, Ont.

LITERATURE.—*First Prize*, (Marzyanna), as above. *Second Prize*, (Interest), Emily J. Garden, Stratford, Ont. *Honorable Mention*, (A Lover of Children), Mrs. Wanless, Dundonald, Ont.; (Look Up, Lift Up), Isabella Duff, Lakefield, Ont.; (Waterloo), Wm. Linton, New Hamburg, Ont.; (Rayne), as above; (Romeo), J. W. McCormick, Chesley, Ont.; (Azabu), Miss Emma Taylor, London, Ont.; (Canada), W. R. Brown, Hallowell, Ont.

GRAMMAR.—*First Prize*, (Trifles Make up Perfection).

[We have no envelope with this motto. Will the writer whose paper bears it kindly communicate with us at once, giving such brief account of the paper as will establish identity.]

Second Prize. This is, in this case, divided equally between (Medora) Sarah Longhurst, Windermere, Muskoka, Ont. and (Labore et Honore) George Spark, Petherton, Ont. *Honorable Mention*, (Marzyanna), as above; (Orpha), T. Walter McLean, Cavanville, Ont.; (L'Espérance), May L. Murray, Kingston, Ont.

The following observations by the examiners we are kindly permitted to publish:

COMPOSITION.—It is surprising that so few competitors entered. Of the five subjects proposed only two were used, "Our School-house," and the "Autobiography of a Jack-knife."

HISTORY.—There was a choice from seven fertile topics in Canadian History. The

competitors confined themselves to three, "Jacques Cartier," "The Quebec Act," and "The Rebellion of 1837." Historical lessons in which the personal element predominates, are much more easily taught than lessons that are mainly constitutional or social.

GEOGRAPHY.—Two of the competitors who took the formation of Streams, used the moulding board—(B. Book and Green Leaf). The method of both these lessons should be published. The same may be said of "Ben's" lesson on the Map.

ARITHMETIC.—"Maple Leaf," possibly to extend his paper over the 1,000 word limit, has made notes on five or six lessons in Reduction. The first one of the set (and perhaps others), is worth publication.

LITERATURE.—Twenty competitors entered in this subject. The average merit of their papers is decidedly higher than in any other subject. A good article for publication could be based on features of the papers of Lover of Children, Rayne, Romeo, Waterloo.

Besides the publishing of the prize lessons, useful articles could be based on certain groups of lessons, bringing out points of novelty or of special merit. Some of the lessons lack merit in general, in fact are erroneous in important respects, but yet have excellent points.

J. H. SMITH.

J. DEARNESS.

We take the liberty of adding the following extracts from a private letter by Inspector Smith, on returning the manuscripts:

Personally I have rather enjoyed the work for many of the papers were very suggestive. Some of the lessons, especially in literature and grammar, possess merit of no mean order, while others too plainly show the necessity there exists for missionary work in the field of practical teaching.

The liberal offer made by the EDUCATIONAL JOURNAL, deserves the gratitude of the teaching profession, and I have no doubt it will be the means of adding largely to your influence among its members. A second trial will in all probability call forth a more general response; your experience will enable you to so arrange the terms of competition, that a larger number of teachers will test their ability in giving "Model Lessons." Such a course will do much good, and in the end advance the interests of THE JOURNAL itself. It may take time to do it, but it will come.

There are some good points in each of the lessons, but not enough to warrant us in going farther than we have gone.

While we are glad that so many teachers have entered into the competition, we are somewhat surprised that the number was not still larger. As Inspector Smith suggests, our experience in this case will probably enable us so to arrange and modify the conditions, in case of another competition at a future time, that a much larger number will see their way to try their hand at the work. Some have written us that in their

opinion the number of words fixed upon as the minimum length of the papers, was too large. Perhaps they are right. This condition may have led some to put in "padding," after the leading outlines of the lesson had been sufficiently given, thereby weakening their papers. One or two the examiners were obliged to rule out in consequence of their falling below the limit. Such efforts have this very great advantage, that the time expended is not lost, even if no prize is won. We are quite sure that no one will regret the time and thought given to the preparation of a paper, even if it failed to win a prize. The work was in direct line with the teacher's daily professional duties, and we venture to say that we can think of no other way in which a portion of the time of a teacher could be more profitably employed than in the preparation of model lessons of this kind.

The competitors and other readers of THE JOURNAL, will, we feel sure, join heartily with the Publishers and the Editor, in thanking Inspectors Dearness and Smith for their kindness in consenting to act as Examiners.

The amounts of the respective prizes will be forwarded to the addresses of the winners within a few days after the appearance of this number of THE JOURNAL.

In next and following numbers we will commence and follow up the publication of the prize papers. These will be followed in due time by those which have received honorable mention and probably by others, if the writers see fit to leave them in our hands. As announced, we will, on the publication of any paper which did not win a prize, forward to the writer payment at our regular rates.

Should any of the unsuccessful competitors for any reason wish his manuscript returned, it will be sent at his request, which must be accompanied with stamps for return postage.

IS THE PUBLIC SCHOOL SYSTEM A FAILURE?

IF it be true that ideas rule the world, and if the extent of the sovereignty of an idea bears any proportion to its inherent grandeur, the destinies of our race must be largely influenced by the modern idea of universal education. Only a few decades have passed since this dream, as many regarded it, and as not a few still regard it, took possession of some of the progressive spirits of the age. It is not necessary to go back in thought to the dark ages, when books and the ability to read them were to be found only in cloisters, in order to get by contrast a conception of the wonderful

change which has been wrought in human minds by the entrance of this grand idea. We have but to recall a state of things which existed within the memory of our great grand-parents, when such education as was then available was the almost exclusive possession of the favored few, when the equivalent of a public school education of to-day was not possessed by the bulk even of the upper classes, and when the great body of the toiling masses had not even dreamed of a time when their descendants should be able to read and write, in order to set clearly before our minds the wonderful progress which has already been made in the direction of the good time coming, when the humblest toiler in all the land shall know something of the power and the joy which spring from the ability and opportunity to think the thoughts of the world's best thinkers after them. True, even the most progressive peoples are still far from the realization of such a dream, but not farther from it than from the condition of their ancestors above referred to.

The progress that has been made in the direction of universal education is one of the marvels of the century, or would be such to the most radical reformers of the last century, could they revisit the scenes of their former labors. And yet there are not wanting, even among men of education and of comparatively liberal tendencies, those who regard the public school systems of the day as a failure, and who are apparently ready to vote for their extinction, though what they would propose as a substitute, or whether they would return to the old state of things, under which education was the monopoly of the wealthy and aristocratic, and all literary ambition on the part of the "lower classes" regarded as presumption, we do not know. But for some reason it has lately become fashionable in certain quarters and with certain classes to sneer at the public school, and to declare it a failure. When we seek for the reason for this wholesale condemnation, we are unable to find that it rests on any better logical basis than the fact that public schools do not turn out finished scholars, and are not always presided over by such. Even a scholar of the wide reputation of Dr. Mahaffy has not hesitated in a recent magazine article, to express in the strongest terms his contempt for the public school of the day, and to express what seems very like a wish for their utter extinction.

The trouble with all such notions of learned men is their failure to appreciate the law of proportion. They forget, on the one hand, that the public school is yet in its infancy, that it has already made wonderful progress, and that it is every day making

further advancement, both in the quality of its teaching, and in the extent of its sphere. They forget that the theory of the public school is that the very fact of the possession of mental and moral faculties carries with it the right and the duty to seek their highest cultivation and development, and that in the meantime it is vastly better that every man and woman in the land should be able to read and write, than that one in a thousand should be a finished classical scholar, and the great majority unintelligent, ignorant, toiling machines, existing rather than living. It is astonishing with what persistency the notion keeps coming to the surface, especially in what are called educated circles, that an imperfect education, a defective culture, is worse than none, just as if all education and all culture were not a thing of degrees, falling short, at its highest pitch, of any very lofty, not to say ideal, standard. Pope's couplet, touching the dangerousness of "a little learning," taken in its common acceptation, is untruthful and mischievous. The most extensive human learning is comparatively, in view of the vast sum of attainable knowledge, a very little thing. And in the very nature of things there must be a stage in the history of even the most highly-educated mind, when the sum total of its attainments was "a little learning," even in the poet's sense.

We have not space to follow out the thought as it presents itself. Possibly these imperfect hints may suggest the broader, truer conception. Let us have faith in our public schools, and in their possibilities of improvement and development. Let us hold fast to the grand idea that every man and woman has, by the patent of nobility given in the creation of mind, an inherent right to all the education and all the learning possible for them, and that it is a noble work, a co-operating, if we may reverently say so, with God, to aid them in attaining the highest possible development.

"Let Knowledge grow from more to more."

FROM one-sixth to one-fourth, or even one-third of the whole school-time of American children is given to the subject of arithmetic—a subject which does not train a single one of the four faculties to develop which should be the fundamental object of education. It has nothing to do with observing correctly, or with recording accurately the results of observation, or with collating facts and drawing just inferences therefrom, or with expressing clearly and forcibly logical thought. Its reasoning has little application in the great sphere of moral sciences, because it is necessary and not probable reasoning. In spite of the common impression, that arithmetic is a practical subject, it is of very limited application in common life, except in its simplest elements—the addition, subtraction, multiplication, and division of small numbers. It indeed demands of the pupil mental effort, but all subjects that deserve any place in education do that. On the whole, therefore, it is the least remunerative subject in elementary education as now conducted.—*President Eliot.*

* Special Papers. *

AMERICANISMS.

IRENE WIDDEMER HARTT, YONKERS, N.Y.

We make use of many expressions in our writings and conversation that nonplus the Englishman, and bring the foreigner into difficulty when he sets out to learn our language. These are termed *Americanisms* and we get them from two sources. The first class are those adopted from foreign tongues, but which have been so changed in the process of being naturalized that the mother can no longer recognize her child.

The second class are to the manor born. They have been invented on some occasion to represent new acts which no word brought from the mother country quite expressed.

The Indians have left us few words; not nearly so many as we could wish. The very name Indian arises from a mistake made by Columbus. He supposed when he discovered what we call now West Indies that he had reached the East Indies. The Indians in their turn called the English *Yengees*, from which *Yankee* comes. Some Indian phrases have become so a part of our language that their origin is almost forgotten. Thus: "Digging up the hatchet," "burying the hatchet," "to be on the 'war' path," "a pow-pow," "to smoke the pipe of peace," and "*Indian file*," by which is meant single file.

The Dutch have left fewer traces on our language than on the face of the country. Some hills, mountains, towns and streams bear Dutch names, but many of them are so changed that they could not be recognized. The Bowery of New York bears less resemblance in looks to the *Bowery* (garden-bower) of the old Dutch city than in name. Brooklyn is called after *Breukelen*, a village near Amsterdam, Holland. We call the descendants of these Dutch *Knickerbockers*, after one family of them. The word Dutch originally meant Germans as well as Hollanders, coming from their own name, *Deutsch*. In the seventeenth century, Archbishop Trench tells us "Dutch meant German, and a Dutchman a German."

The Hollanders left behind them a favorite dish, which still bears the original name a little changed. The *donnet* survives as *doughnut*. The *cool slaw* (literally cabbage-salad), is still popular, although written cold slaw. So little is the real origin and meaning known that this dish when cooked is called "hot slaw."

The stoop, which designates the place between the steps leading up to the house and the door, is derived from the Dutch word *stoeps*, meaning seats. The burghers had seats here, and liked to sit upon them as they smoked. The word bush came from the Dutch word *bosch*, meaning a region abounding in trees and underbrush. Bushwhacker comes from this, and it used to mean the process of propelling a boat by pulling the bushes on the banks of the stream, but it has since become a name for lawless persons and fugitives from justice who take refuge in the bush. The Dutch word which has the strongest hold on American speech is *baass*. From it we derive "boss." Originally this meant simply a master or overseer, but now any one who has the least control is the "boss." Such as "boss-builder," "boss-carpenter," etc. If two people do not agree the one who carries his point is the "boss." The head of a party politically is the "boss." It has even been turned into a verb, and the man who undertakes any business "bosses the job."

A Dutch saint dear to the hearts of the children is *Santa Klaus*. It should be written *Klass*, and is an abbreviation of *Nikholas*. In Pennsylvania the Christmas gifts are brought by *Kris Kingle* or *Kringle*, which is adapted from the German *Christ Kindlein*, the Christ Child.

The French have given us even fewer Americanisms, and names. We have Beaufort and Port Royal in South Carolina, Castine and Mount Desert in New England, Champlain and the bayous of Louisiana, and some others. General Fremont first introduced the word *butte* for detached hills and ridges, and latter the word became a verb. It is used in the Northwest for chopping off anything with a dull axe. Then our *crevice* comes from *crevasse*, and *levee* written *levy* often, from the name

of an embankment. The *levee* of the French monarch gives us *levee*, which designates the President's public reception. *Prairie* is a French word. Canoes, and even larger boats "shoot the river," meaning to dart over the rapids in a swift current. The term comes from the French word *chute*, a name given to every place where a river hemmed in between high rocky banks is forced to fall with great violence to a lower level. *Bateaux* are still employed on the water courses of the old States like Virginia. *Cache*, the hiding place of valuable property, is heard only out west. In Canada the *caleche* of the early Acadians has become *calash* which means an old-fashioned gig, and an immense covering for the head. *Carriole* has degenerated into carryall. *Vendue* comes from the French word *vendre* to sell. *Bois bule* is called Bob Ruly. *Bois de vache* (buffalo chips) is bode-wash. The osage orange used to be known as *bois d'are* of the French, who made bows of the wood. We renamed it *bodark*, and later *bodak*. Some familiar names have been woefully changed. A Mr. *Bon Coeur* was called Bunker in New England, and it was near his hill that the famous battle was fought. *Pibaudieres* has become Peabody. *Bonpas* is Bumpers, and *De l'Hotel* is Doolittle.

Savery is one of the few words we get from the Spaniards. It is from *Quien sabe?* The word negro is Spanish. Creole comes directly from *criollo*, the Spanish word for a child born of European parents in the West Indies or on American soil. *Filibustero* was originally the Spanish for a small, swift sailing vessel, later it meant a lawless adventurer sailing in such a craft and from it we get fillibuster. The Spanish word *placer* used to mean only the pleasure of coming unawares to a rich gold mine. It now means not only the sand-drift which contains the gold, but anything which promises a liberal return of profit. *Bonanza* is also from the Spanish. The prairies to the south suggested to De Soto's followers the snow white *sabana* of their country, and from this comes Savannah. *Rancho* has been adopted as ranch.

We have few words from the German. From *standpunkt*, an outlook, comes our standpoint. Sour crout, spelled *saurkraut*, etc., and but few others. The interesting Americanisms are born on American soil. The great majority of them come from the West, where new scenes and new life need new names and new words. There they drop the more elegant diction as they drop the elegancies of life, and coin something short and to the point to suit the occasion.

Back country, *up country*, *down East* are purely American. *Grants* is the name given to the land which has been granted to a new railroad by the Government. *Plantation* comes from *plant*, meaning the land given any one intending to plant a colony. In the South, from this the farmer is known as a *planter*. The *Manors* were the Dutch *grants* which have disappeared. In Virginia the town *grants* were *blazed out* or *blazoned* by cutting some marks on the bark of a tree. This comes from the French word *blason* and has been so thoroughly Americanized that no one dreams of its foreign origin. A new comer in the West *blazes out* his pre-emptions by cutting a belt around the tree. In this way he prevents the sap from rising, and deadens the tree. These mark his land out. He *claims* this much ground, and it is called a *claim*. *Diggings* means with us a locality, and comes from indicating where digging for gold or any metal may be. *Hog-wallows* and *sink-holes* are hollows and hillocks where powerful springs suddenly arise, where a hog might wallow or one might be drowned in the hole. Little hills covered with timber are called *hammocks* in the South and *knobs* in the Northwest. *Oak-openings* are forests irrespective of the kind of trees, and *barrens* are where it is barren and no tree or shrub will grow. The dwellers in the pine barrens are nick-named *tar-heel* for obvious reasons. To *dry-up* is more frequently used than *drought*. In a drought springs frequently *dry up* or cease altogether, and thus to stop anything, even in conversation is to *dry up* in vulgar parlance.

Lot, once a lot or parcel of ground, means any piece of land now of a certain specified size, either large or small, for the living or the dead. *Across lots* is a short cut from one place to another, originating in cutting across a lot or field in the country. Forests are timber out West, called so on account of their value as timber. People *took to the timber* when the approach of hostile Indians

made them leave their homes and hide in the woods. Seeking shelter thus led to the phrase *to tree one's self*. *To tree game* comes from getting an opossum imprisoned in a tree. *Barking up the wrong tree* came from the dogs who helped in the chase, making a mistake about the tree where the game was and barking up the wrong one. The *stump speaker*, now common parlance all over the country, was first used because the candidate for office used this slight elevation when speaking in the open air. Now the candidate *takes the stump*, or *stumps the State* or *the country*. *Stump* or *stumpy* is anything short and thick, from the appearance and form of the stump. *Chunk* or *chunky* means very much the same. This may be a corruption of the old word *chump*, but it is not certain. *Truck* has changed its meaning. Formerly it meant small produce of cloth, now almost anything is truck, and a vegetable garden where things are raised for sale is hardly called by any other name.

A new settler having to raise up the timber when he built his house asked his neighbors' assistance, and they called in a *raising*; working like bees they added that word, making it a *raising-bee*; now whenever a lot of people come together to do any work it is called a *bee*, such as *quilting-bee*, etc. The westerner has learned to value his axe next to his rifle in clearing, and it is regarded as a misfortune when the axe and handle part company or the *axe flies off the handle*. This gives rise to our *flying off the handle* when under excitement. The old-fashioned gun would sometimes only flash instead of firing off, and this failure was called a *fizzle*. Now any failure is called a *fizzle*, especially where great things are expected. *To be a caution* comes from the caution required by new settlers in their intercourse with the Indians. A warning was called a *caution*, and from that a *marvel* and so on by stages till we have it.

The early westerners or pioneers never seemed to care to make use of the word *death*: it was too solemn for their easy, careless life, but as it would come to them they must call it something, so they expressed it as it was represented; *gone under*, because the body was put under the ground, *wiped out*, because they were no more; *snuffed out* like a candle; *kicked the bucket*, referring to the dying contortions of the body. The most contradictory name for killing a man is to *save*. They mean, however, that they *save* powder when an Indian is killed instead of being only wounded and having to be shot again. The bee hunter following the straight course of the bee to a given point gives us *to strike a bee line*, *making a bee line*. We have *air-line* from going straight through the air without turns. *To be sweet upon* comes from lavishing sweet words and manners on one of the opposite sex. Per contra, the man who does not like something or is fickle or discontented *sours on it*. Sweetening in drinks is either *long* or *short sweetening*, according to whether it is the product of the cane or maple, syrup or sugar. The word *cuss* is now believed to be short way of saying *customer*, an abbreviation of *ugly customer*. It is not always used in this sense. A *little cuss* is a term of endearment among the backwoodsmen.

The verb *lynch* and *Lynch law* are supposed to be called after a man named Lynch who came over to America in 1687 to suppress piracy. He took the law in his own hands and without special license brought the offender to summary justice. Becoming a Christian is spoken of in many different ways which would puzzle a foreigner. You *get religion*, *join the church*, *profess religion*, *experience religion*, *make your peace*, etc. To the Presbyterians, and not to the Methodists, as it is generally thought, we owe *camp-meeting*. Certain Presbyterian ministers held a sacramental meeting at a place called Cane Ridge in Kentucky, in 1800. It was attended by more than twenty thousand people and continued several weeks. This was the first camp meeting ever held in the United States. The *call* our clergy receive to minister over a certain church is an Americanism as is being *settled over* a church. *Donation parties*, *surprise parties*, *pound parties*, etc., are products of our own soil.

The negro term or name *Cuffey* is a corruption of the slang term *cove*. *Log-rolling*, now used to indicate that one congressman asks the aid of others to help him secure some local interest, was a term used by the early settlers when they used to assist each other in conveying logs. The candidate who tells his views plainly comes out *flat-*

footed: if he is not true to his party, he is weak-kneed, shaky, and is likely to be dropped, while he who is true to his party shows his backbone. *Caucus*, which the English have borrowed from us, is credited to *Caulkers*. It occurs for the first time in 1735 when the ship-owners of Boston held a meeting to decide on persons who were to be entrusted with places of influence. It is not known where *high-faluting* originated. *Shebang* is equally mysterious, if we will not accept the theory that it is of French origin and from *cabane*, which hardly seems probable. If *skedaddle* was not originated during the late war it was revived then. The only plausible explanation of this is that it is of Greek parentage from a verb meaning to *disperse* tumultuously. *Carpet-bagger* was the northern man who after the war went South with all his worldly goods in a carpet-bag expecting to return a rich man. *Green-back* is the short name for treasury notes printed in green ink. *Bogus* comes from *Borghese*, the assumed name of a remarkably successful swindler. A merchant who gathers wealth has made his pile. If he is not able to pay a demand when due he is *short*; anything that is missing or lacking is *short*. A bad failure leaves a man *dead-broke* or *flat-broke*. To go up the spout, meaning the same thing, comes from the pawn-broker sending the goods he loans money upon up a spout to another story. More frequently we leave off spout and say *gone up*. *Posting*, or *posting up*, meaning to give or get information, arises from posting up the ledger in book-keeping. The drinking habit is disguised under many names. It is proposed to have a *smile* all around, to stand treat, etc. *Treating* is purely American. *Boozy* was a gypsy word. The fine French *saloon* is dragged in the mire with us. A man makes a *ten-strike* when he is particularly successful in business or any undertaking. The expression originates in the game of ten-pins. Here the man who knocks over the whole ten makes a *ten-strike*. *Raft* was at first used to designate trees or timber caught on a sand-bar. The *schooner* is out and out our own. When this vessel, nameless, was first launched in 1713 a by-stander cried, "See how she scoons!" Thence comes the name. *Aboard* and *ahead* formerly referred only to navigation by water, now they are used in every possible sense and connection. *Sleeper* is a quick American way of indicating a sleeping-car. *Dead-head* once only used in cars refers now to anybody going anywhere free of cost.

Ad. is our peculiar manner of making two letters do the duty of thirteen. It is as well understood as *advertisement*. To *fix* is our word of words. *We could not keep house* without it. Everything that requires any arrangement is *fixed*. *Fix* also means embarrassment. *We get into a fix*. *We leave our fixings about*, etc. *Gap*, to denote a pass between two mountains is only used here. It describes an opening anywhere, as it once only meant an extended mouth. *To happen in* is abbreviated from *to happen to come in*. We alone deal in *notions*, or have *notion dealers*. *Pocket* survives from *poke*, as "to buy a pig in a poke." With the English the word *raise* is only used in reference to vegetables. From *raising* vegetables the Americans *raised* children. "Where were you raised?" is not an elegant but a common mode of speech. Cattle are *raised* on the same farm where corn is. *Rightaway* instead of *straightway* is said to have excited Dickens' wrath when he was in Boston. Expressive of our haste and hurry the word *to run* an establishment of any kind from a church to a grog shop, a canal boat to a large hotel, is used instead of *to manage*. *Slip* from *slipping in between* means an opening between two wharves or a dock. In the Northeast it designates a narrow pew in a church. It is also a cutting from a newspaper and a little child's loose garment. *Telegram* was born April 6, 1852, in the *Albany Journal*. Those who were alive before that had to say *telegraphic despatches*. The *wilting* of a flower gives us a much used word. *We wilt* when we retract or withdraw. "He wilted right down," is a common phrase.

Even vegetables have enriched our slang department. *Some pumpkins* and *small potatoes* express much in a short way. *Sauce* not unfrequently pronounced *saas* from its tartness is supposed to resemble a tart fruit stewed. *Jimson* was *Datura*, a weed from West Indies. It first took root near Jamestown and then was called *Jamestown-weed*, shortened to *Jimson-weed*, and now called simply *Jimson*.

Switches on a railroad came from their resemblance to the branches or switches of a tree. From that we now switch off anything when it is put on another track. A foreigner hearing us say "switch him off," would think we meant to whip him, while we would simply mean to make him change his plans by persuasion or otherwise. But I am exceeding my space and must stop.—From *Education for February*.

(Special Papers continued on page 302.)

Examination Papers.

EDUCATION DEPARTMENT, ONTARIO. ANNUAL EXAMINATIONS, 1892.

PUBLIC SCHOOL LEAVING.

AGRICULTURE.

Examiners: { CLARKE MOSES.
A. B. DAVIDSON, B.A.

1. (a) State some of the properties of each of the following gases: Oxygen, Nitrogen, Carbonic Acid, and Ammonia.

(b) Give approximately the composition of 100 quarts of air.

2. Explain the term "Soil," and give an account of its formation.

3. State how each of the following operations: drainage, ploughing and subsoiling, contributes to changing the dormant constituents of the soil into forms available for plant food.

4. Briefly state the benefits to be derived from a suitable rotation of crops.

5. Explain the term "Soiling," and state the advantages to be derived from a complete system of soiling.

6. State some of the evils resulting from the growth of weeds, and give methods for subduing (a) Canada Thistle, (b) Wild Mustard, (c) Couch Grass.

Values—12, 3, 12, 12, 12, 12.

TEMPERANCE AND HYGIENE.

Examiners: { CLARKE MOSES.
A. B. DAVIDSON, B.A.

1. (a) Give one example of natural distillation and one of artificial.

(b) Give the sources and some of the properties of alcohol.

2. (a) Explain what is meant by the following terms: stimulant, fermentation, coagulation, colloid.

(b) Give reasons why milk is considered a food and alcohol is not.

3. (a) In what respects does arterial blood differ from venous blood?

(b) State how venous blood is changed to arterial.

4. State the action of alcohol on (a) the corpuscles, (b) the fibrine of the blood.

5. "Alcohol, instead of keeping out the cold, allows the cold to rob the body of its heat." Fully explain the statement.

6. State the effects of alcohol on (a) the muscles, (b) the action of the heart.

Values—12, 11, 12, 16, 12, 12.

BOOK-KEEPING AND PENMANSHIP.

Examiners: { CLARKE MOSES.
A. B. DAVIDSON, B.A.

BOOK-KEEPING.

1. (a) Define Book-keeping. (b) Distinguish between Single and Double Entry, pointing out the advantages of each.

2. Name the books that would be used by a farmer and a merchant, each keeping his accounts by Single Entry.

3. How are the following accounts closed: Cash, Bills Receivable, Loss and Gain, Stock?

4. Explain the terms: Resources, Solvent, Net Worth, and show how the latter is determined by Double Entry.

5. (a) Commenced business with a Cash Capital of \$5,000.

(b) Bought of John Craig, for Cash, 800 bbls. Flour @ \$5.

(c) Sold Edwin Mills 400 bbls. Flour @ \$5.75. Received in payment his Note at 10 days for \$1,000, balance to remain on account.

(d) Bought of W. Brown, on account, 1,000 bushels Wheat at 90c.

(e) Deposited, in Bank of Commerce, the Cash on hand.

(f) Sold W. Hull 300 bbls. Flour @ \$5.50. Received Cash \$1,200, his Note for the balance.

(g) Edwin Mills has redeemed his Note by paying Cash \$500, and a new Note, with interest added for 3 months at 6%, for balance.

(h) Sold John Scott the remainder of the Flour @ \$5.50. Received in payment an Order on J. Baxter.

I. Journalize the above transactions by Double Entry.

II. Make out a Trial Balance, Statements of Loss and Gain, and of Resources and Liabilities.

III. Write out the Notes given by Edwin Mills, the first (c) negotiable without endorsement, the second (g) negotiable by endorsement.

PENMANSHIP.

NOTE.—In addition to neatness and legibility, the accurate formation of all figures and letters is required in the following:

Brantford, Apr. 21st, 1892.

Received from C. Mackie, his note of this date, at three months, for Eighty $\frac{100}{100}$ Dollars, in payment for a horse sold him 1st inst.

WM. W. CAMPION.

Values—4, 4, 4, 5, 10, 9, 4, 10.

| ACCOUNT SALES OF GRASS SEED FOR ACCOUNT AND RISK OF STEEL & KEITH, TORONTO, ONT. | | 40 | 75 | 65 |
|--|-----------------|-------|----|-------|
| 1450 lbs. Red Clover Seed. | 30 days | \$650 | 51 | \$598 |
| 3500 " Timothy Seed. | " " | | | |
| 565 " White Clover Seed, 60 days | " " | | | |
| 2000 " Hungarian Grass Seed, Cash | " " | | | |
| CHARGES. | | | | |
| Freight and Drayage | 8 | | | |
| Storage and Advertising | 10 | | | |
| Commission 5 per cent. | 32 | | | |
| Your net proceeds | | | | |
| 1892 | | | | |
| Feb. | 11 | | | |
| " | 6 $\frac{1}{2}$ | | | |
| " | 36 | | | |
| " | 3 | | | |
| Jan | 7 | | | |
| Feb. | 18 | | | |
| " | 18 | | | |

JARDINE & CO.

Montreal, Feb 20th, 1892.

DRAWING.

Examiners: { A. B. DAVIDSON, B.A.
JOHN DEARNESS.

NOTE.—Twenty-five marks constitute a full paper. The work on only two of the books to be attempted.

1. (a) Define symmetrical arrangement and illustrate it about the centre of a circle, using a compound curve.—Bk. I.

(b) On a vertical central line draw three squares touching each other. Trace the diagonals of each square to find the centre. Around each centre draw a circle, with a diameter equal to one-third of the diameter of the square. Around these three circles draw an endless curved band. Line in the diagonals outside the band.—Bk. I.

2. (a) Construct a triangle whose base is 3" and angles at the base 45° and 50°.—Bk. II.

(b) Describe a circle which shall touch the three angles of a triangle.—Bk. II.

3. Draw the perspective view of a line AB, 5' long, lying on the ground, its left-hand extremity touching the picture plane and its right-hand extremity 2½' to the right and 3' back, the eye of the spectator being at a height of 5' above the ground and 10' from the picture plane.—Scale ½' to 1'.—Bk. III.

4. Draw the pail and chair in the relation in which they are presented to you.—Bk. IV.

[NOTE.—The Examiner will place a pail on a chair in a position to be seen by all the candidates.]

5. Draw two designs of an iron casting for the top of a stone wall.—Bk. V.

Values—4, 9, 7, 6, 13, 13, 13.

* English. *

Edited by Fred. H. Sykes, M.A., EDUCATIONAL JOURNAL, Toronto, to whom communications respecting this department should be addressed.

WATERLOO.

BY LORD BYRON.
1788—1824.

GEORGE GORDON NOEL, FIFTH LORD BYRON, is the most remarkable literary figure of his century. No other poet of modern times has aroused so deep an interest in himself and his writings. He was born in London in 1788. His earliest years were spent in Scotland with his mother (his father had deserted them), a woman of most unfortunate temper, who gave the lad the worst possible training. He went to Harrow in 1801, and to Cambridge in 1805. He was always a poor student of text-books, but was an omnivorous reader of history and literature, storing his mind with the masterpieces in these subjects. In 1807 he was encouraged to publish his first volume, "Hours of Idleness." It was the time when "the new poetry" was being assailed by the critics, who stood firmly by the old models. The attack on Byron was fiercer than usual, but he aroused popular sympathy by his spirited poem, "English Bards and Scotch Reviewers," in which he pilloried his opponents to his heart's content. The satire made him famous. His private life at this time was most irregular, and he gradually came to be treated with coldness by his former friends. In disgust, he left England, and spent the next two years wandering about in Spain, Greece, Turkey, and Asia Minor. During his absence he finished the first cantos of "Childe Harold," which were published in 1812. The success of the book was wonderful. Seven editions were sold in a month. Byron said: "I woke one morning and found myself famous." He now became the greatest literary personage of England. The main reason for this was that his poetry was on a level with the popular mind, to which it appealed. It was a time of great political activity at home and abroad—England was about to engage in a conflict which involved her existence. While other poets sang of the beauties of nature, or spoke upon abstract subjects, Byron seized the moment to pour forth his inspired language upon the topics nearest the heart of the nation. His verses appealed to men because of their easy flow, the result of an extraordinary command of language, their melody and rhythmical effect. Sir Walter Scott claimed friendship with the man who had beaten him on his own ground. The poet Moore, too, became his friend and admirer. The friendship of the three great men is worthy of note. Sir Walter said of Byron: "I gave over writing romances because Byron beat me. He hits the mark, where I don't even pretend to fledge my arrow. He has access to a stream of sentiment unknown to me.... What I liked about him, besides his boundless genius, was his generosity of spirit as well as of purse, and utter contempt of all the affectations of literature. He wrote from impulse, never from effort, therefore I have also reckoned Burns and Byron the most genuine poetic geniuses of my time, and of half a century before me. We have many men of high poetic talents, but none of that ever-gushing and perennial fountain of natural waters." The turning point of Byron's social life came with his marriage.

He was deeply in debt, and married a daughter of the rich Sir Ralph Milbanke, chiefly on account of her wealth. The marriage was a very unhappy one, and Lady Byron left her husband. Soon afterwards highly-colored reports of Byron's cruelty to his wife were circulated, on account of which he was bitterly assailed by his enemies and coldly treated by his friends. In 1816 he again left England and never returned. He visited the field of Waterloo, where he got materials for his description of the battle; thence he went to Switzerland, and afterwards to Venice and Rome, where he spent three years. During this time most of his poems were written, viz: "The concluding cantos of "Childe Harold," "Don Juan," "The Vision of Judgment," "The Prisoner of Chillon," "Manfred," "Cain," and many others. In 1821 the Greek war of independence began. In 1823 Byron was invited to assist the Greek forces. His presence among them aroused the greatest enthusiasm, and he exhibited many qualities of a great leader. But his weakened frame could not resist the pestilential climate, and he succumbed to an attack of fever. He died April 19, 1824.

I. SUGGESTIONS TO THE TEACHER.

1. Explain the circumstances which led up to the stanzas of the extract. The battle had taken place the year before. Byron visited the field before the marks of the terrible carnage were obliterated. He takes advantage of the fact that the subject was still engrossing men's minds to paint a word picture of the struggle. Try to make the pupils betake themselves in thought to the *time* and *scene* of which the poet writes. The interest of the pupils will be doubled if the teacher can make a vivid representation of the circumstances.

2. Sketch on the blackboard the most graphic incidents related by the poet. Train the pupil's sense of proportion by getting them to distinguish the more important of these from those of less prominence. The former may be made the central thoughts of paragraphs, and the latter woven in.

3. The extract abounds in ellipses. The pupils should be required to fill these out.

4. Insist on a full paraphrase of the extract as a whole. If too long for a single exercise, it divides itself naturally at the end of the third stanza.

5. The aim of the lesson should be to excite a deep interest in the incidents, and, as far as possible, a keen appreciation of the poetry as a vehicle for the description of such stirring scenes.

II. EXPLANATIONS.

Stop!—The introductory word is abrupt because the battle was but a year old, and was still fresh in men's minds. The stanza is addressed to an imaginary visitor to the battle field.

Empire's dust.—What "empire?" How is the word "dust" used here?

Earthquake's spoil.—The overthrow of the empire is compared to the results of an earthquake. How is "spoil" related to "dust?"

Colossal bust.—An immense statue, the "Lion of Waterloo," was erected seven years later.

Trophied.—Usually means "covered with trophies;" here it means "memorial."

Moral's truth.—What is the moral?

Red rain . . . grow.—The shed blood has made the ground fruitful.

First and last.—The poet calls it the greatest of all battles.

King-making victory.—Napoleon had threatened to overthrow all the kings of Europe. His defeat made their thrones secure.

Revelry.—Festivity. It was the night before the battle of Quatre Bras, which preceded that of Waterloo, and the Duchess of Richmond had given a ball to the officers and their friends.

Chivalry.—Brave warriors.

Voluptuous.—Pleasing to the senses.

Bell . . . knell.—Notice how the poet changes the thought from the happiness of the "marriage bell" to the "knell" of the funeral bell.

Glowing hours.—Why is the word "glowing" used? Expand the meaning in your own words.

As if . . . repeat.—The sound of distant thunder.

Arm! arm! . . . roar.—What is it that makes this line so expressive? Note the climax (i.e. the increasing strength of expression) in the last four lines.

Windowed niche.—A bay-window.

Brunswick's fated chieftain.—Frederick William, Duke of Brunswick, a noted officer in Wellington's

army. Killed next day at Quatre Bras. "Fated" means, doomed to die.

Caught its tone.—Recognizes the sound of cannon.
Death's prophetic ear.—The poet here makes use of the fanciful idea that those who are about to die have all their senses wonderfully quickened, and receive warning from the other world.

His father.—Was mortally wounded at the battle of Auerstädt (1806), where he commanded the Prussian army.

Bier.—Sort of stretcher used for carrying the dead to their graves.

Knell.—Explain the common use of this word.

Choking sigh . . . repeated.—Explain the meaning.

Mutual.—Explain the difference between "mutual" and "common." Paraphrase these lines.

Mounting in hot haste, etc.—Show how these different clauses express the confusion of the sudden preparation for the flight.

Squadron.—Part of a regiment of horse-soldiers. Here, the general body of troops.

Impetuous.—Headlong.

Alarming.—i.e. Sounding the alarm; calling to arms.

Cameron's gathering.—A war-song of the Scottish Highlanders.

War-note of Lochiel.—The Camerons of Lochiel were the chiefs of a Highland clan.

Albyn's Hills.—Albyn, a name for Scotland, as Albion is a name for England.

Noon of night.—Compare this expression with "ere the morning star."

Pibroch.—The sound of the bagpipe, urging the warriors to the fight.

Fills . . . fill.—Note the grammatical difficulty, and also that "memory" is the subject of "instills."

Instills.—Means "pours in."

Evan's, Donald's.—Names of the leaders in the clan.

Ardennes.—A forest lying between Brussels and Waterloo.

Dewy with nature's tear-drops.—Nature is beautifully represented as weeping over the loss of life so soon to occur.

Inanimate.—Lacking the power of thought.

Lusty.—Strong, full of vigor.

Battles . . . array.—Note how these graphic words condense and complete the ideas contained in the two preceding lines.

Thunder-clouds.—A poetical comparison to a storm. A thunder-storm did really occur after the battle.

When rent.—When the clouds at last break away, and reveal the sight of the battle-field.

Heaped and pent.—Referring to the burying of large numbers in a single grave. "Pent" means "packed closely."

Blent.—The more usual form is "blended."

III. QUESTIONS.

1. Give a historical explanation of the first line. Explain the emphasis of the word "stop!"

2. Why was the victory said to be "king-making?"

3. Explain fully the incident mentioned in the second stanza.

4. Write out a full paraphrase of the first three stanzas.

5. Who was Brunswick's chieftain? "Why 'fated?'" Meaning of "death's prophetic ear?" Explain the last four lines of the stanza.

6. Explain, in your own words, the preparations for the departure of the soldiers.

7. Why does the poet mention the Scottish clan of the Camerons in particular?

8. Write down, so as to bring out the full meaning, the last five lines of the seventh stanza.

9. Write out the eighth stanza in your own language, supplying any parts of the sentences which are not fully expressed in the poetry.

10. Mention the lines of the poem which you think the finest, being careful to give your reasons.

11. Mention any rhetorical contrasts in the last stanza. Explain any unusual forms of words, and give their usual forms and meanings. Explain the special appropriateness of the metaphor "thunder-clouds," beyond its merely figurative use.

12. Which is the finest stanza? Why do you think so?

J. O. M.

'Tis not wit merely, but a temper which must form the well-bred man. In the same manner 'tis not a head merely, but a heart and resolution which complete the real philosopher.—*Shaftesbury.*

STORIES FOR REPRODUCTION.

(FOR JUNIOR CLASSES.)

NOTE.—The following exercises should be read carefully by the teacher to the class, or better, he should recite them from memory. The class, after hearing one, should be called on to reproduce the story. There need be no care taken to secure reproduction *verbatim*, though the teacher should see that at least the fulness of the original story is in the main retained. Praise will not, of course, be withheld from versions that have some merit of originality.

I.—THE KING AND HIS OLD GENERAL.

Once upon a time the king had invited his chief ministers and highest officers to dine with him. Among those present was a general who had won great renown in many battles and who had grown old in the king's service. The dinner was very elaborate and ceremonious, and consequently very long. During the endless conversation, the old general fell asleep. The rest of the party noticed this and some smiled with amusement, while others feared the result of this breach of etiquette. The king, however, no sooner noticed it than he said gravely, "Gentlemen, speak softly, do not disturb him. Many a long time has he kept awake for us."

II.—HOW A MONKEY MAY BE CAUGHT.

Among the many curious stories about monkeys, there is one which gives us a very unflattering idea of their sense. In Algeria, it is said, peasants are accustomed to capture wild monkeys in the following manner. They take a gourd and make a hole in it just large enough to admit a monkey's paw. They then partly fill the gourd with rice, and fasten it securely to a tree, and depart. The monkeys, which, as we know, are very inquisitive, soon discover the gourd and set about examining it. Finally one of them, bolder than the rest, puts his paw in, and seizes a handful of rice. But this makes his paw so large that he cannot draw it out through the hole. Either he is too greedy to let go the rice, or else has too little sense, which is more likely, and so he remains fastened there till the peasants come and carry him off.

III.—THE FOX AND THE CRANE.

A long time ago a Crane and a Fox dwelt close by one another, at a spot where a forest skirted a long line of marsh. They were very good neighbors, and Mistress Crane had helped Master Fox to many a good dish of fish, when the dogs of the neighboring farmers proved too watchful for Reynard. But Master Fox's returns had never passed beyond civilities and "I thank you's," till one day he invited Mistress Crane to dinner. The Crane set out in fine feathers for the Fox's den, and found, on arriving there, that her host had made very scanty preparation for her entertainment. One broad flat dish of soup was the only course. To this the Fox shyly invited her. But while he was able to lap up the soup with the greatest ease, she was unable because of her long thin bill to get anything, beyond a few drops, to eat. The Fox smacked his lips, assured her how much he had enjoyed the dinner, and dismissed her with his blessing. Mistress Crane went away meditating. She continued to meditate several days. Even the fish noticed a solemn and thoughtful spirit in their old enemy, and began to venture closer to the marsh. Finally she came to the conclusion that she had not that bill of hers for nothing, and one day sent over an invitation to the Fox to take dinner with her. Ten minutes before the appointed time, the Fox was on hand. The dogs had been exceedingly watchful, and Reynard was doubly hungry for the good things he felt sure were prepared for him. When dinner was announced, the Crane led the way into the dining-room, where the Fox saw in the middle of the table a large vase with a very narrow neck. The odor steaming from it was inviting enough, and the two prepared to do justice to its contents. But try as he might, the Fox could do no more than lap up a few drops with the tip of his tongue, while the Crane, seemingly unconscious of his difficulty, continued her meal with the greatest relish. When the last drop was done, she gravely thanked her guest for the pleasure of his company, hoping that he would soon come again to dinner. The Fox went away with outward politeness but with inward rage, feeling very cheap indeed at being outwitted by a long-billed bird. No sooner did he depart than the Crane, who had never before been known to smile

gave such a series of laughs that the whole forest echoed. And it is said that the mysterious cachinations which the hunter at times hears even to-day among the marshes, are occasioned by the recital by some elderly member of the Crane family of the now traditional tale of how the Crane paid back the Fox.

* Literary Notes. *

ARTHUR LORD gives the history of the old Pilgrims' Church at Plymouth in the February *New England Magazine*. The church has recently been burned down, and so interest is awakened in this historic spot. Walter Blackburn Harte makes a plea for the critics of literature, and insists that the best critical writing is creative literature, as much as good, bad, and indifferent fiction. The loungers at Dodsley's will read "About Critics and Criticism: with other Matters Incidental and Irrelevant," with amusement and profit.

THE editor of *The Arena* contributes to the February number a critical biographical sketch of the life and work of Charles Darwin and a trenchant editorial on the Low Ethical Ideas in Conservative Educational Institutions. He severely arraigns the "fast set" of Yale College, and exposes the lawlessness which characterized their actions in New York on Thanksgiving night. Mr. Flower also discusses "Inspiration and Psychical Phenomena as Experienced by Latter Day Poets." This number of *The Arena* contains able papers by Rev. M. J. Savage, Rabbi Solomon Schindler, Rev. John W. Chadwick, Helen Campbell, W. J. Rolfe, and other eminent thinkers.

THE *Expository Times* for February contains in its "Notes of Recent Exposition," some interesting remarks based on Professor Davidson's criticism of Duhm's Isaiah, on the distinction between criticism that is fair, and criticism that is preposterous and incredible; also some striking comments on the revolution that has taken place in the interpretation of prophecy. These "Notes" are always full of suggestion and are themselves well worth the price of the magazine. Other subjects treated of in this number by distinguished writers are, Milton's "Satan"; "The Babylonian Religion and Judaism"; "Old Testament Theology"; "The Ethiopic Version of the Old Testament"; Exposition of First Epistle of St. John; "The Gospels and Modern Criticism"; "The Teaching of our Lord as to the Authority of the Old Testament," besides "Incidents and Emblems," "The Great Text Commentary" and other departments, contributions and comments. Toronto: The Presbyterian News Co.

In the *Ladies' Home Journal* for February, Mr. Howells is at his best in his "Coast of Bohemia," and his admirable glimpses of girl-life in a great city. Mrs. Burton Harrison tells girls a great deal they will like to know of the social code of opera, theatre and concert, in the fourth of her popular series on "The Well-Bred Girl in Society." Octave Thanet has a very happy article addressed to wives, on "That Man: Your Husband," which Vera Bernardiere supplements with interesting glimpses of the results of foreign marriages made by American girls. Ella Wheeler Wilcox tells vigorously who, in her estimation, are the "Destroyers of Domestic Edens," while Rev. T. De Witt Talmage discusses woman's tendency for curiosity in an article on "The Curiosity of Eve." Mamie Dickens' reminiscences, "My Father as I Recall Him," deepen in interest as she tells this month of her great father's love for birds, sports and outdoor life. These make but a portion of the table of contents of this vivacious journal.

THE frontispiece of the February *St. Nicholas* is from Delort's painting of "The Capture of the Dutch Fleet on the Zuyder Zee by French Huzzars in 1794," and a beautiful piece of engraving it is. The opening story is one of Rudyard Kipling's interpretations of India—there is in it a good story for children, and a good study for the older readers. The next article plunges us into a cooling sea, and calls upon us to study "Battling under Water." Those who prefer to delve among relics of the past than to plunge into the sea, will maybe prefer Mrs. Orpen's "Boyhood of Louis XIV.," an excellent historical study, illustrated by beautiful pictures—particularly that of the statue on page 257. A long

ballad describes the misfortunes of Polly Cla, an Oriental cockatoo. It is chiefly notable for its local color. The number contains also two bright stories,—"Little Peter and the Giant," by Jack Bennett, and "How Janet Did It," by Katharine Festetics. No one should overlook the quaint Dutch child-song, "The Vrow that Lives by Haarlem Lake," a story that has the directness of a folk-story and the melody of a song.

THE reader of the midwinter number of the *Century* will find as the frontispiece a portrait of Tennyson engraved by T. Johnson, from the photograph by Mayall, which the poet, Lady Tennyson, and their son, all agreed in thinking the best portrait of the laureate. Probably the most notable article of the number is a semi-official paper by the Secretary of the Russian Legation in Washington, Mr. Pierre Botkine, entitled "A Voice for Russia," in which for the first time an authoritative statement is made of the attitude of Russia toward its political prisoners and its Jewish population. Clarence Clough Buel contributes vivid "Preliminary Glimpses of the World's Fair," and the Rev. Washington Gladden shows, in the second part of his series on "The Cosmopolis City Club," the actual working of an organization for municipal reform. An article of much freshness of topic by the Rev. John P. Peters, gives account of "An Art Impetus in Turkey," which is attractively illustrated from photographs of beautiful unpublished Greek statuary in the Museum of Constantinople, besides a full-page reproduction of the great Alexander Sarcophagus from Sidon.

Book Notices, etc.

Any book here reviewed sent post-paid on receipt of price. Address The Grip Printing & Publishing Co., Toronto.

Object Lessons. D. Salmon. Longmans, Green & Co., Publishers. Revised by John F. Woodhull.

There is, perhaps, no department of school work that suffers more (we judge from observation) from inexperienced teachers than the so-called object lessons. The fault is often one of lack of preparation on the part of the teacher; this can be remedied. But earnest, painstaking teachers often complain of insufficient information on a given subject, and of their inability to procure this. The volume under review fully meets this want, while it does far more. It is full of valuable hints and suggestions as to the best methods of giving an object lesson. These are largely from the pen of Mr. Woodhull, Professor of methods of teaching Natural Science in the New York College for the training of teachers. Part I. contains hints on preparing and giving lessons; it should be read by the teacher before each lesson. Part II. gives notes on lessons. The first year is devoted to lessons on common properties of matter, common animals and plants; the second year course is largely a continuation of the first, while in the third and fourth years, lessons on elementary chemistry, physics, and natural history form the subject-matter.

It is a book that should be in the hands of every public school teacher. W. H. J.

Catechism of Agricultural Chemistry. By Professor Johnston. Revised by Professor Aikman. Price 1s. Blackwood & Sons, Publishers.

The great impetus given of late years to agricultural education renders imperative a suitable textbook. The catechism has been in use in England and on the Continent for many years and has been found to accomplish a great deal of good. To those who believe the subject should be taught empirically the catechism will be found to accomplish all they expect. The information is thoroughly up to date and can be practically applied to the daily occupations of the farmer. W. H. J.

I HOLD the truth with him who sings
To one clear harp in divers tones,
That men may rise on stepping stones,
Of their dead selves to higher things.
—In Memoriam.

* Science. *

Edited by W. H. Jenkins, B.A., Science Master,
Owen Sound Collegiate Institute.

NATURAL SCIENCE IN PUBLIC SCHOOLS.

AN OBJECT LESSON ON THE CAT.
(From Salmon.)

REQUIREMENTS: A cat and a saucer of milk.

(NOTE.—Some teachers are afraid of the effects on the order of the class of introducing live animals. It is very questionable if such teachers should be granted a certificate. To obviate the difficulty much of the information may be obtained by the pupils at home.)

FOOD.—Show cat. "On what does this cat live?" If we did not give her any food, on what would she live? Emphasize the fact that cats catch their prey alive.

FEET.—Have children count claws on fore feet, and on hind feet, and make them observe that the former are longer and sharper than the latter. Elicit reason. With which claws does a cat catch a mouse? Which claws have most weight on them when the cat is climbing a tree?

Each claw has a sheath of thick hard skin. Let children see the sheath and make the cat project and retract her claws. Elicit use. Why must the claws be sharp? What would happen to them when the cat was walking if they had no sheath?

What would a mouse do if she heard the cat coming? What makes the cat able to move without making a noise? Show pads under each toe and under the middle of each foot.

TEETH.—Show. Then elicit that the teeth are formed for tearing and not for chewing.

TONGUE.—Let the cat lick a child's hand. To induce her to do so put some milk on the hand. "How does the tongue feel?" Explain that the roughness is caused by little hooks fixed all over the tongue and pointing backwards. How does the cat get all the meat off the bone?

Let the cat lap some milk, and make the children observe the spoon-like action of the tongue.

EYE.—Make the children observe that the pupil, in the bright light, is a narrow slit. What is the shape of the pupil at night? Compare the admission of light through the pupil to the admission of light through a window. Why do we pull down blinds when the sun is shining? Why does the cat's pupil become small in a bright light? Why do we pull up blinds towards evening? Why does the cat's pupil become large in a poor light?

WHISKERS.—Make children touch the end. They will perceive that the whiskers are stiff and that the cat feels. Should we feel if the ends of our hairs were touched? Elicit use of whiskers. Why does a blind man hold a stick before him? Why do we hold our hands out when walking across a room in the dark? When does the cat go about most?

FUR.—Make children feel that the fur is not oily. Why does father oil his boots in rainy weather? Does the cat dislike wet? Does the duck like wet? Is its coat oily?

HABITS.—Let the children say what they know about the habits of the cat.

PRACTICAL PHYSICS FOR PRIMARY STUDENTS.

APPARATUS: Galvanometer (directions for making one are given in the appendix to the H. S. Physics), pieces of zinc, copper, carbon pencils, a little mercury, and a few yards of insulated copper wire, No. 18. A cell containing sulphuric acid and water.

PROBLEMS:—1. Connect a zinc and copper strip by a piece of insulated wire; insert the galvanometer in circuit. Place the metal plates about half an inch below the level of the liquid in the cell. Note the deflection of the needle.

2. Keeping the metals the same distance apart as in 1, immerse 1 inch of the plates in the liquid. Note deflection. Is it twice as great?

3. Separate or bring closer together the plates in 2, keeping the same amount immersed. Note deflection.

4. Leave the plates immersed for say five minutes and notice if the deflection of the needle changes

during that time. If so, examine closely the copper plate.

5. For the plates in the battery use a bit of commercial zinc and a bit of amalgamated zinc. Is there any current?

6. Use two copper plates instead of the zincs. Is there a current?

7. Repeat 6, using two carbon plates.

8. With a zinc-copper cell attach the wires to a galvanometer, note the direction of deflection. Now attach the battery wires to the opposite posts of the galvanometer. Note direction. Devise a plan to change the direction of deflection without changing the attachments of the wires.

9. Make up a zinc-copper cell and a zinc-carbon cell, join the two zincs by a wire, and connect the copper and carbon plates with the poles of the galvanometer. Is there a deflection? What is the direction? Which cell is the stronger? This is joining cells in opposition.

10. Take a zinc-copper cell, connect the plates by insulated wire with a galvanometer. Now cross the wires. Effect? Remove a small bit of the insulation from each wire and cross the naked wires. Effect? Does the current enter the galvanometer? What is meant by short circuiting?

11. Procure 48 yards each of No. 16 and No. 30 copper wire and No. 30 German silver, all insulated. Divide the first two into lengths of 32 yards and 16 yards. Insert each in turn into a circuit in which is also a galvanometer. Keep a record of the deflections in each case. Is there any similarity between the results in this experiment and those in Problems 1, 2, 3?

NOTE.—It will take probably 12 lessons to record the observations to all these problems. Pupils' note books should show the problem stated fully, their observations, and a blank for the conclusions. These should not be inserted until the teacher has questioned fully, and obtained the required observations.

INTERESTING NOTES FOR GENERAL READERS.

THE OSTRICH: It lives in the most barren stretches of Africa and Arabia. It is omnivorous. It will devour cabbage, frogs, lizards, spoons, unopened oysters.

Ostriches are polygamists. The females lay ten to eighteen eggs; four or five females deposit their eggs in one nest. They take turns with the male in hatching. The nest is a sand hollow.

Incubation last thirty-eight days. Fresh eggs are laid during the period of incubation for the fresh hatched young.

The young ostrich is at birth about the size of a spring chicken.

The eggs are delicate, weigh three pounds. The adult bird weighs one hundred pounds. It can kick hard enough to satisfy a wolf. Utmost speed one mile in one-half minute; stride from twelve to fourteen feet.

Its cry resembles a lion. Its enemies are vulture, jackal, hyæna.

THE BAYA: The baya bird of India spends his nights in catching fire-flies, with which he plasters his nest. The baya does not kill the fly, but simply attaches it to his nest by means of a piece of moist clay. On a dark night a baya's nest has the appearance of an electric street lamp. Evidently the baya does not like to be in the dark, and he utilizes the ready-made lamps he finds about him in an intelligent way.

The initial velocity required to make a terrestrial body a meteorite is eleven thousand meters.

The minimum velocity at the moon would be sixteen hundred and sixty-eight meters, consequently if it possessed volcanoes of sufficient power some meteors might come to us from it.

FOR CORRESPONDENTS.

T.R.E.—We are pleased to learn that the Science column has been of assistance to you. Your difficulties will probably be among those of other teachers. In Science teaching he is a most remarkable man who has never met with things he could not explain.

J.B. (MINDEN).—How to tell the age of trees? This question was partially answered in a previous

number. Take a cross section of the stem, count the concentric rings. This will give you the approximate age. In some countries of prolonged drought, aestivation is not annual, and, consequently, no ring would be formed during the year in which it did not take place.

QUIZ.—Does a ball fired from a cannon return to the earth with the same velocity it had on starting? Yes; if its initial direction is vertical.

School-Room Methods.

ARITHMETIC TEACHING.

COMMON FRACTIONS.

BY MARK LANE, NEW YORK CITY.

At a meeting of the teachers' association of Suffolk county several years ago, a paper was read on arithmetic, in which the writer cited nine hard points:—1. The use of figures and addition. 2. The multiplication table. 3. Long Division. 4. Common fractions. 5. Denominate fractions. 6. Percentage. 7. Rule of three. 8. Square and cube root. 9. Alligation. In the discussion that followed one remarked that it would seem from this that arithmetic was pretty much all hard points.

The more skilful teachers consider (1) the management of common fractions; (2) percentage; and (3) square and cube root as the only points at which the pupil is likely to meet with perplexity. This reduction of difficulties has come from the teachers aiming at brain-culture rather than pencil-manceuvring—that is, rule-learning.

TWO PRELIMINARY STEPS.

The first step will be to show that fractions may have different forms: that $\frac{1}{2} = \frac{2}{4} = \frac{3}{6}$, etc. The same must be done with $\frac{1}{3}, \frac{1}{4}, \frac{1}{5}, \frac{1}{6}, \frac{1}{7}, \frac{1}{8}, \frac{1}{9}, \frac{1}{10}$. Let it be noted that this equivalence must be shown. Some teachers teach this solely by figures, they say $\frac{1}{2} = \frac{2}{4}$, etc. This throws the learning of the fact on the memory; it is a matter for the understanding. It makes little difference whether the boy is ten or fifteen years of age; give him a circle, and let him show you other equivalent forms for $\frac{1}{2}$. A pair of scissors, a pair of compasses, and some manilla paper in the hands of each pupil are absolutely necessary.

A boy who had been "through arithmetic," witnessed with curiosity the operation of cutting a circle so as to show the meaning of certain statements concerning fractions and then said, "Well, I never thought it meant that way before."

The teacher will say, show me what $\frac{1}{2}$ is equal to. ($\frac{2}{4}$.) Show me another form it is equal to. ($\frac{3}{6}$.) How about $\frac{2}{4}$ and $\frac{3}{6}$? "They are equal." Why? "Things equal to the same thing are equal to each other."

In a similar way $\frac{1}{3}, \frac{1}{4}, \frac{1}{5}$; etc., will be treated.

In a similar way, $\frac{2}{3}, \frac{2}{4}, \frac{2}{5}$, etc.

In a similar way, $\frac{3}{4}, \frac{3}{5}, \frac{3}{6}$, etc.

It will be a capital exercise for the pupils to make a table of 24 columns, thus:—

EQUIVALENT FRACTIONS.

| | | | | | |
|---------------|---------------|---------------|---------------|---------------|------|
| $\frac{1}{2}$ | $\frac{2}{4}$ | $\frac{3}{6}$ | $\frac{4}{8}$ | | |
| $\frac{1}{3}$ | | $\frac{2}{6}$ | | $\frac{3}{9}$ | |
| $\frac{2}{3}$ | | $\frac{4}{6}$ | | $\frac{6}{9}$ | etc. |
| $\frac{1}{4}$ | | | $\frac{2}{8}$ | | |
| $\frac{2}{4}$ | | | $\frac{4}{8}$ | | etc. |

This can take all fractions from $\frac{1}{2}$ to $\frac{1}{12}$, inclusive.

2. The second step is to show that "over-unit" fractions have another form. (This is the "improper fraction" of the books.) Show me three halves; they are equal to what? "One and one-half." That is written thus, $1\frac{1}{2}$, etc., etc. Numerous examples follow.

The ground is now clear for computation with fractions. All statements concerning fractions can

be made visible. Let not the teacher think he is wasting time because he keeps the pupil in sight of the shore. He can make a show of knowledge by requiring him to memorize rules, but the thinking power is not cultivated; to educate is to train the pupil to think. A lady was lately met by a graduate of a noted public school who said: "I never can tell what three-quarters or two-thirds of anything costs; I never understood it." Yet she performed the examples!

TYPE PROBLEMS.

It is best for the teacher to have a clear view of the work he proposes to accomplish. There are four problems that embrace the whole field of fractions:

1. John has $\frac{3}{4}$ of a dollar, James $\frac{1}{2}$ of a dollar, how much have both?
2. John has how much more than James?
3. (a) John buys 3 oranges at $2\frac{1}{2}$ cents each; what is the whole cost? (b) John buys $\frac{1}{2}$ a yard of cloth at $\frac{3}{4}$ dollars a yard. Required the cost.
4. (a) John divides $\frac{1}{2}$ of a dollar among 4 boys; how much to each? (b) He gives $\frac{3}{8}$ of a dollar for $\frac{3}{8}$ of a yard of cloth; what is the cost of a yard?

The problems 3b and 4b involve somewhat intricate processes of thought, and they are postponed for the second stage in fractions. The others can be rapidly learned.

ADDITION AND SUBTRACTION.

Problem: I bought $\frac{1}{2}$ a yard, and then $\frac{1}{3}$ of a yard; how much in all? The pupil goes on to find equivalent forms, with equal denominations. He may use the table referred to. This is a little longer road at first, but when one knows the road he will "cut across lots" himself. A pupil exemplifies; he turns to the circle, he cuts a half into three-sixths; he cuts a third into two-sixths; these pieces are of the same size; he counts them up. Now, the symbols are placed before him and they are understood. $\frac{1}{2} = \frac{3}{6}$; $\frac{1}{3} = \frac{2}{6}$; in all $\frac{5}{6}$.

MULTIPLICATION.

Problem: I gave three boys each a half orange, how many oranges?
 "Three times one-half is three halves, an over-unit fraction equal to $1\frac{1}{2}$. A pupil exemplifies it. Other problems are solved in the same way, as: 4 oranges at $\frac{1}{4}$ of a cent; 5 apples at $\frac{1}{5}$ of a cent, etc.

DIVISION.

Problem: Divide $\frac{1}{2}$ into two parts. The pupil exemplifies by cutting a half-circle into two parts. Make a statement: $\frac{1}{2}$ divided by 2 is $\frac{1}{4}$. The teacher writes:

$$2)\frac{1}{2} = \frac{1}{4}; 2)\frac{1}{4} = \frac{1}{8}; \text{ etc., etc., etc.}$$

Nothing need be said about "multiply the denominator," the pupil sees what to do; besides multiplying the denominator does not divide the fraction—it only furnishes a form that may be used as the result of a division.

Here are $\frac{2}{4}$ of a circle. I want to divide them among two boys, how much does each get? The teacher writes:

$$2)\frac{2}{4} = \frac{1}{4}; 2)\frac{1}{4} = \frac{1}{8}; \text{ etc., etc.}$$

THE WORD "OF."

This word "of" comes into much use in fractions; it means division.

Show me $\frac{1}{2}$ of $\frac{1}{2}$. The pupil cuts a half-circle into halves. Show me $\frac{1}{2}$ of $\frac{1}{4}$. The pupil exemplifies. The teacher writes:

$$\frac{1}{2} \text{ of } \frac{1}{2} = \frac{1}{4}; \frac{1}{2} \text{ of } \frac{1}{4} = \frac{1}{8}; \text{ etc., etc.}$$

In a similar way $\frac{1}{3}$ of $\frac{1}{2}$; $\frac{1}{3}$ of $\frac{1}{3}$, etc.

So that $\frac{1}{2}$ of $\frac{1}{2} = 2)\frac{1}{2}$; $\frac{1}{2}$ of $\frac{1}{4} = 2)\frac{1}{4}$; etc., etc.

I give this problem: What is $\frac{1}{2}$ of $\frac{1}{2}$? What do you understand? "To get a half I must divide by 2. $\frac{1}{2}$ divided by 2 gives $\frac{1}{4}$; hence, $\frac{1}{2}$ of $\frac{1}{2} = \frac{1}{4}$."

We conclude that when we say $\frac{1}{4}$ of $\frac{1}{2}$ we mean $\frac{1}{8}$ divided by 4, etc.

What do I mean when I say $\frac{1}{5}$ of $\frac{1}{3}$; $\frac{1}{4}$ of $\frac{1}{7}$; $\frac{1}{8}$ of $\frac{1}{3}$; etc., etc.?

GIVE PROBLEMS.

The way to add, subtract, multiply, and divide fractions being known, the teacher should now give appropriate problems—not less than 100. He should make them up, dictate them.

Bought $\frac{1}{2}$ yard of cloth, then $\frac{1}{3}$, then $\frac{1}{4}$, how much?

Had $\frac{1}{2}$ yard of cloth, and sold $\frac{1}{3}$ of a yard. How much left?

Bought 7 apples at $1\frac{1}{2}$ cents. How much?

Gave $15\frac{1}{2}$ cents to 4 boys. How much to each? etc., etc., etc.

All these can be exemplified by the circle as a unit.

The plan proposed, as will be seen, is to get the pupils at once at work in fractions, not learning definitions or rules. As soon as the two steps are clear they can forge ahead and work thousands of examples.

The great effort should be to prevent confusion. When the pupil says, "I must multiply the numerator or divide the denominator, I don't know which;" then confusion has come, and it often comes to stay.

The first stage should bring the pupil to a practical working out of problems that form the bulk of those he will meet with. He solves them by brain power, not by rules.

THE SECOND STAGE.

There are problems in which the road to the solution is not so apparent. While the pupils are busy with the hundred problems the teacher at the recitation discusses results of operations on fractions that will appear at this stage.

(1) Here is $\frac{1}{2}$; what is twice $\frac{1}{2}$? "Two halves." And that equals 1; so, to be short, we can say twice $\frac{1}{2}$ is 1; he writes on the board $2 \times \frac{1}{2} = 1$. So he takes up $3 \times \frac{1}{3}$; $3 \times \frac{2}{3}$; $4 \times \frac{1}{4}$; $4 \times \frac{2}{4}$; $4 \times \frac{3}{4}$; etc., etc., etc.

One will be tempted here to introduce *canceled*—don't do it. "Sufficient unto the day is the evil thereof." Wait. Nor is it best to give a rule; a sufficient number of examples will force them to make a rule themselves.

(2) Problem: John has $\frac{1}{2}$ of an orange and divides it among two boys. What has each? They will solve this readily.

Problem: John has $\frac{1}{2}$ of an orange and divides it among two boys. What has each?

Here is the circle: here is the $\frac{1}{2}$; I divide it and give each a piece. What part is each piece of the circle? "One-tenth."

What is $\frac{1}{2}$ of $\frac{1}{3}$? $\frac{1}{3}$ of $\frac{2}{3}$? $\frac{1}{2}$ of $\frac{3}{4}$? etc., etc., etc.

Numerous examples must be given so that the pupils will increase the denominator when he divides. Let it be exemplified on the circle by a pupil that seems to be slow.

These two effects of operations must be distinguished from the operations themselves.

Problem: John buys $\frac{1}{2}$ a yard of cloth at $\frac{3}{4}$ dollars a yard. Required the cost.

Now, a bright pupil will see that to get the cost of a half yard, he must divide by 2. But such an example is placed under multiplication, and so he is taught to "multiply the numerators for a new numerator;" etc., etc.

Problem: John buys $\frac{3}{4}$ of a yard of cloth at $\frac{5}{8}$ of a dollar a yard. Find cost. First, I will find cost of $\frac{1}{4}$, that will be $\frac{1}{4}$ of $\frac{5}{8}$, $4)\frac{5}{8} = \frac{5}{32}$. Next, I will find cost of $\frac{3}{4}$, that will be 3 times as much; $\frac{5}{32} \times 3 = \frac{15}{32}$.

Now give out numerous examples; so that the two steps enter the boy through his fingers.

The other type problem was: John gives $\frac{5}{8}$ of a dollar for $\frac{3}{4}$ of a yard of cloth. What is it per yard? First, I divide the $\frac{5}{8}$ by 3 and then multiply that by 5 to get the cost of a whole yard.

$$3)\frac{5}{8} = \frac{5}{24} \times 5 = \frac{25}{24}$$

Numerous examples will follow to familiarize the pupils with the process.

No attempt has been made to indicate a rapid method, and yet the writer has initiated classes very quickly into the mysteries of fractions; and they knew what they knew. No book was used until the ground here marked was gone over. No rules were learned.

RECAPITULATION.

First teach that fractions may have different forms: (1) Larger or smaller terms. (2) Over-unit fractions may be expressed in units and fractions.

Second, teach the "four rules," excepting two cases, in fractions.

Third, teach the two results of operations.

Fourth, teach the two excepted cases.—N. Y. School Journal.

For Friday Afternoon.

THE MIDDLE ONE OF THREE.

I WONDER if you ever thought
 How hard it is on me
 To be the fellow that I am—
 The middle one of three?
 I never have a single right,
 I just belong nowhere:
 I got put into the wrong place,
 And no one seems to care.

There's John; why, every meal, you know,
 He's always helped the first;
 And if we have two pair of things
 Of course I get the worst.
 Whenever a big show comes to town
 They always let John go;
 But as for me, they're sure to say,
 "John's older, Sam, you know."

Ted breaks my toys and tears my books;
 If we go out to slide,
 I always have to be the horse
 And Ted the one to ride.
 Then, if I dare to say a word,
 Ma's face gets awful blue,
 She looks at me so sad, and says,
 "Ted's younger, dear, than you."

I'd rather never be at all;
 It isn't any fun,
 Unless you are the oldest boy
 'Or else the youngest one,
 John's "older," and Ted's "not so old,"
 And worse than all, you see,
 I'm never going to get my turn,
 For they will always be.
 —Carrie B. Chandler, in *Wide Awake*.

THE BETTER WAY.

WHO serves his country best?
 Not he who, for a brief and stormy space,
 Leads forth her armies to the fierce affray.
 Short is the time of turmoil and unrest,
 Long years of peace succeed it and replace;
 There is a better way

He serves his country best
 Who joins the tide that lifts her nobly on;
 For speech has myriad tongues for every day,
 And song but one; and law within the breast
 Is stronger than the graven law on stone;
 There is a better way.

He serves his country best
 Who lives pure life, and doeth righteous deed,
 And walks straight paths, however others stray
 And leaves his sons as uttermost bequest
 A stainless record which all men may read;
 This is a better way.

No drop but serves the slowly lifting tide,
 No dew but has an errand to some flower,
 No smallest star but sheds some helpful ray,
 And man by man, each giving to the rest,
 Makes the firm bulwark of the country's power;
 There is no better way.

—Susan Coolidge, in *The Congregationalist*.

SOWING SEEDS.

OUT in the highways, wherever we go,
 Seed we must gather, and seed we must sow;
 Even the tiniest seed has a power,
 Be it a thistle or be it a flower.

Out of each moment some good we obtain,
 Something to winnow and scatter again;
 All that we listen to, all that we read,
 All that we think of, is gathering seed.

Gathering seed, we must scatter as well;
 God will watch over the place where it fell.
 Only the gain of the harvest is ours;
 Shall we plant thistles or shall we plant flowers.

—Josephine Pollard.

* Special Papers. *

(Continued from page 297.)

"COMMIT TO MEMORY."

THE BREAD OF INTELLECTUAL AND SPIRITUAL LIFE—
GEMS AND GOLD OF LITERATURE.

THE favorite books of Tennyson were the Bible and Shakespeare. He once advised a boy to read daily at least one verse of the former and some lines from the latter. "The Bible," he said, "will teach you how to speak to God; Shakespeare will teach you how to speak to your fellows." It is well also to commit to memory many of these and other precious things, and thus make them our own in a way that the mere reading of them can never do.

"To what extent should the child memorize?" Of all people perhaps teachers are most to be congratulated upon the opportunities their work affords for good to themselves and others. The best thought, most suggestive and most helpful, of the choice spirits of the ages, in its finest expression, is theirs—if they will have it. But is anything more true of thousands of teachers than that, in the midst of plenty, they starve their own souls and those of their pupils? Shall the memory be merely a sort of refuse chamber of odds and ends of personal experience, a junk shop collection of things of little value, or shall it be a treasure chamber filled with things of inestimable value, and radiant with light and beauty?

Let the habit of committing to memory be formed early. Let it be continued through school days, and all the after years of life. We shall thus become educated in a high and true sense—*fed*, for that is what the word means, upon intellectual manna which might well be the food of angels. We shall be educated, because widely familiar with the very best prose and verse in the literature of the world, and quickly and gladly responsive to the thought of the author. Not a few of these gems—"their price above rubies"—are short as to number of lines and occupy but little space in print, as "Abou Ben Adhem," "Ozymandias," "Crossing the bar," and a hundred others.

This habit once acquired and steadily followed is one of the most profitable and enjoyable that can be formed by quiet people who never have occasion to make a public address; while to teachers who must frequently address their schools, to school superintendents, clergymen, lawyers, and public speakers generally, it is of immense value. To exercise the memory in the manner suggested is to strengthen it and to keep it strong. The imagination is at the same time cultivated, the vocabulary improved, and the best expression of the best thought of the masters becomes our own; just as the musician thoroughly at one with his art is what he is because of close sympathy with the tonemasters, and his perfect knowledge both of the letter and spirit of the best things they have written. Beyond question this truth holds in literature no less than in music.

How many teachers can repeat accurately a half-dozen of the psalms, or a dozen choice poems of moderate length which the world has taken to its heart, or a like number of fine things in prose? How many have their pupils to commit these things to memory? They are the finest of the wheat, and they remain when the chaff and sawdust of non-essentials in arithmetic, grammar, geography, and other branches are utterly blown away. Securely garnered in the memory, these things lift the life by lifting the thought, the love. They elevate the entire being into a finer and purer atmosphere, make distasteful things that are low and mean, present new ideals and new aspirations. Through them more and more we walk by faith in the unseen. And of all education—all feeding of mind and heart from childhood to old age—this is the rarest and the best.

Often a single poem made one's own in youth influences thought and character and affords gratification for a life-time. A few days since a gentleman remarked in our hearing: "I thank the teacher who made me commit Bryant's 'Thanatopsis' to memory. I didn't want to do it, but he compelled it. I have thanked him ever since, and much more as a man than when a boy. 'It is quite possible for pupils to do fairly good work in the ordinary branches of school training, and yet to have one or two things like this stand out above everything

else, to be remembered for a life-time with gladness and gratitude. Is there not a suggestion here for the thoughtful teacher?"

We like the practical thought of Tennyson, which makes one part of this work all the while moral and religious. Let the selections for the week be, if possible, two in number, the first from the Bible or sacred song, and the second from the world of literature, prose or verse, in other directions—say, the ninetyeth psalm and "Lincoln's Speech at Gettysburg," or "Lead Kindly Light" and "Long-fellow's 'Psalm of Life,'" or the twenty-third psalm and Lowell's "Once to Every Man or Nation;" or the nineteenth psalm and "Home, Sweet Home;" or "My Country, 'Tis of Thee" and "The Chambered Nautilus;" or the thirteenth chapter of Corinthians, and "The Last Rose of Summer;" or any others of hundreds of good things moral, religious, patriotic, descriptive, or sentimental in the best sense of the word, that we should all be very glad to have securely lodged in the memory. And let the teacher always commit to memory what is here required of the pupil. Should two each week be one too many, let the selections alternate, sacred and secular, one each week.

Any good book of varied and choice selections can and should be supplemented by the Bible, and by a manuscript collection of best things dictated by the teacher, and written down by the pupil. In our own school two hours on Tuesday morning are given to this exercise. The selections for the week that have been memorized are first written by all the pupils, effort being made to reproduce them with spelling, capitals and punctuation, as found upon the page. The books are then exchanged, the selections read by the teacher, all errors marked by the pupils, and the work graded accordingly. The selections for the following week are then announced, read and discussed at such length as time will permit, attention being directed to anything new or of special interest which might be overlooked by the pupil.

Memorize accurately. Get it as the author left it, the exact words he used, and each word in its place. See the capital letters, the spelling and meaning of unusual words, and the punctuation marks, so that you could write it as "copy" for the printer. This requires care, close observation, thought, and encourages the habit of close attention. In committing to memory also try to see the page in your mind as it lay before you.

An aid of some value is to use the pencil and the ordinary "four and tally" count. For each stroke with the pencil held upon it, repeat the sentence, or line, or verse, or selection. This enables the pupil to keep ready count of the number of times he or she has repeated it. For a time the school might do this work aloud and in unison, so that all would fall in with the method. This means close strain upon the attention, but it means definite result as well.

Each pupil should have a blank book in which these things may be written from dictation or copied from the black-board. Such book will be highly prized in after years.

If you do not know "Abou, Ben Adhem," by Leigh Hunt, you ought to be familiar with it. And that you may have it if you want it, here it is:

Abou Ben Adhem—may his tribe increase!—
Awoke one night from a deep dream of peace,
And saw, within the moonlight in his room,
Making it rich, and like a lily in bloom,
An angel writing in a book of gold.

Exceeding peace had made Ben Adhem bold,
And to the presence in the room he said,
"What writest thou?" The vision raised its head,
And with a voice made all of sweet accord,
Answered, "The names of those who love the
Lord."

"And is mine one?" said Abou. "Nay, not so,"
Replied the angel. Abou spoke more low,
But cheerly still, and said, "I pray thee, then,
Write me as one who loves his fellow-men."

The angel wrote and vanished. The next night
It came again with a great wakening light,
And showed the names whom love of God had
blessed.

And lo! Ben Adhem's name led all the rest.

And this gem from Jean Ingelow:

Take joy home,
And make a place in thy great heart for her,

And give her time to grow, and cherish her;
Then will she come and oft will sing to thee,
When thou art working in the furrows; ay,
Or weeding in the sacred hour of dawn.

It is a comely fashion to be glad:
Joy is the grace we say to God.

There is a rest remaining. Hast thou sinned?
There is a sacrifice. Lift up thy head:
The lovely world and the over-world alike
Ring with a song eterne, a happy rede:
"Thy Father loves thee."

And "Crossing the Bar," written by Alfred Tennyson when he was eighty years of age, which was sung in Westminster Abbey at his funeral, and a part of which was embroidered upon his pall:

Sunset and evening star
And one clear call for me!
And may there be no moaning of the bar
When I put out to sea.
But such a tide as moving seems asleep,
Too full for sound and foam,
When that which drew from out the boundless deep
Turns again home.
Twilight and evening bell,
And after that the dark!
And may there be no sadness of farewell
When I embark.
For tho' from out our bourne of Time and Place
The flood may bear me far,
I hope to see my Pilot face to face
When I have crossed the bar.

* Correspondence. *

UNIVERSITY EXTENSION IN DETROIT.

BY HENRY A. FORD, A.M.

It may be helpful to the cause of University extension in the Dominion and to the efforts of the excellent organization made at Toronto in its behalf last year, if some report is made of the work among your nearest Yankee cousins to the westward. At Detroit, we feel this winter a special indebtedness to Her Majesty's never-sunsetting realm for the memorable services of one of England's most gifted children. Professor Richard G. Moulton, long of the extension work in connection with Cambridge University, and now (for this year only. I fear), of the University of Chicago, in middle November opened his course of six lectures on "Stories as a Mode of Thinking," and continued it by good fortune uninterruptedly and most happily to the close. A finer and more ample auditorium, that of the Church of Our Father, on the grand circus, was taken for this, as for nearly all other courses of the season; and its spacious precincts were regularly filled with the finest audiences ever gathered in this city for purposes of platform instruction. Most of them remained to the class-work that followed, and thus, for the nominal price of 12½ cents a night, heard in effect two admirable and most valuable lectures. A tolerable number, though smaller than was hoped, wrote the weekly papers; and ten of these successfully passed the professor's rather severe examination at the close, only one failing of success. But the effects upon his auditors in general, and more remotely upon the community at large, are profound and, I think, permanent. In my judgment he brought in for us a new era of critical reading and study, especially in the great departments of fiction and drama.

The stories treated in detail by the scholarly and eloquent professor were that of Faust, as represented in the dramas of Marlowe and Goethe, "The Monastery" of Scott, and those which underlie the "Macbeth" and "Tempest" of Shakespeare. He was to be followed in a full course on Shakespeare by Professor I. W. Demmon, of Michigan University, who opened the courses of our first season very successfully with six lectures on "The Masterpieces of English Literature." He began in early January with an excellent audience in hand, though not so large or perhaps select as Professor Moulton's; but illness soon came upon him, and he has since been totally disabled from this service, to our grievous interruption and disappointment. His course will now by necessity run alongside of another by Professor Edward W. Bemis, of the University of Chicago, on "The Labor Question," a thing which it is always desirable to avoid, espe-

cially where the reliable clientele of the work is somewhat limited, as with us. Professor Bemis is a pioneer in extension work in this country, and a worker highly approved on economic themes. His course in Detroit is secured expressly for the labor demand; and it is hoped that the workingmen and women will co-operate with us more than during the first season, when their indifference gave us the only serious disappointment of the year. The extension system is "The Salvation Army of Education," and we did not like to give up the idea of reaching the masses with it. But so little encouragement has thus far been given by them that most of our courses have had to be in what was regarded as high-class work; and the present season will close with a series in fine Art by Professor F. N. Scott, of the State University, who also served us excellently last year. For all courses except Professor Moulton's the season ticket has cost but fifty cents, and his but seventy-five. I think these rates too low, however. Last year closed, and this will close, with a deficit, and consequent draft on the guaranty fund. True, our institute netted a handsome sum on Professor Moulton, even at the cheap rate; but all this was swept off by the expense of a two-lecture course by Professor John Fiske, whose renown as historian and philosopher did not save it from a loss of nearly fifty per cent. I should not advise another experiment of the kind; better stick to the regular work.

Educational Notes.

THE Board of Education in Detroit Mich., has adopted a resolution which practically excludes Catholics from teaching in the public schools.

THERE are in attendance at Johns Hopkins University nine graduates of Canadian colleges, of whom six are from the University of Toronto. Out of thirteen scholarships recently awarded in the graduate department three have been won by representatives of Toronto, the fortunate men being F. H. Sykes, M.A., '85, scholar in English; G. W. Johnston, B.A., '86, scholar in Latin; A. W. Stratton, B.A., '87, scholar in Sanskrit.

THE recently completed school census of Chicago, taken under authority of City Board of Education, shows that there are in Chicago nearly 5,000 persons under twenty-one years of age who cannot read or write English! There are 9,000 children of school age who do not attend school, but a considerable proportion of these will be found over twelve, and to have gone through the primary grade of a public or private school; the number of children in parochial schools of all denominations is less than 52,000; in private schools other than parochial there are 6,000 pupils. The private schools are academies that prepare young people for colleges and universities, and do not include business colleges.

A new kind of writing for the blind, not distinguishable from that of the seeing, has been brought into operation by Fräulein Mulot, a teacher at Antwerp. The scholars write with a blunt pen, and the writing produced is perceptible both to the sight and to the feeling. It is *visible* because it becomes blue by means of a sheet of overlaid blue paper, on which the pupil writes; *tangible*, because there is laid beneath the writing paper a leaf of blotting-paper, which causes the letters to sink in through the pressure of the pen. Fräulein Mulot has produced blind pupils able to execute this writing from dictation as quickly as seeing ones; her method of blind writing appears, therefore, likely to become an important feature in the education of the blind.

At the recent meeting of the Central Farmers' Institute of Ontario the following resolution was adopted: "That the members of the Central Farmers' Institute hereby express their highest approval of the action of the Education Department in preparing a text-book on agriculture to be used in public schools and in placing the subject of agriculture on the public school curriculum; but we regret to observe that, notwithstanding this, the subject of agriculture is practically untaught in our schools, and we believe that it will still remain untaught so long as it is not made a part of the regular work prescribed for the public school leaving examination and the high school entrance examination. Therefore we would respectfully urge upon the honorable the Minister of Education (1) the propriety

of making the subject of agriculture a part of the regular obligatory work prescribed for the aforesaid examinations for all pupils coming up from rural public schools; and (2) that all third-class teachers shall be required to show some knowledge of the principles of agricultural practice before being granted licenses to teach; and that a copy of this resolution be sent to the honorable the Minister of Education and also the secretaries of all county and township farmers' institutes, with a request that these institutes take similar action in this matter to that we are now taking."

Teachers' Miscellany.

"OVER THREE BUT UNDER FOUR LAST BIRTHDAY."

"OVER three years, but under four years last birthday." The phrase has sat upon us like a nightmare for a week. "Over three years last birthday" may be understood by the simplest amongst us with comparative ease. "Under four years last birthday" is intelligible without especially profound consideration; but "Over three years, but under four years last birthday" is a proposition which should have near at hand, and easily available for the victim unfortunate enough to encounter it, a strait waistcoat and a padded room. Where has it made its appearance? In a return of school statistics, asked for by the Commissioners of the National Board of Education for —. Exactly, no one but an Irishman could have perpetrated such a phrase. On second thoughts, however, this is scarcely fair to the Irishman, for did not a Chairman of Petty Sessions in the West of England last week, in sentencing a man to three months' hard labor, add with all seriousness, "Each month to begin at the commencement of the next!"—*The Schoolmaster*.

SHAKESPEARE AND COPYRIGHT.

MR. HORACE DAVIS, in his paper on Shakespeare and Copyright in the February *Atlantic*, speaks of the circulation of poems in manuscript in the Elizabethan age:

Different motives may have contributed to this unwillingness to print. Men are the votaries of fashion, and the old established style of manuscript circulation among one's friends was still the time-honored custom, sanctioned by good society. Very likely, too, authors felt an aversion to encounter the attacks of the virulent critics and pamphleteers of that day. As printing became cheaper and more common, another sentiment came in to check a disposition to print: the very cheapness and commonness of a printed book gave it a plebeian air, and "the nobility and gentry," as Puttenham has it, shrank from being put on the level of the common herd. Besides this, printing smelt of the shop; there was a money profit in it, and the publisher was working for that. The dilettante gentleman of Elizabeth's time might write sonnets or poems for the delight of his friends, and loan them his manuscripts, but it was bad form to print them, and called for some kind of apology. Thus, when Greville writes to Walsingham offering to superintend the publication of Sidney's *Arcadia*, he scorns the idea of any profit from what he calls "the mercenary printing." "Gain there will be no doubt to be disposed [of] by you; let it be to the poorest of his servants." This sentiment lingered in the realm of letters when the poet Gray left the profits of his poems to his publisher, and perhaps a trace of it may be seen in the case of Edward Fitzgerald.

The dislike to print had in a great measure worn away by the close of Shakespeare's life. The publication of the works of such men as Spenser, Sidney, and Shakespeare, and the remarkable group of minor poets and dramatists at the end of the sixteenth century, had removed the stigma connected with printing, while the mass of readers had become so large that it was an object worth catering for to meet their approval. In the meantime, however, there was an eager search in every direction for manuscript poems which were floating about to put them into print. The publishers of those days were as anxious for literary novelties as are the men of to-day for the journal of the most recent African traveler or Tennyson's latest poem.

Nor were they at all scrupulous about the feelings of the author; holding, perhaps, that the fact of circulation in manuscript justified printing. Whenever they could lay hands on such material, they snatched it up and printed it, utter regardless of any claim of ownership on the part of the writer.

THE STRUGGLE OF LIFE.

In his reply to the Duke of Bedford's attack upon his pension, Edmund Burke said of himself: "I was not rocked and swaddled and dandled into a legislator. '*Nitor in adversum*' is the motto for a man like me." Neither into statesmanship, nor into anything else that is high and great, is any man ever "rocked and swaddled and dandled." He comes into it not otherwise than through struggle. He fights his way to it sword in hand; his pathway to it is marked by conquered difficulties and obstacles swept out of the way. Always, when it is asked who those are who have attained to the heavenly heights, it must be answered "These are they which came out of great tribulation." "What is there in the world," says Jeremy Taylor, "to distinguish virtue from dishonor, or that can make anything rewardable, but the labor and the danger, the pain and the difficulty?"

It is the struggle of life that imparts to it its chief significance and interest. A life without struggle is insignificant and uninteresting; it is dull and common-place; it is of the earth, earthy. While the man is toiling and endeavoring, striving and struggling, his life is full of meaning. Success and prosperity, by putting an end to the struggle, often destroy the interest of the life, tarnishing its lustre and robbing it of its glory. The man has gained much, but he has also lost much; he has no longer the "lean and hungry look;" he has become fat, prosperous, and uninteresting.

The reason of this is obvious. It is because that, by a sort of unalterable law, by struggle alone can the highest that is in a man be set free, come forth, and thus attain to its full and proper stature. Struggle is an emancipating and ennobling force. Ease cannot ennoble us, but endeavor can. It is the wrestling with adverse forces that awakens the heroic in man, begets power, forges character; and character is the one thing in the development of which the significance of this earthly life is found. Hence it is that every earnest and noble life is of necessity a life of struggle; hence it is that our Christian life, is a conflict, a wrestling, a fighting of "the good fight."

A LITTLE book has just been issued by the Copp, Clark Co. (Ltd.), which contains over four hundred questions in History and Geography as set for the Departmental and Matriculation Examinations during the past ten years. The questions have been arranged chronologically by Mr. Peter McEachern of the Jarvis Street Collegiate Institute. Such a little book cannot fail to be helpful to teachers and intending candidates.

Feed a Cold

Yes, but feed it with Scott's Emulsion. Feeding the cold kills it, and no one can afford to have a cough or cold, acute and leading to consumption, lurking around him.

SCOTT'S EMULSION

*Of pure Norwegian Cod Liver
Oil and Hypophosphites*

strengthens Weak Lungs, checks all Wasting Diseases and is a remarkable Flesh Producer. Almost as Palatable as Milk. Prepared only by Scott & Bowne, Belleville.

