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J. E. WELLS, M.A.

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Editorial Notes.

It will be gratifying not only to certificated teachers but to all friends of education in Ontario to learn that the number both of permits and of extensions of Third Class Certificates is rapidly decreasing. Permits have declined as follows: 1883, 578; 1885, 409; 1887, 126; 1889, 71; while the number of temporary certificates has fallen from 310 in 1885 to 87 in 1889. This means better teachers, better salaries, better educational work in every respect.

FROM a return touching the Superannuation Fund, laid before the Legislature the other day by the Provincial Secretary, it appears that there are at present 857 teachers on the superannuated list, that 501 still subscribe to the Fund, that 6,354 have withdrawn the portion of their subscriptions allowed them under the law, and that no less than 4,035 have ceased subscribing without applying for the refund to which they are entitled. This last fact is somewhat surprising, as the teachers of Ontario are not generally supposed to be so liberally paid that they can afford to make the consolidated revenue fund of the Province a present of even a small portion of their earnings.

ACCORDING to the Calcutta correspondent of the *London Times*, there are in all in British India only 131,709 schools, attended by 3,554,257 pupils. These are large figures, but, relatively to the vast population of the Indian Empire, they show that an immense work has yet to be done before the masses of India can be made intelligent citizens. Only about eleven per cent., or one in nine of the total school population, are, it appears, receiving even the rudiments of education. Or, as a city paper puts it, "India has a population about 120 times as great as that of Ontario, but the number of pupils attending its schools is only about seven times as great as in Ontario." No doubt the percentage of the school-goers will rapidly increase.

A REPORT upon "Bi-Lingual Teaching in Great Britain, the United States and Canada," has been presented to the Legislature. The evidence in favor of bi lingual teaching, that is, of teaching the native language of the pupil as well as the language of the country, is very strong. Much of the report deals with the question of teaching Welsh in the Welsh schools, and shows that the tendency is to increase instead of diminishing the attention paid to the teaching of Welsh. We have no

doubt that it would be highly inexpedient and unwise to attempt, as some have proposed, to instruct French children in English without using their own language as the medium of instruction. Experience proves what a little reflection would suggest, that there would be great danger that the children so taught would learn to use English words without any clear idea of their meanings, and thus have the appearance of knowing the language, without the reality.

OUR thanks are due to Dr. Baldwin for a copy of the pamphlet containing his Inaugural Address, as Professor of Logic and Metaphysics in the University of Toronto. The address, which we read with much pleasure, as reported in the papers at the time of its delivery, is an able and admirable one. In these days when so much is being said, and not always wisely said, of the importance of the study of Psychology to members of the teaching profession, a judicious and scholarly treatment of Philosophy in its "Relation to Life and Education," cannot fail to be of service to many. We shall take an early opportunity of gathering up for the benefit of our readers some of the useful teachings and hints this valuable address contains for them. In the meantime, many of them will no doubt wisely prefer to procure a copy and study it for themselves.

ACCORDING to the official returns, nearly thirty per cent. of the children of school age in Quebec do not attend school. To remedy this state of things *Le Canadien* and other journals recommend that the school fees should be done away with and education made gratuitous. It would cost the Province about \$200,000 a year to do this, but *Le Canadien* thinks that sum might easily be saved in some other branch of the public service. Even if it could not be so saved, the outlay would be one of the most economical and profitable in the long run, that could be made. It is a pity that so strong a prejudice exists amongst the clergy of the sister Province against anything looking in the direction of free schools and universal, compulsory education. We hesitate to accept the assertion of the *Toronto Mail* that "Quebec is the darkest spot on the intellectual map of North America," but if three out of ten of the children of school age do not attend the schools, and are not otherwise educated, no other result can be expected. Free schools, better schools and compulsory attendance would soon give a wonderful impulse to the intellectual life of Quebec.

THE question has often been asked, and never, we believe, answered quite satisfactorily—certainly not to the satisfaction of the ladies concerned—why female teachers should not receive as large salaries as male teachers, for doing the same work. The question has lately, we believe, been up in the London School Board. A newspaper correspondent says that a majority of ten members of that Board are now of the opinion that ladies should receive even more, but that “for some unexplained reason, probably a fear of increasing the salaries account, they have been afraid to handle the question.” Miss Eliza Yates, one of the oldest members of the teaching staff in that city, lately wrote an open letter to the Board on the subject. Here is one of her paragraphs :

“My services to the Board are worth at least \$500 per year. Were I a man I would say \$900, but it is a well-known fact that in all the callings of life where men and women are engaged—unless indeed that of gardening, and there, strange to say, no one seems to think of asking when a turnip is brought to market whether a man or woman hoed it, as he pays the price for it—a woman pays a premium for the privilege of being a woman, the premium being often, as is the case in the teaching profession, a very large one.”

ACCORDING to figures submitted to the Minister of Education by a deputation from the Toronto Public School Board, the saving of cost to parents by the adoption of the free text-book system is a strong argument in its favor, to say nothing of other considerations, such as the loss of pupils' time, teachers' patience and parents' temper often resulting from the present system. The deputation figured out the problem as follows:—During the last year there passed through the city schools 28,000 pupils. The cost of providing these pupils with books at \$1.07 per head amounted to \$29,960, or, in round figures, \$30,000. Some parents had large families, and transferred the books from child to child as each came of age to attend school. With this fact in view the actual sum expended might be estimated at \$25,000. At this estimate the cost would amount in five years to \$125,000. The scheme proposed, if adopted, would bring the expense for the first year down to \$20,000, and to \$7,000 for each of the four years following; so that the total cost for five years would be only \$48,000, a saving of over \$75,000 being thus effected in the five years. The object of the Board in sending the deputation was to ask an amendment to the School Act, authorizing trustees or boards to provide free text-books for the pupils. The Minister seemed to regard the proposal very favorably, and promised to lose no time in consulting his colleagues in regard to it. It is, therefore, not unlikely that the amendment to the Act may be made during the present session.

THE following beautiful stanzas composing the closing poem in Tennyson's last volume, have been extensively quoted, and have, no

doubt, been seen by many of our readers, but for the benefit of any who may not have met with them we reproduce them here. The poem is entitled “Crossing the Bar.” There is something infinitely touching in the picture suggested of the aged bard, conscious of having finished his life's work, and sitting down at the close of the day, and at the end of the journey, on the shores of the great Unknown Sea, to wait his summons to embark for the final voyage. The little poem would be a fine one, in the hands of a skilful teacher, to be used in calling out the literary and poetic sense of the pupils in a third or fourth class. The language, the imagery, the melody, the thought and the grand suggestion are all highly educative :

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 time 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 cross't the bar.

THE domestic servant difficulty is beginning to make itself felt in some parts of England, and it is not surprising to find that some of those who suffer inconveniences are disposed to lay the blame upon education. The *Schoolmaster* admits that there is some truth in the complaint, as the class of people who used to send their daughters to domestic service are now, by reason of the better education provided all round enabled to place them in higher walks of life. It points out, however, that it is rather to the general widening of the sphere of female labor in every department of society and commerce that the decrease in the supply of general servants is to be attributed. Formerly a working girl could only take service either as a mill or factory hand, or as a general servant. Now, however, there are innumerable lines of business in which female labor is becoming more and more in vogue every day. But admit the charge in its full force as against general education, and what follows. Is the larger part of the human race to be doomed to perpetual ignorance in order that they may be the more willing to perform menial service for the smaller and more favored classes? That is, we suppose, stripped of disguise, the old view, and still the view of many of the “upper classes.” Shall we not rather rejoice in the fact that, as a consequence of the spread of intelligence, the conditions under which manual labor and menial service are to be performed must be henceforth radically changed, in such a manner that they shall no longer be galling to a free intelligent worker, or inconsistent with the dignity and nobility which are properly inherent in all labor?

Educational Thought.

HE needs no other rosary whose thread of life is strung with beads of love and thought.—*Coleridge*.

HABITS are soon assumed, but when we strive
To strip them off, 'tis being flayed alive.

—*Cowper*.

DOING God's will in small things is the best preparation for doing it in great things.—*Prof. Drummond*.

A SOUND mind is a real organism in which everything has its own place, but in which all things work together for the same end.—*Compayre*.

THE culture of the whole body is as necessary as that of any special organ. The health of the body as a whole seems to be intimately connected with the emotional condition.—*McLellan*.

“SOUNDS which address the ear are lost and die
In one short hour; but that which strikes the eye
Lives long upon the mind; the faithful sight
Engraves the knowledge with a beam of light.”

Prof. E. V. De Graff.

EDUCATORS should feel beyond everything that character is the highest attainment of a human being, and use their influence accordingly. We know that character can always be counted on. Conditions and circumstances may shift and change, but the vital elements of character remain the same.—*Exchange*.

LIFE is a leaf of paper white
Whereon each one of us may write
His word or two, and then comes night.

Greatly begin! though thou have time
But for a line, be that sublime—
Not failure, but low aim, is crime.

—*J. R. Lowell*.

IT was Dr. Thomas Arnold's opinion that a man is only fit to teach so long as he is himself learning daily. A teacher is doing what he ought to do only when he is learning more than his pupils. We might as well stop living when we get to the point where we can stop studying, for studying always means improving. The expression, “I know enough to teach the common branches,” was more common a few years ago than to-day. The impression is growing that we shall never know enough to teach the common branches, or any other branches, as well as they might be taught. The teacher who settles down for life on a States certificate, a normal school or college diploma, ought to be settled in some place where there are no schools, for he is certain to settle into a soggy mass of inert stolidness. The best teachers among us are our most growing scholars.—*N. Y. School Journal*.

YET if a poet goes into the same field, what manifold marvels his mental vision may behold. Bear witness all happy songs of field, and forest, and stream, and hill, that have been, or shall be, sung on earth. Bear witness butterfly and flower, bird, bee and every living thing that gladdens earth with life that moves, in all earth's changing moods, and which now make melody for evermore in human hearts dwelling in lasting summer of the poet's verse. Yet in all cases the image on the retina is the same. The ploughboy sees the same field; the sportsman sees the same field; the painter sees the same field; the poet sees the same field; the actual eyes of all are the same. Compare the ploughboy's world, a prison without light, with the poet's world. Compare the prison of the walls of flesh with the dark soul within closed round with gloom, cribbed, cabined and confined in its unwidened body, with nothing but a lump of bacon in the midst of the gloom as its highest thought and joy; compare this and the poet's inheritance and empire over worlds on worlds. Nay, compare it with the feeblest glimmer of the dawn of light in the heart of the unwilling schoolboy: would not the most stolid schoolboy clamor after light? For he would feel a sense of power and pleasure in himself, a new selfbeginning to live, and would not let go the feeling and the gain. But this truth holds good through every gradation of progress, whenever each learner with certainty grows new powers through true guidance and teaching, however slowly it may be. Give the certainty, and there will be no more living prisons with bacon, or cricket in the darkness, as the sole relief, flickering like a farthing rushlight, soon to go out in stench.—*Thring*.

*Special Papers.**ON THE VALUE OF A TRAINING IN
NATURAL SCIENCE TO TEACHERSBY WILLIAM BURNS, B.A., SCIENCE MASTER, ST. CATHARINES
COLLEGIATE INSTITUTE.

THE question to be discussed in this paper is not the relative value of all the branches of study on our curriculum, but the value of this one branch in the education of our teachers, without disparagement of the value of other subjects. All these have their acknowledged place in our educational system. Who ever dreams of disputing the necessity to a teacher of a thorough acquaintance with English or mathematics, and the advantage also of a knowledge of Classics, French or German? The place of Science is not, as yet, so clearly defined, and it is the object of this paper to endeavor in some slight degree to define it.

Modern education supposes a knowledge, however slight, of the laws and forces of nature. From the pulpit and platform, as well as in social intercourse, we hear constant reference to natural phenomena, and these remarks are given as if the audience must necessarily know all about the subject, whereas, if an allusion to some mythological character is made, an explanation naturally follows. Again, our workshops, factories, businesses of all kinds pre-suppose some acquaintance with these laws, and our modern household life, with its arrangements for light, heat, drainage, requires at least some practical familiarity with natural laws. If such is the tendency of our modern life it is clearly our duty to provide the next generation with the amplest instruction in such matters, and the changes in the character of our teaching must be in the direction of providing this needed instruction.

In this democratic age "the greatest good of the greatest number" is the law. Dr. McLellan, in one of his addresses, says that only two per cent. of our school children are even entered on the books of a High School; and we know well that a very small percentage of our High School pupils take a University course. Evidently the knowledge obtained by the ninety-eight per cent. is derived from the teachers who have obtained their education at our High Schools, and thus it is to the curriculum of these schools that we must look for the means of influencing the mass of our children in an educational point of view. The recognition of this fact was the real cause of the founding and extending of our High School system, and thus, certainly, it is the duty of these schools to supply these teachers with the best possible training for their work. Now we must remember that a very large majority of our teachers have to pursue their work, not in our large towns and cities, but in remote country districts, and in isolated villages, among a population not interested in art, literature, or manufactures, but earning a living by agricultural pursuits of some kind or other. To such a population a knowledge of the chief facts of botany, zoology, physics and chemistry is more valuable than classics or mathematics.

A close inspection of our Readers will show that the Education Department in compiling them has kept this necessity of our schools carefully in view. In the IV. Reader there are more than ten selections which will require a considerable amount of knowledge of Natural Science on the part of a teacher, to make them interesting and instructive to the pupils, and the same may be said of the III. Reader, as well as of the others. In the subject of Temperance it is manifestly impossible for any teacher unacquainted with the laws of nature to properly explain the facts set forth in the authorized book. Now our Second and Third Class teachers have to teach these subjects. Should they not be required to take up the necessary Sciences sufficiently in our High Schools and at their Non-Professional Examinations to enable them to make these lessons really valuable? We do not by any means undervalue the study of classics, but let us consider which will be of the greater practical value to the average teacher in our public schools—a knowledge of Natural Science or of classics—especially of the amount of the latter usually required to pass an examination.

Again, let us consider the relative practical usefulness of our present option subjects. Whether is the knowledge of the antidote to a common poison, vegetable or chemical, the common facts in physics by which the pump can be made to work in unusual circumstances, the means by which the drain can be prevented from exhaling its deadly gas, the well cleansed from its discovered impurities, or the amount of knowledge gained by our students of the other options in the allotted time, the more useful? Let us remember that we have the duty imposed on us, not merely of teaching these things but also of showing the pupils how, in future years, they may obtain further information in such matters. In order to spread a knowledge of these subjects among all our school children the first step must be to make a general knowledge of them compulsory on all candidates for teachers' certificates, and to abolish the present system of options, which is merely an addition of work to the teaching staff of our High Schools without any compensating advantage to the students. In fact, as we have to impart to modern children ideas suited to this modern world, we must modernize our teaching to suit the change of times.

Neither the status nor the pay of our Public school teachers is sufficient to induce them to spend another four or five years in preparation. Obviously then we cannot expect them to have the same range of knowledge as a University graduate who has devoted so many more years to his intellectual training. The question we have to settle is simply, with a limited amount of time and means, which is the best of the present options to ask from our teachers? In our opinion, for the above-mentioned reasons, we would answer unhesitatingly, Science.

THE CULTIVATION OF A LITERARY
TASTE.

ONE of the most important questions before the teacher of pupils between the ages of twelve and fourteen is how to create in them a pure literary taste. They are so accustomed to read in a perfunctory manner selections from the school books, and so little habituated to study any one of the masterpieces of literature that it is difficult to determine exactly how to proceed in order to give them a real love for pure and elevated expression of thought. The suggestions given below come directly from the school-room of a teacher of large experience in schools of all grades. For several years he was trying to find the best methods of teaching English literature, and at last employed this plan as one of the best he had ever tried. It is given here to our readers for the first time. He first selected the following from Lord Byron's "Ocean," and wrote it in distinct and large letters on the blackboard, where it remained for half a day.

I.

"There is a pleasure in the pathless woods,
There is a rapture on the lonely shore;
There is society where none intrudes,
By the deep sea, and music in its roar.
I love not man the less, but Nature more,
From these our interviews, from which I steal
From all I may be, or have been before,
To mingle with the Universe, and feel
What I can ne'er express, yet cannot all conceal."

This was then read by the teacher, and the following questions asked:

What is meant by "the pathless woods"?
Where do we find "the lonely shore"?
What is "society"?
Can there be "society where none intrudes"?
Are we alone when we are by ourselves?
What is "music"?
What is the "Universe"?

These preliminary questions gave to the class the meaning of the words. Next followed a different sort of questions calculated to awaken connected thought, and stir the emotions.

Imagine you are wandering in the pathless woods, alone, hearing nothing but the rustle of the leaves, the singing of the birds, and the ripple of water. Then a little further on, through this forest, you come to the shore of the ocean, on a so itary spot where nothing is seen but a distant sail, and

nothing heard but the monotonous roar of the waves beating against the shore. Here you sit down and think. What emotions you feel! The Universe is all around you. Especially is this felt as the sun goes down and the stars come out, and the heavens and earth seem to touch each other. How deep now are your emotions! You feel that you can almost converse with the stars, the ocean and the trees. All around you there seem to be creatures of intelligence, although unable to utter a word of what we call language, but yet, capable of communicating with man. Then the teacher read the opening lines of Bryant's "Thanatopsis": "To him who in the love of nature," etc.; after this asked the pupils one by one to read the selection written on the board; and there began to be created an appreciation of the spirit of the poet's thought. In other words, a sympathy was excited between the thought of the poetry and the thought of the readers. This is but an imperfect outline of what the teacher did or said, for it was his own *spirit* that came from him and went into his pupils that gave them somewhat of his inspiration.

A few days afterward he wrote on the board the following from John Milton's "Morning," and pursued nearly the same course as with the selection from Byron.

II.

"Sweet is the breath of morn, her rising sweet,
With charm of earliest birds; pleasant the sun,
When first on this delightful land he spreads
His orient beams, on herb, tree, fruit and flower,
Glistening with dew; fragrant the fertile earth
After soft showers, and sweet the coming on
Of grateful evening mild; then silent Night,
With this her solemn bird, and this fair moon,
And these the gems of heaven, her starry train."

This appropriately followed after the former selection. The conversation that followed dwelt upon—the beauty of an early summer morning—its breath—the rising of the sun—the sparkling dew—the slow coming on of evening—the silent night—the silver moon—the gems of heaven. This created much thoughtful interest and when the selection was read again each member of the class caught more or less of the spirit of the immortal poet, and saw as he saw the glories of nature in the early morning, in the evening and at night. The interest of the class was visibly increasing. After this the teacher selected a few lines from John Keats' "The Grasshopper and Cricket." The class had been prepared for it, but if it had been given first it would have been almost impossible to have created much interest in it; but as it came with the previous preparation, it was appreciated from the commencement of the conference. It will be noticed that these were not called "lessons," but "talks." No task was assigned, no work demanded, but the class worked and thought nevertheless.

III.

"The poetry of earth is never dead;
When all the birds are faint with the hot sun,
And hide in cooling trees, a voice will run
From hedge to hedge about the new-mown mead:
That is the grasshopper's—he has never done
With his delights; for when tired out with fun,
He rests at ease beneath some pleasant weed,
On a lone winter evening, when the frost [shrills
Has wrought a silence, from the hearth there
The cricket's song, in warmth increasing ever,
And seems, to one in drowsiness half lost,
The grasshopper's among some grassy hills."

After this other selections were discussed. We cannot give all of the methods. The whole work on these three selections occupied three full weeks, and at the end of the time each pupil was voluntarily reading elegant poetry and prose with an interest and zest never known before. Their mental eyes were opened. The questions we print are specimens of a few asked.—*The Teachers' Institute.*

THE man of pure and simple heart
Through life disdains a double part;
He never needs the screen of lies
His inward bosom to disguise. —Gay.

MANY a teacher mistakes work for "growth." That is, if his pupils work hard he accepts it as proof that they are growing. This may be true or it may be false.—*J. E. Williams.*

*Abstract of an address delivered at the recent meeting of the Science Association.

English Department.

NOTES ON ENTRANCE LITERATURE.

LESSON LIV.—LOCHINVAR.

(See also notes in Journal of Oct. 1st, 1889.)

THIS short poem is what is called a ballad. The word "ballad" is derived from an Italian word meaning a dance song. The term is more generally used in English to denote a short tale of love, war, or sorrow; some brave exploit or touching calamity. Its main characteristics are that it tells a story, is brief, simple, popular; often rude in style, and that it is adapted to be sung and accompanied by an instrument. As explained in the introductory note in the Reader, the ballad of Lochinvar is from Scott's lengthy poem, "Marmion," into which it is introduced as an episode in the shape of a song sung by Lady Heron at the Court of King James IV. of Scotland, in the presence of Marmion, who had come as an ambassador from the English King.

I.

The Border is the term used to denote the common frontier of England and Scotland. Here = the Border Country, *i.e.*, the country lying along the Border, on the Scottish side.

Broadsword.—A sword with a broad blade, adapted for cutting, not thrusting.

Weapons.—It is not quite clear what Scott intended to be the grammatical relation of this word. It may be taken as the object of *had*, in which case *none* must be used as an adjective; or, it may be regarded as governed by the preposition *of* understood; or, it may be the accusative or objective of reference—as to weapons. Probably the first is preferable.

Unarmed.—Had no spear, lance, or other of the weapons carried by knights when prepared for a fray. It is possible that the word may be here used in the sense of *unarmored*, denoting that he had not on the suit of plated armor in which knights were usually arrayed.

Alone.—He was without the retinue of armed followers who usually attended a knight. He wished to appear at the wedding as a guest without any hostile intention.

Dauntless.—Dänt-less,—*a* as in *far*, not as in *fall*.

Brake.—A thicket of brambles. He rode on over the rough country regardless of obstacles.

Laggard.—One who lags behind others.

Dastard.—A contemptible coward.

Craven.—Cowardly.

Bridal.—A wedding festival.

Love swells, etc.—He threw the father off his guard by pretending that he no longer cared specially for his daughter.

One measure.—In the dance.

She looked down, etc.—This oft-quoted couplet is remarkable for its simple elegance and truth to nature.

Bar.—Interpose to prevent. It seems to be implied that the mother's discernment would lead her to suspect danger where others did not.

Galliard (gál-yard).—This word sometimes denotes a brisk gay man, and sometimes a lively, graceful dance. Here, evidently, the latter.

Fret, fume.—Note the well-chosen words to denote the different ways in which the father and the mother were affected.

Charger.—War horse; high-spirited steed.

Croup.—The part of the horse's back behind the saddle.

Scaur.—A broken or precipitous place.

Clan.—A family, with its dependents.

II.

Trace the boundary-line between England and Scotland.

There are several rivers called Esk in Scotland. Can you locate them, and tell which one the poet probably had in mind?

Where and what is "the Solway?" Why is it selected for this illustration?

III.

Distinguish between the following pairs of words:—Steed, palfrey; through, threw; rode, rowed; knight, night; brake, break; gate, gait; peace, piece; bridal, bridle; tide, tied; fair, fare.

IV.

Write short sentences showing the different senses in which the following words are used:—Brake, gallant, fleet, fair.

V.

What part of speech is each of the following words, and what is its grammatical construction or relation:—*Save*, stanza i., line 3; *so*, stanza i., line 5; *none*, stanza ii., line 2; *with*, stanza iv., line 3; *hall*, stanza v., line 2; *touch*, stanza vii., line 1?

VI.

Reproduce in your own language and in prose order the second and fourth stanzas.

VII.

Tell in your own words and style the story told in this ballad.

Examination Papers.

EDUCATION DEPARTMENT, ONTARIO—
DECEMBER EXAMINATIONS, 1889.

HIGH SCHOOL ENTRANCE.

LITERATURE.

Examiners: { J. E. HODGSON, M.A.
 { THOMAS PEARCE.

NOTE.—A maximum of five marks may be allowed for neatness.

I.

Children dear, was it yesterday
(*Call yet once*) that she went away?
Once she sate with you and me,
On a red gold throne in the heart of the sea,
And the youngest sate on her knee.
She combed its bright hair, and she tended it well,
When down *swung* the sound of a far-off bell.
She sighed, she looked up through the clear green sea,
She said: "I must go, for my kinsfolk pray
In the little gray church on the shore to-day.
'*I will be Easter-time in the world*—ah me!
And I lose my poor soul, Merman, here with thee."
I said: "Go up, dear heart, through the waves.
Say thy prayer, and come back to the *kind sea-caves*."

She smiled, she went up through the surf in the bay.

Children dear, was it yesterday?

- (1) Explain the italicized portions.
- (2) To whom does "she" refer?
- (3) Why does she say
"And I lose my poor soul, Merman, here with thee."
- (4) "She sighed," "She smiled." Account for these actions.
- (5) What feeling on the part of the Merman is implied by the first two lines and the last line?
- (6) Give a brief outline of the lesson from which this extract is taken, and show the propriety of the title that is attached to it.

II.

Scrooge was *better than his word*. He did it all and *infinitely* more; and to Tiny Tim, a weakly, delicate child of Bob Cratchit's, he was a *second father*. He became as good a friend, as good a master, as good a man as the good old city knew, or any other good old city, town or *borough* in the good old world. Some people laughed to see the *alteration* in him, but he let them laugh, and little heeded them; for he was wise enough to know that nothing ever happened on this globe for good at which some people did not have their *fill of laughter* in the *outset*; and knowing that such as these would be blind anyway, he thought it quite as well that they should wrinkle up their eyes in grins, as have the *malady in less attractive form*. *His own heart laughed*; and that was quite enough for him. It was always said of him, that he knew how to keep Christmas well if any man alive possessed the knowledge. May that be truly said of us, and all of us.

(1) Explain the italicized portions.

(2) "He did *it* all." "May *that* be truly said." Explain fully what is meant by 'it' and 'that.'

(3) What is the subject of this paragraph?

(4) What moral may be drawn from the lesson from which this extract is taken?

(5) State, in your own words, how Scrooge spent the Christmas Day referred to in this lesson.

III.

Quote *one* of the following:

- (1) "The Three Fishers."
- (2) The first thirty-two lines of "Edinburgh after Flodden."
- (3) The first twenty-nine lines of "The Forsaken Merman."

ENGLISH GRAMMAR.

Examiners: { JOHN SEATH, B.A.
 { D. FOTHERINGHAM.

NOTE.—All candidates will take questions 1, 2 and 3, and any two of the remaining four. A maximum of five marks may be allowed for neatness.

1. Classify, as far as possible, the words in the following extract, as (1) names, (2) words that take the place of names, (3) words that assert (or state), (4) words that modify (or qualify) and (5) words that connect:

"O Lady Clare, you shame your worth!
Why come you drest like a village maid,
That are the flower of the earth?"

2. In this year, Swift's relations with Steele *grew strained*. Swift declares *that the latter* was the worst *company in* the world till he had a bottle of wine *in* his head.

- (1) Classify and give the relation of the clauses.
- (2) Analyze fully the first sentence.
- (3) Parse the italicized words.

3. Correct the errors in any four, and not more than four, of the following sentences:

(1) Hoping to see John and you to-morrow, believe me yours truly, James Thompson.

(2) If he does this, I will be forced to lay down.

(3) Have you ate your tea as quick as him?

(4) Corn has rose three cents a bushel yesterday?

(5) When a person looks like that, they hadn't ought to talk so.

(6) The sailors, them we saw at New Haven, came right back again, though they done nothing wrong.

4. Form sentences to show that each of the following may be used with the value of different parts of speech, and name in each case the part of speech:

on the road, carrying a load, where he goes.

5. In the following list classify the words that may be used as adjectives:

Our, six, great, the, what, first, many, adjective, led, hurrying, most, stone.

6. Explain the meanings of Number, Person, Government and Agreement; giving as many examples of each as possible from the following:

James and I saw her on this road-side.

7. Explain the meaning of the term Syntax, and state the Syntax of each of the italicized words in the following sentence:

*There, where a few torn shrubs the place disclose,
The village preacher's modest mansion rose.*

COMPOSITION.

Examiners: { J. E. HODGSON, M.A.
 { JOHN SEATH, B.A.

NOTE.—Candidates will take questions 1, 2, 3, 4 and either 5 or 6. A maximum of five marks may be added for neatness.

1. Combine the following statements into a complex sentence:

(a) These soldiers were lodged in miserable sheds.

(b) They were still bound down by the suffering of that great agony.

(c) They were fed only with grain and water.

(d) They were not released till the female relations of the nabob interceded in their behalf.

2. Substitute phrases for the subordinate clauses in the following sentences :

(a) Men who have wisdom and virtue are nobler than men who have wealth.

(b) The Pharisees did all their religious works that they might be seen of men.

(c) It was greatly in his favor that he was strictly honest.

(d) I cannot consider favorably what you propose.

3. The Commons, in its *zeal to effect reforms*, was carried into excesses, which alienated some of its members and *drove* them to *sympathize with the king*. By *granting* to the *Sots* what they demanded Charles had *produced* peace in the North, and given hope in England that he would now be more yielding. This expectation brought him further support, *particularly* of those who *thought* that the Commons had gone far enough in *asserting its rights*, and who *feared to plunge the country into anarchy*.

(a) In the above passage substitute other and appropriate words for those printed in italics.

(b) Re-write the first sentence, changing the finite verbs that are in the active form of conjugation into the passive form, and those that are in the passive form into the active.

4. Draw an outline of an ordinary page of note-paper and of an envelope to correspond in size. Within the former write, with proper heading, etc., a note to your teacher asking to be excused for a day's absence from school, and within the latter write the teacher's address as for the post-office.

5. Write in the form of a paragraph a description of the room in which the examination is being held.

6. Write a short sketch of the life of any author, statesman, soldier, or of an imaginary character, arranging your sketch under the following heads : (a) Birth and Parentage, (b) Education, (c) Life-work, (d) Lessons to be learned from his life.

HISTORY.

Examiners : { JOHN SEATH, B.A.
D. FOTHERINGHAM.

NOTE.—Only four of the questions in English History are to be attempted ; and only two of those in Canadian History. A maximum of five marks may be allowed for neatness.

I.—ENGLISH HISTORY.

1. Give an account of :
The Indian Mutiny ;
The chief writers of the Victorian Era.

2. What changes did the Reform Bill make ? What other reforms took place in the reign of William IV. ?

3. Sketch the part England took in the struggle against Napoleon.

4. Give as full an account as you can of the careers of any three of the following : Washington, Fox, Burke, Pitt (the elder) and Gladstone.

5. Explain why Henry VIII., Edward IV., Simon de Montford and the Battle of Bosworth Field are important in the history of the English people.

6. Write explanatory notes upon any three of the following : The Witenagemot, The Statute of Præmunire, The Petition of Right, The Act of Settlement.

II.—CANADIAN HISTORY.

1. Make a summary of the services rendered to Canada by Champlain, La Salle and Wolfe.

2. Write explanatory notes upon :
The Quebec Act, United Empire Loyalists, The Constitutional Act.

3. What important events occurred in Canada during the administration of Lord Elgin, and why are they important ?

4. In whom is the sovereign power in Canada vested ? Of whom does the Dominion Parliament consist ? How are the laws made in the Dominion Parliament ?

ARITHMETIC.

Examiners : { THOMAS PEARCE.
J. E. HODGSON, M.A.

NOTE.—Only six questions are to be attempted. A maximum of five marks may be added for neatness.

1. A fruit merchant bought a quantity of apples for \$144 ; he sold half of them for \$82.80, thereby gaining 12 cents per bushel on what he sold. What did the apples cost him per bushel ?

2. Find the interest on \$84.25 from April 16, 1888, to Nov. 4, 1889, at 7 per cent., per annum. (Year=365 days.)

3. A pint contains 9,000 grains of barley and each grain is one-third of an inch long. How far would the grains in 17 bush. 3 pk. 1 gal. 1 qt. 1 pt. reach if placed one after another ?

4. An orchard is $24\frac{3}{4}$ rods long and $15\frac{1}{4}$ rods wide. At $1\frac{1}{2}$ cents per cubic foot what will it cost to dig a ditch around it 3 ft. 9 in. wide and 4 ft deep ?

5. A sold a town lot to B and gained $12\frac{1}{2}$ per cent. B sold it to C for \$306 and lost 15 per cent. How much did the lot cost A ?

6. In a room 26 ft. 6 in. long, 16 ft. 8 in. wide, and 12 ft. 3 in. high, there are three windows each $5\frac{1}{2}$ ft. high and 3 ft. wide, and two doors each 7 ft. high and $3\frac{1}{2}$ ft. wide. The base-board is 9 in. wide. How much paper, $\frac{1}{8}$ of a yard wide, will be required to cover the walls and ceiling ?

7. A farmer sells to a merchant 3,015 lbs. of hay at \$16 per ton, and takes in payment 6 lbs. of tea at 80 cents per lb ; $22\frac{1}{2}$ lbs. of coffee at 26 cents per lb ; 33 lbs. of sugar at 12 lbs. for a dollar ; $32\frac{1}{2}$ lbs. of raisins at $18\frac{3}{4}$ cents per lb. ; 14 lbs. 13 oz. of bacon at 16 cents per lb., and the balance in cash. How much cash does the farmer receive ?

8. Brown purchased $\frac{7}{8}$ of a mill property for \$4,064.55, and Smith purchased $\frac{3}{8}$ of the same property at a rate 5 per cent. higher. What did Smith's part cost him, and what fraction of the property remains unsold ?

9. My farm contains exactly 184 ac. 76 sq. rd. $24\frac{1}{2}$ sq. yd. There are 3.85 ac. in garden and orchard ; 9.147 ac. of green crop ; 76.9 ac. of grain ; 23.608 ac. of meadow ; 34 ac. of pasture, and the remainder is uncleared bush. What per cent. of my farm is uncleared ?

10. Write down the following statement of six weeks' cash receipts ; add the amounts vertically and horizontally, and prove the correctness of the work by adding your results :—

	Mon.	Tues.	Wed.	Thur.	Fri.	Sat.	Total
1st	\$95 65	\$89 24	\$59 79	\$78 04	\$59 37	\$98 16	
2nd	71 58	65 41	67 24	62 49	67 02	51 42	
3rd	58 47	57 99	50 60	71 08	82 91	76 89	
4th	69 29	80 07	91 87	93 74	63 36	90 21	
5th	45 81	93 56	82 54	57 96	72 12	67 96	
6th	63 42	77 68	79 18	86 60	87 31	82 75	
Total							

(No marks will be allowed for this question unless all the work is correctly done.)

GEOGRAPHY.

Examiners : { D. FOTHERINGHAM.
J. E. HODGSON, M.A.

NOTE.—Only six questions are to be attempted, A maximum of five marks may be allowed for neatness.

1. Make a diagram showing how the zones are exposed to the sun's rays in the different seasons, and explain how we in Canada have the coldest weather and the shortest days when we are nearest to the sun.

2. Explain in few words : Trade Winds, Sea Breezes, Climate, Rainfall, Solar System, Orbit, Plane of Orbit.

3. Write, in a column, the names of the following :—The city, town, village or township ; the county ; the province ; the country ; and the

nation to which you belong. After each of these on the same line write the name of the body that makes its laws or by-laws, and the title of its highest officer or administrator.

4. Give a list in one column of such products of the stall, the dairy, the garden, the orchard, the field, the forest, the mine and the waters of Ontario, as are usually sold in our home (or Ontario) market. Give another list of those sent to the foreign markets.

5. What goods do we import in considerable quantities from the United States ? Great Britain ? West Indies ? China ?

6. Make a map, at least six inches from east to west, of all the provinces bordering on the Gulf of St. Lawrence ; marking and naming the chief cities, towns and islands ; also the bays and straits.

7. Name five nations that have free institutions, that is, in which representatives chosen by the people make their laws. Give the form of government and the title of its ruler in each.

8. Name all the bodies of water, including straits, &c., through which you would pass in sailing the shortest way from Behring's Strait to the Black Sea.

TEMPERANCE AND HYGIENE.

Examiners : { D. FOTHERINGHAM.
THOMAS PEARCE.

NOTE.—Any five questions may be taken.

1. Give three chief reasons why you should seek to have a perfectly healthy body.

2. What is the proportion of water to solid parts in the human body ? and name four important uses of water in the human frame.

3. What reasons can you give for calling water a natural drink and milk a natural food ? Name the principal substances in milk and the proportions in which they are found.

4. Make short notes on : membranous screens, fibrine, blood corpuscles or globules, scorbutic, normal temperature of the human body.

5. Give five sayings of wise men on wine—two from Scripture and three from other sources.

6. Describe the effects of alcohol on the corpuscles and fibrine of the blood and on the minute blood vessels.

7. Describe briefly the four stages of animal life under alcoholism.

DRAWING.

Examiners : { D. FOTHERINGHAM.
THOMAS PEARCE.

NOTE.—Only two questions are to be attempted.

1. Make a drawing of an ordinary coal oil lamp, 4 in. in height.

2. Draw a frame and door four inches in length, showing panels and handles ; first, shut ; then, half open.

3. Make a circle having a horizontal diameter three inches in length. From one end of this draw two right lines each equal to a radius and touching the circumference. From these new points of contact draw two diameters, and join with straight lines the ends of diameters not already joined.

How many and what kind of three-sided figures have you formed ? How many and what kind of four-sided figures ? What other figure of more than four equal sides ?

4. On a perpendicular diameter of three inches make a circle. Divide this diameter into four equal parts. Through the lowest point of section draw a horizontal line touching the circumference. Through the point of intersection draw two other lines bisecting each of the right angles and terminating each way in the circumference.

Upon these eight construction lines form the compound leaf of the horse chestnut.

WHO does the best his circumstances allow,
Does well, acts nobly ; Angels could no more.
—Young.

Primary Department.

IMAGINATION.

RHODA LEE.

ALTHOUGH we know the primary schools of "Ye Olden Time" differed from ours in a great many ways, we cannot help feeling startled by a description such as the following, given us in one of our prized and well-read books—"An inclined plane of little vessels arranged in order, ready to have imperial gallons of facts poured into them until they are full to the brim."

Thomas Gradgrind's irrevocable law in regard to youthful training was, No wondering, no fancying, no imagining. His was no mere stunting or dwarfing process, it was simply a murdering of all the emotional side of child-life.

This picture of a school of Dickens' time recalled to me the fact that I had intended some time ago to say a little about the development of the third stage of intelligence, namely, imagination, which though being in a great measure incapable of direct training, should on the very account of its free individuality and personality, be fed carefully and cultivated constantly throughout the whole school life.

Of course the home influences affect greatly the growth of this faculty of mind, but that does not relieve us as teachers from the responsibility of our training.

Some child-minds remind me of a well-trimmed lawn, with nicely gravelled walks mathematically arranged, devoid alike of flowers and weeds, yet, nevertheless, well kept and cared for. Others are rich in flowers and shrubberies, with perhaps a few weeds intermingled, but with the true predominating far above the false.

The first know nothing of the venerable faggot-gatherer of the moon, or wicked Jack Frost, or the exploits and stories of Mother Goose. They never laughed over Jack's escape from the Giant, nor did they ever cry silently over little Snow White in the forest.

Not so with the other class: a brighter picture of childhood presents itself. We are all familiar with those happy little children who weave their day-dreams and build their air-castles, in their work as in their play being capable of building their own little world about them.

Imagination is said to be the power of producing ideas without any reference to our own past experiences. But imagination is not creative. It is dependent on percepts already in the mind, and also on the memory as retaining these percepts; it consists in transposing and combining these percepts in such a way as to form something entirely new.

The artist takes some primary and secondary colors, and with a few washes and a careful handling of the brush has his picture before him. The mind also takes its old percepts and washes, and works out its image to suit the fancy.

As imagination is dependent on perception and memory, we can direct our training in a measure to these. The greater the number of percepts and the stronger the power of retention, the greater will be the imagining, provided the mind has some stimulus.

The question is, What is the nature of the stimulus?

All the school studies will aid in gaining percepts, especially object, language and geography lessons but the stimulus or incentive to the imagination must go far beyond the power of sense perception.

All nature is a training. A child who has been associated with beautiful scenery and trained to the close observance of nature, her signs, works and marvels, will naturally be more imaginative than one who has passed all his life in a noisy city. If we cannot give our scholars the advantages of grand scenery we can do something in that direction by giving them vivid mental pictures of lofty mountains, rushing streams, dark woods, fairy glens, etc.

We talk about the clouds, sun, moon and stars, directing attention to all kinds of natural phenomena, endeavoring to instil a reverence and love for nature.

And all this will incidentally come under the head of stories.

If you ever thoughtlessly condemned fairy stories as being bad food for the growing mind, reconsider your verdict.

I do not refer to the silly, inferior quality of stories published now-a-days as children's stories, but I mean Grimm's good old tales and the old national traditions, elf stories and folk-lore that have been handed down to us.

How the little people live through a story as I tell it at the end of the day, perhaps as a reward for special effort in some line or other. Their whole-souled interest and rapt attention bespeak appreciation.

Just here let me say that I find it a thousand times better to tell a story than read it. In telling it you can adapt and word it just to suit the advancement and mental capacity of your class.

As to the stimulus to the imagination, I do not know how I could tell you better of my plans than just to give you the substance of a little talk I had with one of our teachers on this very subject.

One afternoon, lately, I had given half an hour for story writing, and after placing before the class the picture accompanying the Christmas *Globe*, called "Friends," I left them to their own resources and busied myself with some other work.

At the end of the time allowed there were some fairly good stories, and after hearing them read I let the children decide on the best one and we sent it in to Miss Bright, next room. In a few minutes the scholar came back with the message that Miss Bright had read it to her class and they all liked it very much.

(We were in the habit of sending work for each other's approval as a means of interesting the scholars.)

That evening at four o'clock Miss Bright came into my room for a little talk, and almost her first words were, "How do you get your children to write such stories?"

"Why," I said, "I didn't say anything about that story in particular, but I have been doing the best in my power to cultivate the imaginative powers of my pupils. Of course we all have our hobbies and this is one of mine."

"I understand perfectly well," said Miss Bright, "that we cannot teach imagination like other things, but what really does your training consist of?"

"Well," I said, "I cannot begin to give you the whole system, but I can tell you of a few methods that appeal specially to the powers of imagination. In the very first phonic reading lessons we personate the letters according to certain likenesses in sound. Thus 'p' is the tired old man with the load on his back, 's' is the old gander, 'f' the steam engine, etc."

As language lessons I have *store-keepers*, and the children tell what they would purchase at the several stores.

We take wonderful *excursions* by boat, rail and balloon, and relate what we see, but last, and best of all in this line, come *dreams*. This form of language lesson constitutes an excellent rest and change of work. Let the little folks go to sleep on their desks and *dream*. What dreams we do have!

At first there is apt to be a little sameness, but that will wear off. Of course these are all oral exercises, and there is still one more I think of, namely, the "Fairy and The Three Wishes." I ask the children to tell me their wishes: 1st, What they would like most to have; 2nd, What they would like to be, and 3rd, Where they would like to go.

In the reading lessons, after obtaining all the information the book affords, we proceed to tell something more about the picture and people, describing their appearance, home or surroundings. The next plan I found practical was the use of large, colored pictures and well selected business cards. At first I found it necessary to give my scholars some assistance in the way of questioning, to bring out their ideas touching the picture, but now they can quite readily make up their own little stories to interpret the scene.

It is interesting to note the amount of character that comes out in these stories. Sometimes I give merely a mental picture as an outline or suggestion.

For instance I say, "I noticed one day a little boy with his face muffled up, standing at a window watching three or four children playing in the garden."

The scholars then write their little interpretation of the picture, going into detail with the utmost care and putting it all in the form of a story.

And now I have come to my last stimulus which I have referred to over and over again—the good old *fairy tales*.

These will serve more purposes than one, as they may be reproduced as language lessons, and as exercises in memorizing and expression. Care must be taken always to choose healthy natural stories, and those suited to the imagination of children.

They act as a powerful incentive to the creative imagination, and in some cases are full of sound and practical moral precepts.

I have been discoursing on this subject now at a much greater length than I intended, but as our conversation ended at this point I must conclude, with the expectation, however, of continuing it at some later date.

OUR LITTLE DEMOCRACY.

ARNOLD ALCOTT.

OUR title suggests a class in which the teacher is not an autocrat, but an executive agency to enable the pupils to carry out the laws or rules whereby they are governed.

But this is not the only idea which evolves naturally, and therefore easily, from a thoughtful study of the meaning of our subject. In short, we believe that the *spirit* or genius of our heading is embodied in the statement which follows:—

Our Little Democracy—obviously, we, that is pupils and teacher, are *thinking* and *feeling*, the one with the other, and with these conditions are, consequently, *willing* together, for the benefits which will accrue to the general well-being of the "fraternity." In fact all are in "sympathetic co-partnership."

Methinks someone says, "Of course this is a pretty theory, but practically, must not the teacher put down the rule and say, 'Thou shalt,' or 'Thou shalt not,' without appealing to the pupils at all?"

We think we can show that there is a way, a refined, reasonable path, which surely will lead to the heart and to the head.

Democracy, a genuine belief in the reasonableness of human nature, is the foundation on which this powerful agency rests. "But," you say, "we are afraid to delegate so much power to our pupils. We must have the rules which we make obeyed."

Now we know that the mistake which very many worthy teachers make is just here. They, the teachers, make the rules and the scholars are familiar with the "do not's"; and what boy or girl with this nineteenth century wide-awakeness does not inwardly, at any rate, resent this dogmatic method?

Would not a dose composed of about equal parts of sympathy and reasoning be a good sedative to administer to your pupils just before having a rule made?

Let me illustrate: I want to lead my pupils to know that we should have no eating or chewing during school hours.

Now sympathy whispers to me and she says, "Imagine yourself down there among the boys and girls, you wouldn't like to have some person say, 'You must not eat in school.' If you have a will that is worth anything you will feel just a little (to put it mildly) roused at this dictatorial attitude."

Sympathy says, "Reason with your pupils."

So acting on the advice of this tried and truly faithful and beautiful friend we begin to converse with our scholars, and proceed perhaps in the following way:—

"Boys and girls, I want to have a talk with you, and I wish you to give me your opinions as I ask you for them.

"I have some friends spending the evening with me at my house. Now, supposing one of them should take from his pocket an orange or an apple or a piece of candy, and begin to eat, what would you think of him?"

Mary.—"I would think he was unmannerly."

Well, John.—"I'd think he was greedy."

Florence.—"I'd think he was selfish."

Then appeal to the class, "Those who think as these pupils?" And you will find that your class will unanimously agree with them. The foregoing answers are not mythical, for we have received them from junior pupils ourselves. And what a world of meaning there is in that word "selfish!"

I think I hear some one say "All very well, but how can we apply this to the class-room?" The teacher may go on now to apply this to the class-room:

"Boys and girls, you are my little friends, and we meet in this room everyday, 'our room.' Now,

as friends, we wish to have a pleasant time, and you know how polite and mannerly friends are when they spend the evening in our parlors with us. This is our parlor. Don't you think we ought to be just as nice as we can in it?

"Now, if I were to stand up here on the platform and take out an orange and commence to eat it, what would you think of such an action? Why you have already said that it would be unmannerly, greedy and selfish. That is just what I think.

Now, if any pupil in this room eats during school time, what may we say of him?

1st.—That he is unmannerly.

2nd.—That he is greedy.

3rd.—That he is selfish.

"Then shall we have eating in the room?" "No, Miss A."

"George, will you make a rule for us?"

And George, feeling his importance, stands up like a *real boy*, and says, "We should not eat in school."

Incidentally the teacher may add that eating between meals is injurious.

We believe that we should be able to show the reasonableness of things to "our future men and women." The pupils will not then feel that the rules are made for the *comfort* of the teacher, and for the annoyance of themselves.

The machinery will run without much friction, because the oil of interest and earnestness keeps the works in good running order.

School-Room Methods.

MENTAL ARITHMETIC.

THE use of mental arithmetic is unquestioned. It aids in developing the powers of attention, memory and reasoning, cultivates the power of language and greatly assists pupils in their written number work. Oral exercises should be given separately, and also in connection with written arithmetic.

The oral exercises which are given in connection with written arithmetic are mainly for the purpose of illustrating principles, and for drill, both in abstract and concrete work.

Illustrations of the use of small numbers in teaching a new subject or principle have already been given. By concentrating the thought mainly upon the reasoning processes, the pupil is led to see plainly what he could not see if he were dealing with large numbers. Mental exercises should therefore very frequently precede or introduce a regular recitation in written arithmetic, and they may also be given whenever pupils fail to understand a process or the conditions of a problem. For example, there may be some pupils who do not understand the process of finding the present value of a note due at some future time. The principle involved is found to be very simple when such problems as the following are given:

John has 4 cents, which is $\frac{1}{2}$ as much as James has; how much has James? John has 6 cents, which is $\frac{2}{3}$ as much as James has; how much has James? John has a certain sum of money; after his father gave him $\frac{1}{2}$ as much more, he had 6 cents; how much had he at first?

By giving many problems similar to these, and increasing the size of the numbers gradually, the pupils can readily see that the present value is $\frac{100}{100}$ of itself; and if it gains $\frac{3}{100}$ in six months, it will be worth $\frac{103}{100}$ of its present value in six months. Knowing its value then in money, the present value can be easily ascertained.

When a principle is well understood it needs to be fixed in the mind by doing mentally many simple problems involving that principle, and others which have been taught previously. For example, when division of fractions is well understood, problems like the following should be given in great number:

I divide 8 apples equally among some boys, giving each boy $\frac{1}{2}$ of an apple; how many boys received a part?

To how many boys could I give 6 apples if each boy has $\frac{1}{3}$ of an apple?

How many sticks $1\frac{1}{2}$ feet long can be cut from a stick 6 feet long?

How many bushels of potatoes at $\frac{2}{3}$ of a dollar a bushel can be bought for \$6?

Four men earned in one day \$8 $\frac{1}{2}$. If this money

were divided equally among them, how much would each man receive?

When coal can be bought for \$7 a ton, what part of a ton can be bought for \$2 $\frac{1}{2}$?

Drill follows teaching and serves to fix in the mind what is taught. It may consist of practice upon abstract work, in which rapidity is the end sought, or upon concrete work, in which the main object in view is the cultivation of the reasoning powers; or it may combine both of these operations and aim to promote both thought and rapidity. Besides the oral work which is done in connection with written arithmetic, there should be a few minutes set apart each day for miscellaneous mental practice. The problems given should be of a varied character, sometimes consisting of operations with abstract numbers, in which accuracy and rapidity are mainly sought; at other times the problems should be of such a nature as will call into active exercise the reflective faculties. As no one book would furnish a sufficient variety of problems, there should be upon the teacher's table several different mental arithmetics, from which to gather and give problems of a proper kind. It will not be found best for the teacher or pupils to read the problems from a book. Let the teacher glance over two or three pages of a book, and select such problems as will induce the pupils to think, giving them in language of his own. Sometimes the problems may be analyzed and explained, and sometimes, especially in examination, answers only may be required. One good method of examining a class in mental arithmetic is to give out the problem slowly and distinctly, ask the pupils to do it mentally and to keep the answer in their minds. After a sufficient time has elapsed for all to do the problem, give the direction, "Write the answer," and after they have had time to write the figures of the answer, ask them to put the pencils down and take a good position. If the answers are given in large figures the slates may be examined by having them held up, asking pupils who have the wrong answer not to hold them up.

EXPLANATIONS.—Great freedom should be allowed in the form of explanations, especially to pupils of the lower grades. The pupils' attention should be directed mainly to the thought and not to the language, as is frequently the case when complicated and set forms are insisted upon. Sometimes a pupil will understand how to perform a problem, but cannot give the reason. Let similar problems be given with smaller numbers, and the expression of a reason will come in time.

SHORT PROCESSES.—Always encourage the pupil to perform a problem in the shortest way, provided the problem is equally well understood by the short process. It will be found generally best in the lower grades to have but one method of performing problems of a given kind. In the higher grades, however, the pupils should be encouraged to perform problems with the fewest figures, provided, of course, accuracy is not sacrificed.—*Prince's Methods of Teaching.*

LANGUAGE LESSONS.

THE "Third Reader Class" is one that needs especial care. The pupils cannot study formal grammar with any profit; there must be much oral teaching in respect to the use of words.

1. Give the pupils all the contracted words the teacher can think of, and let them write them in a column and the word or words they represent in another. For example:

"I'm" means, I am.
 "Don't" " do not.
 "O'er" " over.
 "Ne'er" " never.
 "I've" " I have.

There are twenty-five such contractions in use. 2. Give the pupils a list of words that may be represented by contractions, and let the pupils write in another column the contractions. For example:

could not,
 would not,
 does not,
 can not,

Let them put the sign of contraction (') in its proper place.

3. Give a list of words and let the pupils form derivatives and give examples in sentences.

Mercy, merciful, merciless; hope, hopeful, hopeless; care, careful, careless; pain, painful, painless, etc.

4. Give them words and let them place synonyms opposite.—*Central School Journal.*

A TEST IN GEOGRAPHY.

[THE following questions were recently submitted by Dr. White to the pupils of the A grade (8th school year) of the Cincinnati schools, not as promotion questions, but as suggestive teaching tests.]

1. Why is it warmer at noon than at 9 o'clock a.m.?

2. Why is it warmer in Ohio in July than in January?

3. In what month is the sun nearest the zenith at noon in Toronto? * Farthest from the zenith?

(2) What is the difference in degrees between the highest and lowest altitude of the sun here at noon?

4. Is the sun at this time (March) going from or approaching the zenith? When will there be a change? When the next change?

5. Why is the Torrid zone warmer than the Temperate zones? The Temperate zones than the Frigid zones?

6. If you lived at the equator would the sun ever be directly over your head at noon? If so, when?

7. In how many and what months is the sun at the equator north of the zenith at noon? South of the zenith at noon? What is true of the movement of vertical rays of the sun in the Torrid zone?

8. Are the rays of the sun ever vertical at the Tropic of Cancer? If so, when? North of the Tropic of Cancer? At the Tropic of Capricorn?

9. If you lived at Quito (on the equator) in what direction would your shadow fall at noon in July? In January?

10. In what month are the shadows of vertical objects at Toronto longest at noon? In what month shortest? Why?

11. When does the sun rise exactly in the east? (2) In what months does it rise north of east? South of east? (3) When does it rise farthest north of east at the equator? How many degrees?

12. When the rays of the sun are vertical at the Tropic of Cancer, which zone has no day? Which no night?

13. Which pole of the earth is now in continual darkness? Which will be next April? Why the change?

14. How many times in the year and when are the days and nights equal? (2) Is this true in all parts of the earth? (3) On what line are the rays of the sun vertical when the days and nights are equal?

15. In what month will the days at Toronto be the longest? The shortest? Will this also be true in all parts of the North Temperate zone?

16. Which has the longer day in summer, Toronto or New Orleans? Cincinnati or Chicago? Quito or Quebec?

17. Which has the longest days in July, the Torrid zone or the North Temperate zone? The North Temperate zone or the North Frigid zone?

18. How many, and what seasons has the Torrid zone? Are the seasons the same on both sides of the equator at the same time? Why?

19. How many and what seasons have the Temperate zones? The Frigid zones? Why?

20. When it is summer in Canada, what is the season of the year in Chili? Why?—*Southwestern Journal of Education.*

THE men to whom in boyhood information came in dreary tasks along with threats of punishment, and who were never led into habits of independent inquiry, are not likely to be students in after years; while those to whom it came in the natural forms, at the proper times, and who remember its facts as not only interesting in themselves, but as the occasions of a long series of gratifying successes, are likely to continue through life that self-instruction commenced in youth.—*Herbert Spencer.*

* We have substituted Toronto for Cincinnati, and Canada for Ohio.

BUSINESS NOTICES.

WE direct attention to the announcement of the merits of the "Concise Imperial Dictionary." It is our intention to handle this Dictionary in connection with the JOURNAL, and we offer it in the best binding, and the EDUCATIONAL JOURNAL for one year, both for \$5.50, plus 14 cents for postage. Subscribers who are paid in advance may deduct the amount they paid for one year, send the balance, and have the book at once. This gives the party the JOURNAL for \$1.00.

THE holiday season is, in many cases, the season also for removals and accepting new positions. We trust that no teacher who now gets the JOURNAL, and who changes his location, will forget the formality of notifying us, so that the necessary change may be made in the address. This should be attended to in any case, even if the visits of the paper are no longer desired. Otherwise, under our present rule of not cutting off a teacher's name unless he wishes it, the paper will continue to go to his old address at his risk. A post card is sufficient for all purposes of notification; and this courtesy may save both the subscriber and the publishers much unpleasantness at a later period. It is rather a severe punishment, when our sole offence is that of trusting a subscriber, to be told that the party left the locality months ago, and knows nothing about the paper. A notification in all cases of removal is suggested under every form of business rule. We hope that every teacher who removes may feel that he needs his paper as much in his new location as he did in the old.

TEACHERS' CONVENTIONS.

East Grey, at —, March 6 and 7.
Waterloo, at Galt, March 6 and 7.

Will Secretaries of Associations, or Public School Inspectors, have the kindness to forward us programmes of their meetings, for announcement as above. Also, will Secretaries please send an epitome of the more important business transacted, for publication in the JOURNAL.

Editorial.

TORONTO, MARCH 1, 1890.

"THE ONTARIO TOWNSHIP."

WE have, we think, already informed our readers of the appearance of the first of a series of "Toronto University Studies in Political Science," which are being given to the public under the editorship of Professor Ashley. We are indebted to the kindness of the editor for No. 1 of the First Series, which consists of a study of "The Ontario Township," by J. M. McEvoy, with an Introduction by Professor Ashley. We hail as a step in the right direction the publication of this series. We have often thought that the University of Toronto was not doing all that might be reasonably expected of it in the way of giving to thousands of teachers and others studiously inclined throughout the Province some opportunity to share in the benefits of the investigations and prelections carried on within its walls. The Universities, great and small, in other lands, are doing much in these days to extend their influence beyond the bounds of their lecture rooms. This may be done, and is being done in two ways, viz., by local lectures and by the distribution of instructive and stimulating literature representing University work and its results in specific lines of study. We see no reason why our Universities may not do much for the intellectual life of the country in the same way. Perhaps, in the case of most, the staff of instruction is as yet too small to admit of much outside work in the shape of scientific and popular lectures, but we can see no good reason why

the results of much toil and research in many departments of useful inquiry may not be scattered abroad by means of brochures like those of the series just commenced in the pamphlet before us. Some of the questions which we from time to time receive show that not all our teachers understand clearly the character and workings of the political and municipal institutions of their own country. This is not, perhaps, to be wondered at, seeing how scanty is the material available for such studies. The series of which the first number is before us will thus supply a want which is evidently felt by many of our readers. The work that is being done by Professor Ashley in his department is an illustration of what might be done, and may we not say should be done by others in other departments of University work.

The municipal system of Ontario is in many respects admirable. Every teacher should understand it thoroughly, both as it is in itself and its workings, and in its relations to the higher Provincial and Dominion institutions to which it is closely related, and which it to some extent represents in miniature. We know nothing that is likely to be more helpful to the teacher in much of the practical work of the school-room than the clear knowledge of both the genius and the details of our political and municipal system which can, no doubt, be gained by a study of the series of treatises of which this is the first.

INVOLUNTARY TEACHING.

It adds very greatly to the responsibility of the teacher's position that his work is not confined and cannot be confined within the limits of any school room routine. In school and out of school his unconscious educative influence is at work. In some respects the impressions he is involuntarily making upon the young minds with which he is brought into so intimate contact is more powerful for good or evil than his most strenuous voluntary exertions. The same remark, of course, holds true in some degree of every man and woman in every sphere of life. But the peculiar relations of the teacher to the young minds placed under his charge renders his unconscious influence much more powerful and important than that of most others.

The kind and extent of this involuntary teaching are determined by the teacher's character. What he is, what he is seen by the keen eyes of the child to be in himself, leaves often a far deeper and more lasting impress upon the child mind than anything he may say or do can possibly produce. Every teacher who rises at all towards the high level of his profession, must become to a greater or less extent his pupil's model. He is to the child the embodiment not only of wisdom and learning, but of truth and righteousness. At least no teacher who fails to become in a measure such is in a position to do the work and exercise the influence belonging in him by virtue of his office. It will be, of course, one of his daily duties to teach those under his

charge to use their powers independently, judging for themselves what is true and right and good. But even while he is doing this, and perhaps in proportion to his success in doing it, he is establishing an ascendancy over the child mind which gives a double value to every word he utters and every act he performs.

From this point of view we get a new conception of the value of character in the teacher. Keen eyes are reading him every day in school and out. In vain will he urge his pupils to put aside prejudice, and to seek and love truth for its own sake, so long as it is clear to their keen perceptions that this is not the principle upon which he acts in forming his opinions and carrying on the affairs of his little kingdom. In vain will he exhort them to make the right and wrong the first and paramount question in every proposed course of action, so long as they fail to find that he himself is an "embodied conscience," as he goes about his daily duties.

Thus it comes that the teacher is placed constantly under the heaviest bonds not only for correctness of deportment but for true worth of character. If he would do his whole duty and win a good degree he must make it his first aim to be all that he would have his pupils become. And children's insight into character and motive is wonderfully keen. They will not often be imposed upon by shams, but they may generally be relied upon to recognize and appreciate what is genuine and lofty in the spirit and conduct of him to whom they should look up as their model of intellectual and moral excellence.

It is no wonder then that the public opinion of each community sets up a high standard of conduct, if not always of character, for the teacher: that many things which would be regarded as peccadilloes in another will not be tolerated in him. This is as it should be. But the true teacher will aim higher. He will see that his own best interests and his highest success in the profession lie in exactly parallel lines, and demand of him constant effort to reach the highest standard of intelligence, in the clearness and calmness of his mental and moral judgments and in probity of character and nobleness of aim.

Literary Notes.

Our Little Men and Women for March (D. Lothrop Company, Boston), is to the fore with its usual freight of pleasure for the little ones, in the shape of pretty pictures and instructive little articles and stories.

THE contents of *The Chautauquan* for February are interesting and valuable, the literary articles being of wide scope and superior excellence. Among them are the following: "The Story of Rienzi," by George Parsons Lathrop; "Sunday Readings," selected by Bishop Vincent; "Economic Internationalism," by Richard T. Ely, Ph.D.; "Moral Teachings of Science," by Arabella B. Buckley; "The Works of the Waves," by Prof. N. S. Shaler; "Traits of Human Nature," by J. M. Buckley, LL.D.; "Browning," by Oliver Farrar Emerson; "Modern English Politics and Society," by J. Ranken Towse; "English Critics and

Essayists," by Prof. W. M. Baskerville, A.M., Ph.D.; "How Sickness was Prevented at Johnstown," by Dr. Geo. Groff, and many others.

Question Drawer.

1. ACCORDING to the P. S. Grammar "news" is used in the plural only; which then of the following is correct: "The news *is* good" or "The news *are* good?"

2. In the sentence, "St. James' Cathedral is in Toronto," how would you parse St. James' Cathedral?

3. What is the correct pronunciation of Iroquois?

4. In Third Reader on page 162, how would you pronounce Elihu?

5. Is there a book published which gives the pronunciation of geographical names?—S. M. H.

[1. *News* is almost always used as singular, not plural. "The news *is* good," has the sanction of the best usage. 2. We do not understand your difficulty. *Cathedral* is, of course, a noun, the subject of the verb *is*, and modified by the possessive which precedes it. The three words may be taken as a compound, the name of the building, but the compound should be analyzed in parsing. 3. *I-ro-kwoi*. 4. *E-li'-hu*. 5. Most good dictionaries have lists of such words in an appendix.]

1. EXPLAIN fully the difference between "Legislative Council," "Legislative Assembly" and "Executive Council," and name duties of each and how they are elected.

2. Explain difference between "Legislative Union" and "Federal Union"—SUBSCRIBER.

[1. The "Legislative Assembly" in the Province of Canada consists of the representatives elected by the people, to make laws, etc., concerning all matters which are relegated to the Province by the Act of Confederation (British North America Act). Every province has its Legislative Assembly, corresponding to the House of Commons of the Dominion, and to that of Great Britain and Ireland. The Legislative Council is another branch of the Legislature, corresponding in some measure to the Dominion Senate, and the British House of Lords, or Upper House of Parliament. Five of the Provinces, viz: Quebec, Nova Scotia, New Brunswick, Prince Edward Island and British Columbia have Legislative Councils; Ontario and Manitoba have none. In Prince Edward Island the Legislative Councillors are elected; in Quebec, Nova Scotia and New Brunswick they are appointed by the Lieutenant-Governor in the Queen's name; in British Columbia not more than six can be appointed by the Governor-General, and the rest are elected. In the provinces which have the two Houses (Assembly and Council) all legislation must be passed by both before it can become law. The Executive Council consists of a certain number of members chosen by the Lieutenant-Governor (in the Dominion by the Governor-General) to assist him in the discharge of his duties. The members of this Council constitute the Ministry or Cabinet. In the Dominion and in Great Britain the Executive Council is called the Privy Council. 2. In a Legislative Union there would be no Provincial Assemblies or Councils, but only the one Dominion Legislature or Parliament, which would legislate for the whole Dominion in all matters. A Federal Union is a union such as we now have, in which matters deemed purely Provincial or Local in character are legislated upon by the Provincial Legislatures; all those which are deemed to affect the whole Dominion by the Dominion Parliament.]

1. WHAT are the seven wonders of the world?

2. Where can copies of Entrance Examination Papers, set for the different examinations for the past two or three years, be obtained?—SUBSCRIBER.

[1. The seven wonders of the world were in ancient times reckoned to be the Pyramids of Egypt, the Hanging Gardens of Semiramis, at Babylon; the temple of Diana at Ephesus, the Statue of Jupiter, by Phidias, at Athens; the Mausoleum at Halicarnassus; the Colossus at Rhodes, and the Pharos of Alexandria. They were described in a special work by Philo of Byzantium.

2. From an Inspector or High School Master, if at all.]

1. WILL there be an Entrance Examination in December?

2. The Public School Geography does not cover the Entrance work with regard to definitions. Is there any text book that does?—M.W.

[1. Yes. See advertisement for Time table. 2. Will some teacher of experience kindly answer?]

ACCORDING to the explanation given of infinitives on page 111 and 112 of Public School Grammar, is not the word "skating" in the sentence, "His graceful skating was much admired," used with the same force as the word "playing" in the sentence "playing is pleasant." And skating would not be an abstract noun as given, but an infinitive.—A SUBSCRIBER.

[In the one sentence the word *playing* is unlimited, *i. e.*, it denotes the act without reference to "the person or number of any subject;" in the other, the word *skating* is limited by the adjective *his*, so that the assertion is not made of skating in itself considered, but only of the skating of a particular individual. This we understand to be the distinction intended. Whether the verbal noun is properly an abstract noun, is, we think, open to question.

1. ARE there separate maps published of the Provinces and districts of the Dominion, and, if so, where can I obtain one, outline preferred, of Assiniboia?

2. By whom is "Our Little Men and Women" published, and what is the price of it?

3. Is there a good book of "Object Lessons" published?—A SUBSCRIBER.

[1. Separate maps of the Provinces can, no doubt, be had of any educational bookseller. We do not think any separate maps of the Territorial Districts have been published. We know of none. 2. D. Lothrop Company, Boston, Mass., \$1 a year. 3. Calkin's Primary Object Lessons (Harper & Brothers, Publishers) is a good book. There are, doubtless, many others.

1. PLEASE tell me the exact or approximate number of Public schools in the Province of Ontario.

2. Also the average number in a county.—B.S.

[1. Public schools, according to Report of 1888, 5,277; Separate schools, 229; grand total of all schools in operation, 5,624. 2. Divide above by number of counties.]

1. COULD you find space to publish the last Entrance Examination questions (Dec., '89)?

2. What is the capital of South Dakota? of North Dakota?—M.M.

[1. We give them in this number. 2. Bismarck and Pierre, respectively.]

1. WHAT is the best plan I can pursue in taking up Zoology without a teacher (for First Class work)?

2. What is the Literature, poetical and prose, for First Class in July, '90?

3. Has the History limit been changed (since last July's examination)?

4. I failed in Chemistry only, last year, and am reading Wilson's. Can I make a pass on book-work, having no means for performing experiments?—FAINT-HEART.

[1. Will some teacher of the subject kindly answer this and No. 4? 2. *Shakespeare*—*Coriolanus*; *Addison*—*Selections from the Essays*—*Spectator*, Nos. 21, 23, 26, 47, 50, 69, 93, 115, 159, 162, 169, 195, 225, 381, 387, 458, 483, 574, 583, 598. 3. No.]

1. WHAT is the correct form for "So long," usually said when two are parting? Is it French? What does it mean?

2. What is the meaning of the following words, found in "Third and Second Readers": Barbara Lewthwaite, Sheelah, (Abou Ben Adhem,) Conway, St. Anne's. Please state how a person could best find the meanings of any other words in above books that are not given in the ordinary dictionaries.—SUBSCRIBER.

[1. To the best of our knowledge it is slang, and used only as such. If it has any meaning it is, we should guess, as an abbreviation of some such expression as "Good-bye till we meet again," but it is not used by persons of education or refinement. 2. We are not sure we understand what you want. Give references and explain your difficulty. They are all proper names, real or fictitious. Every teacher should have access to an encyclopaedia such as Chambers'. The trustees should supply one for every school.]

WOULD you or some of your readers kindly give me a few notes on teaching *case* of nouns and the mode of distinguishing *transitive* and *intransitive* verbs?—INEXPERIENCED.

[Perhaps some experienced teacher will favor us with a method that has been tried and found successful.]

PLEASE show errors in the following reasoning based on definitions found in Public School Grammar:

1. Iron is the name of a metal, and distinguishes that metal from all others, therefore it is a proper noun.

2. The cake lies *in* the basket.

In joins words basket and cake, and shows the relation between them. How would you show a child that relation is "lies *in* basket"?—SUBSCRIBER.

[1. A proper noun is defined as the name of a thing. *Metal* cannot be regarded as denoting a *thing*, but only any one of a class of things possessing certain properties. 2. We would show it by reference to the meaning. There is an obvious difference in meaning between "The cake in the basket lies (somewhere)" and "The cake lies in the basket." In English such relations, affecting as they do the meaning of sentences, are indicated mainly by the positions of the words.]

1. Give origin and proper use of the word "ain't."

2. Give an explanation and test that a Junior Fourth Class will understand for calling a word, used in the connection of "turning" in the sentence "I saw him *turning* the corner," a participle.

3. (a) Parse "so," Third Reader, page 136, first sentence. Lesson: "The Flax." (b) Explain the relation of "rich," Fourth Reader, page 333, first stanza, Grey's Elegy.

4. Give a somewhat definite outline of the drawing—other than Book No. 5—that a person should teach to an Entrance Class.

5. Where could a person obtain a copy of the last three or four Entrance Examination papers?—YOUNG TEACHER.

[1. *Ain't* is not a correct abbreviation and should not be used. 2. Does it modify or limit a substantive? (*Turning* modifies *him*). Does it partake of the nature of a verb? (*Turning* expresses an action.) 3. (a) *So* is here an adverb, meaning of that kind, or description, and used to avoid repetition of *delicate*. This is, we think, the usual view. As *so* in such cases, takes the place of an adjective, a strong argument might be made in favor of regarding it as an adjective. If an adverb it must modify *is*, understood. (b) *Rich*, is an adjective modifying *page*. It is placed after its noun for convenience sake because it is itself modified by the clause which follows it. 4. See Entrance Examination questions in this issue. 5. See answer to Subscriber above.]

PLEASE republish the receipt given in a July or August number of ED. JOURNAL, for preparing the aniline ink used with the Lithogram.—A SUBSCRIBER.

[The ink is prepared by dissolving one ounce of aniline violet or blue (2 R B or 3 B) in seven fluid ounces of hot water, and on cooling adding one ounce of wine spirit with $\frac{1}{4}$ ounce of glycerine, a few drops of ether and a drop of carbolic acid. Keep the ink in a well stoppered bottle.]

PLEASE publish the list of lessons required for Entrance work.—J.C.

[See advertisement.]

*(We are obliged to hold over several questions for next issue.)

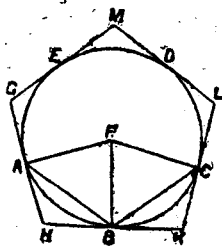
Mathematics.

SHORT AND SIMPLE PROOF OF A PROPOSITION IN EUCLID, BOOK IV.

To the Editor of the Educational Times.

SIR,—The demonstration usually given of the problem which is Prop. 12 of Book IV., viz., To describe an equilateral and equiangular pentagon about a given circle, is not only prolix, but by many students is found difficult to remember, and the latter objection is also made to a briefer demonstration lately put forth. A brief and easy demonstration may, however, be presented, and as the same has by many students and teachers been deemed highly acceptable, I beg your permission to submit an outline thereof to your readers. One would suppose that it must have been already published, but I have not seen it. Yours obediently, W. J. REYNOLDS.

[The annexed diagram is lettered as usual, but the construction for the purpose of the demonstration is merely the drawing of two consecutive sides of the inscribed pentagon and the joining the centre of the circle to the extremities of these two sides.]



Firstly. The equality of the tangents HA and HB is most easily deduced by the 6th of Book I., from the fact that the angles HAB and HBA are the remainders when the equal angles FAB and FBA are taken from the equal right angles FAH and FBH, and that they are therefore (by the

third axiom) equal.

Secondly. The angles FBA and FBC may be shown by means of the 8th of Book I. to be equal.

Thirdly. The equality of the angles HBA and KBC is deduced from the fact that they are the remainders when the equal angles FBA and FBC are taken from the equal right angles HBF and KBF.

Fourthly. The equality each to each of the remaining angles and sides of the isosceles triangles HBA and KBC is shown by reference to the 26th of Book I.

The proof, according to the foregoing indications, will, I believe, be found when written out formally to be shorter (for the same fulness and use of permitted abbreviating signs) than any other.

The following appreciative notice from the same paper of a work by two well-known Ontario mathematicians will be interesting to all our readers:

Algebraic Analysis. By G. A. Wentworth, A.M., J. A. McLellan, LL.D., and J. C. Glashan. (Ginn & Co.)—The first or introductory part of this work illustrates the fundamental theorems and the most important processes of pure Algebra. It contains complete explanations and illustrations of topics which receive but scant attention in ordinary books, such as the Principle of Symmetry, Theory of Divisors, and its application to Factoring, and Applications of Horner's Division. The volume closes with a large collection of exercises in Determinants, which present under new forms many of the general results obtained in the earlier chapters, and to these they add many important propositions in other subjects; as, for example, in the method of least squares, in linear, homographic, orthogonal and homaloid transformations, and in the degeneracy of the tangency of quadrics. Excellent taste and judgment are exhibited in the beauty and elegance of the production. These, as we have before observed, are marked characteristics of the works sent forth by this firm, which has lately started a London agency. The fact that its books are free from the trammels of the English examination system is sufficient to make them before long a boon to the English teacher.

CORRESPONDENCE.

MR. W. S. HOWELL, of Sombra, points out typographical errors in this column for Nov. 1st. In Prof. Dupuis' solution three exponents were omitted. The correct reading is: "Let m and n denote any two numbers. Then since $(m^2 + n^2)^2 = (m^2 - n^2)^2 + (2mn)^2$ is an identity, the

problem will be satisfied by the numbers denoted by $m^2 + n^2$, $m^2 - n^2$ and $2mn$, etc., etc." We thank our friend for noting the slip. Mr. H. solved the problem in the same issue. Instead of "For instance, with 12 as base," read "with 20 as base."

Problems 70, 78, 79, 80 and 82 of last year were not solved. The three following solutions were sent by a correspondent whose name has unfortunately been lost. We shall be glad to acknowledge his kindness in due form if he will please send the name.

No. 78. How many years' purchase must I give for an estate to get $3\frac{3}{4}\%$ int. for my money?

I am to receive a perpetual annuity of $3\frac{3}{4}\%$ of the sum paid for estate
P. worth of annuity =

$$3\frac{3}{4} \left\{ \frac{1}{1.03} + \frac{1}{1.03^2} + \frac{1}{1.03^3} + \text{ad inf} \right\}$$

$$= 3\frac{3}{4} \times 30; \text{ i.e., } 30 \text{ years' purchase.}$$

No. 79. Face of note = \$150.00

$$3 \text{ mos. int. @ } 6\% = 2.25 = \$152.25 =$$

Value of note at maturity. Bank Disc. on this for 15 days @ $4\% = .25$; net proceeds = \$152.00.

Had the note been "drawn at 3 mos.," instead of "due in 3 mos." interest would be reckoned for the three days' grace also.

No. 82. P. worth of annuity of \$154 for 19 yrs @ 5%

$$= 154 \left\{ \frac{1}{1.05} + \frac{1}{1.05^2} + \text{&c.} \frac{1}{1.05^{19}} \right\}$$

$$= 154 \left\{ 1 - \frac{1}{1.05^{19}} \right\} \div (1.05 - 1) = \$1861.15 \text{ nearly.}$$

No. 80. If $a^2 + b^2 = c^2$, then abc is a multiple of 60.

SOLUTION.—Every square number is of the form $3m$ or $3m+1$. Thus, if there be two squares both of the latter form, their sum is of the form $3(m^2+2m)+2$, i.e. of the form $3m+2$ which cannot be a square. Thus at least one of the two must be of the form $3m$, i.e. a multiple of 3.

Every square number is also of one of the forms $5m$ or $5m \pm 1$. Thus if the quantities a^2 and b^2 are not of the form $5m$, they must be of the form $5(5m^2+2m) \pm 2$, that is, of the form $5m \pm 2$, which cannot be a square. Thus at least one of the two must be a multiple of 5, or c is a multiple of 5. Again, a and b are either even or odd, and every even number is of the form $4m$ or $4m+2$, and every odd number of the form $4m+1$ or $4m+3$, taking for the modulus. Consequently if a and b are both odd the sum of their squares is of the form $32m+2$, which cannot be a square, for by hypothesis every square number must be of one of the forms $16m$, $16m+4$ or $8m+1$, and this sum is of the form $16m+2$, or $8m+2$, thus one must be odd and the other even if their sum = c^2 . Now when one is odd and the other even there are two cases, as either of the forms $16m$ or $16m+4$ may be taken with $8m+1$. But the latter case is excluded because $24m+5$ is of the form $4m+5$ which cannot = c^2 , so that we have only $16m$ and $8m+1$ as a possible combination. In this case if a^2 or b^2 is of the form $16m$, either a or b is of the form $4m$, and one at least of the quantities is divisible by 4.

On the whole it is plain that either ab or at least abc is a multiple of 3, 4 and 5, and thus in any case 60 will divide abc .

No 70. In the circumference of a circle whose area = πac , a stake is driven to which is attached a rope that just allows a horse to graze over $\frac{1}{2}$ acre outside the circle. Find the length of the rope.

Solution by W. PRENDERGAST, B.A., Seaforth Coll. Inst.

Let A = one acre, a = rad. of that circle, b = difference between the two radii, and C = area common to both circles. Take the stake as the origin, and the equation of the outer circle is $r_1^2 = (a+b)^2$;

that of the given circle is $r_2^2 = 2a \sin \phi$. Thus we get area of half difference

$$= \frac{1}{2} \int_0^\pi (r_1^2 - r_2^2) d\phi$$

$$= \frac{\pi}{2} (a+b)^2 - \frac{1}{2} \int_0^\pi 4a^2 \sin^2 \phi d\phi$$

$$= \frac{\pi}{4} (b^2 + 2ab - a^2) = K \text{ suppose.}$$

$$\text{Now } 2K + 2C = \pi a^2 + \frac{1}{2} \pi (a+b)^2$$

$$\text{But } C = \pi (a+b)^2 - A; \therefore 2C = 2\pi (2ab + b^2)$$

\therefore substituting and reducing

$$2\pi (2ab + b^2) = 2\pi a^2, \text{ whence } b = \frac{a}{2}(\sqrt{2} - 1), \text{ and}$$

the radius of the larger circle = 47'5765 yds.

A correspondent from Rosedale asks for an arithmetical solution of the following:—"A and B have equal sums of money at first. A gains \$50 and B loses \$95, and A then has twice as much as B. How much had each at first?" I. SOLUTION suitable for a IV. Class, by the EDITOR. Each had a certain sum, let us call this the sum,

$$\text{then sum} + 250 = (\text{sum} - 95) \times 2$$

$$\text{or sum} + 250 = 2 \text{ sum} - 190. \text{ Add } 190 \text{ to each side}$$

$$\frac{190 =}{190}$$

\therefore sum + 440 = 2 sum. Subtract sum from each side

$$\frac{\text{sum}}{440} = \frac{\text{sum}}{\text{sum}}$$

After doing this question the pupils would understand that any quantity in an arithmetical equation can be taken from one side to the other by simply changing the sign.

PROBLEMS FOR SOLUTION.

M. N. sends the following taken from Ex. xxiv. Robertson's Birchard's High School Algebra, Part II.:

2. How many different signals can be made with 20 flags of 5 different colors, 4 of each color, any number less than 5 being used, but always placed in a straight line, either vertical or horizontal?

3. Five ladies and five gentlemen drive out in five separate carriages, one lady and one gentleman in each; in how many ways may the party be arranged, including the order of carriages?

4. Proposed by MR. PRENDERGAST, Seaforth Coll Inst.: A father left \$16,395 to be so divided among his three sons, aged respectively 15, 17 and 25, that when the shares of the two younger put out at (simple) interest at 5% per annum until they became of age each would then have an equal amount, and that if one of these equal amounts had been put out at the same rate for a time equal to that which elapsed since the eldest became of age it would then amount to his share. Find share of each.

5. By the EDITOR: The interest already due on a mortgage, together with what accrues during the time, will board 28 people $4\frac{1}{2}$ months, or 19 people for $25\frac{1}{3}$ months. How many people may be supported on this interest and what accrues during the next 12 months?

$$6. \text{ Simplify } (8^{\frac{3}{4}} + 4^{\frac{3}{4}}) 16^{-\frac{3}{4}}; \text{ and}$$

$$7. (9^n \cdot 3^{2n} \cdot 3^n - 27^n) \div 9 \cdot 3^n. \text{ Sent by T.F., Elginfield.}$$

8. A man invested \$300 more than $\frac{2}{5}$ of his money in a house and \$600 more than $\frac{1}{3}$ of the remainder in a lot, and had \$900 left. How much was he worth? Sent by A.G., Fournier.

9. How many pounds of tobacco @ 5s. 8d. must be mixed with 4 lbs. @ 6s. 6d. that the mixture may sell for 7s. 10d. and yield a profit of $33\frac{1}{3}\%$ on the outlay? Sent by W.N., Algoma.

10. W.K., Kleinburg, asks for simple solutions of the next three. From 12 acres subtract 9 ac. " 2 roods " 39 per. " 30 yds. " 6 ft. " 108 in. What are the two exact times when the hands of a clock are equally distant from the Fig. III.?

11. Two cisterns of equal size are full. The tap in one would empty it in 5 hours, the tap in the others in 4 hours respectively. Both taps are opened; when will one cistern have twice as much water in it as the other?

CHILDREN are God's apostles, day by day
Sent forth to preach of love, and hope, and peace.—Lowell.

EVERY one blames in his neighbor what the world blames in himself.—La Rochefoucauld.

HABIT with him was all the test of truth:
"It must be right; I've done it from my youth."
—Crabbe.

Hints and Helps.

GAMES IN SCHOOL.

For the EDUCATIONAL JOURNAL.

AT our school during the winter there were about a dozen large boys and girls and about the same number of medium-sized ones, so we used to play games at noons and intermissions. We had a set of "bean-bags," packs of Nations, Logomachy and Authors—the Nations and Authors being used principally for playing "Old Maid," and when the teacher was "old maid" there was general rejoicing. We had several "wire-puzzles" and others, the pupils often bringing them. We had "magic-writing" and "guessing games," but our stand-by was "Animal, Vegetable and Mineral." Two chose sides, each side taking a waiting-room. The waiting-rooms were separated by a class-room, where the younger pupils played "Pussy Wants a Corner." (In country schools we have no play-rooms.) Two were then sent out, one from each side, to select some animal, vegetable, or mineral, and each went into the side of the other to be questioned as to what it was, all the answers being "yes" or "no," except those which told to classes which of the three the articles in question belonged. Whichever side got it first clapped their hands to let the other side know it and got a "man" from the other side. Then two more were sent out until, after many exchanges, perhaps one side got all the "men" from the other side. It was surprising to me to see how fast the questions would come. If an animal, "Is it wild?" "Is it as large as a dog?" "Has it fur?" and so on. But the mistakes caused the merriment, such as an elephant with fur, a monkey with two legs, a tortoise with hair and a long tail, a bat with feathers, and so on, evidently a few not knowing much about the animal except its name.

ONE INTERESTED IN CHILDREN.

ON TEACHING IN COUNTRY SCHOOLS.

WHEN some principle of teaching is presented and elaborated before a body of teachers nothing is more common than for the teacher of a rural school to remark to his fellows with a half-defined sneer, "That may be good for graded schools, but it cannot be followed in a country school." And we have heard a county superintendent say, in substance, to the State superintendent that the county superintendents could not look to the State Department for help, because of the difference between country schools and those with which the State Superintendent had been chiefly identified. And not long ago a principal of a Normal school remarked that lecturers at institutes and associations are constantly ignoring the country teacher, and discussing questions that concerned only the teacher in cities. We believe that this is a false and harmful sentiment, and that it should be vigorously combated. An extended experience in all kinds of school work, including the country school, and the normal school, and every grade of the city school, both as teacher and supervisor, has forced the conviction upon our own mind that good teaching in one kind of school is good teaching in every kind of school in which the same subjects are taught. The only difference between these classes of schools is a difference in the devices that may be applied. The school machinery differs, and whatever is mechanical in teaching will differ accordingly. Whenever, then, the country teacher declares that certain instruction is good for the city, perhaps, but will not work in the country, it may be true or it may be false. It is likely to be true if the discussion turns on a merely mechanical device. It is absolutely certain that it is not true if it is the presentation of a principle of teaching.

If school teaching is the organic thing we affirm it to be, and if the school system is also an organism and not a mere mechanism, then the knowledge of what is higher must comprehend a knowledge of what is lower in all of its essential features. The man farther down the mountain may declare that the man above him cannot see what is in his own range of vision, but he who is above knows that he sees that and much more besides.

But we intended merely to say that the sooner we prevail upon the teachers in the country schools to

distinguish between teaching and mere devices for teaching, the better will it be for them and the more profitable will the lectures at their institutes and associations be to them, provided these treat of *teaching* and not of *devices* for teaching. It is very true that some devices that can be employed in city schools cannot be used in country schools. And this is the whole matter in a nutshell.—*Public School Journal*.

MNEMONIC LINES.

It is quite likely that many of our readers are familiar with the following lines but it may be worth while to reprint them for the sake of those who may not have seen them. We remember finding them a great help in remembering the order of the British monarchs in our younger days, and even yet we sometimes have occasion to recall them :

First William the Norman,
Then William his son ;
Henry, Stephen and Henry,
Then Richard and John ;
Next Henry the Third,
Edwards One, Two and Three ;
And again, after Richard,
Three Henrys we see,
Two Edwards, Third Richard,
Two Henrys, I guess ;
And, after Sixth Edward,
Queen Mary, Queen Bess,
Then Jamie, the Scotchman,
And Charles, whom they slew ;
And again, after Cromwell,
Another Charles too.
After Jamie the Second
Ascended the throne,
Good William and Mary
Together came on ;
Then Anne, Georges four,
And fourth William all past,
Then God sent us Victoria,
May she long be the last !

EXCESSIVE HELPS IN EDUCATION.

It is evident that the intellectual training of the school which does not help the pupil to help himself is pernicious and destructive of the very ends for which the school exists. This pernicious effect is a constant tendency in education, flowing from the mistaken idea that it is quantity and not quality of learning which is to be arrived at by instruction. To get over the course of study rapidly seems to be a very desirable thing to some teachers, and to many parents and children. The majority of teachers have learned that such progress is all delusion ; that true progress is the mastery by the pupil of his branch of study, by a clear comprehension of all the steps. From this comes power of analysis—the ability to divide a difficult subject and attack it in each of its details in proper order. Victory is sure to come if we can detach the forces of the enemy from the main body, and defeat them one by one. The good teacher looks solely to the quality of the knowledge, and by this increases the pupil's self-help. The poor teacher helps the pupil by doing his work for him instead of stimulating him to do it for himself. He gives the pupil ready-made information, and saves him the trouble of finding it out from books and experiments. He pours in his oral instruction to save the pupil from hard study.—*Dr. Wm. T. Harris, in Education*.

THE TROUBLESOME BOY.

A WELL-KNOWN teacher relates a little incident that happened last summer. As he was walking through a crowded street he was accosted by a gentlemanly looking person, who said, "This is Mr. ———, I believe. You don't remember me. Well, I was the most troublesome boy you had at ——— school. Come to my office, it is near by."

This was the boy the teacher had prophesied would come to no good—mischievous, uninterested, tardy, irregular ; in fact, guilty of all the sins peculiarly sinful to a schoolmaster. Here he was, a fine-looking, well-behaved and evidently prosperous man. How came it about? His old pupil solved the problem by saying :

"I know I must have given you any amount of trouble, but I did not want to very bad. One day, I had been cutting up some capers, and you called me up, and said you wished me to tell to you what you neglected to do, for you felt certain you must be the one to blame, that a pupil would not be so bad unless the teacher was not doing the right thing. 'Tell me,' said you, 'what I must do to make you a good conscientious boy ; I am making a failure here.' This worried me a good deal, and I determined to reform, and set out to. I struggled hard ; you never found fault with me again for my conduct. In my studies I was very backward when you left, but your words I never forgot. You have no idea how I watched you ; I have thought of writing to you, to tell you that you had not made a failure."

This teacher, with thousands of others, was made to see that no one fails who puts his heart into his work. Boys' natures often try one ; but they have hearts after all. Go for their hearts, teachers, every time.—*N. Y. School Journal*.

For Friday Afternoon.

THE BOOTBLACK.

Oh ! a sooty face and a dwarfish form,
And a saucy tongue has he,
And a ready wit, and he swings his "kit,"
And lives life merrily—
With a—"Shine 'em? Shine 'em? Who wants a shine?
Shine 'em for half a dime!
Shine 'em up, mister? Shine 'em? Shine?
Now's yer time!"

Perchance no home has he, nor roof
But the smoky skies at night,
But the rogue knows where from the chilly air
He can rest till morning light—
Perchance in a hogshhead or empty box,
Or open cellarway—
And his sleep is sweet as the hours are fleet,
No score has he to pay !

Oh ! a miniature man is he,
With world-lore always gray ;
He's sooty and gritty and sharp and witty,
And able to make his way—
With a—"Shine 'em? Shine 'em? Who wants a shine?
Shine 'em for half a dime!
Shine 'em up, mister? Shine 'em? Shine?
Now's yer time!"

—Robert Ogden Fowler, in *Wide Awake*.

THE RIVER TIME.

Oh ! a wonderful stream is the river of Time,
As it runs through the realm of tears,
With a faultless rhythm and musical rhyme
And a broader sweep and a surge sublime,
As it blends in the ocean of years.

How the winters are drifting like flakes of snow,
And the summers like birds between,
And the years in the sheaf, how they come and
they go
On the river's breast with its ebb and its flow,
As it glides in the shadow and sheen !

There's a magical isle up the river Time,
Where the softest of airs are playing,
There's a cloudless sky and a tropical clime,
And a song as sweet as a vesper chime,
And the Junes with the roses are straying.

And the name of this isle is the "Long Ago,"
And we bury our treasures there ;
There are brows of beauty and bosoms of snow,
There are heaps of dust—Oh ! we loved them so—
There are trinkets and tresses of hair.

* * * * *

Oh ! remembered for aye be that blessed isle,
All the day of our life until night ;
And when evening glows with it beautiful smile,
And our eyes are closing in slumbers awhile,
May the greenwood of soul be in sight.

—Benj. F. Taylor.

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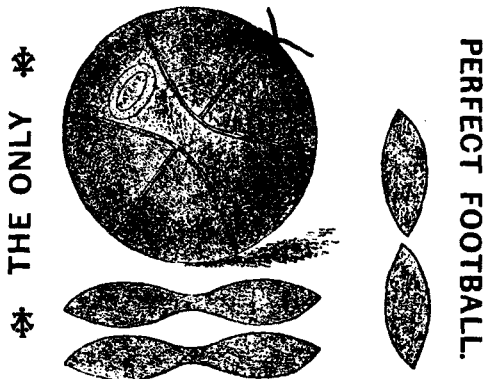
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REFERENCES:

By permission we refer to the following well known educational people: Wm. E. Sheldon, New England Journal of Education, Boston; E. L. Kellogg & Co. New York School Journal; Ivison, Blakeman & Co., Publishers, New York; N. A. Calkins, Asst. City School Supt., New York; Orville Brewer, Teachers' Agency, Chicago; A. P. Marble, Supt. City Schools, Worcester, Mass.; Geo. J. Luckey, Supt. City Schools, Pittsburgh; G. & C. Merriam & Co., Publishers, Springfield, Mass.; C. W. Brown, Manager Educational Department D. Appleton & Co., T. W. Gilson, Manager Educational Department J. B. Lippincott & Co.; Hon. Thos. L. James; Dr. Charles F. Deems; and Gen. P. L. di Cesnola, of New York; J. Murray & Co., Toronto, Ont.; The Grip Printing and Publishing Co.; and many others.

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To High Schools and Collegiate Institutes.

The Entrance Examinations to High Schools and Collegiate Institutes for 1890 will be held on July 3rd, 4th and 5th, and on December 22nd, 23rd and 24th.

Examination Papers will be set in Literature on passages from the following lessons in the authorized Fourth Reader:—

JULY, 1890.

1. The Vision of Mirza—First Reading..	pp. 63- 66
2. " " Second Reading..	68- 71
3. To Mary in Heaven.....	97- 98
4. Flow Gently Sweet Afton.....	98
5. The Bell of Atri.....	111-114
6. Ring out, Wild Bells.....	121-122
7. Lead, Kindly Light.....	145
8. The Heroes of the Long Sault.....	155-161
9. Lochinvar.....	169-170
10. A Christmas Carol.....	207-211
11. The Heritage.....	212-213
12. Song of the River.....	221
13. The Ocean.....	247-249
14. The Song of the Shirt.....	263-265
15. The Demon of the Deep.....	266-271
16. Edinburgh after Flodden.....	277-281
17. Canada and the United States.....	289-291
18. The Forsaken Merman.....	298-302

DECEMBER, 1890.

1. Pictures of Memory.....	pp. 31- 32
2. The Barefoot Boy.....	43- 45
3. The Vision of Mirza—First Reading..	63- 66
4. " " Second Reading..	68- 71
5. The Face against the Pane.....	74- 76
6. To Mary in Heaven.....	97- 99
7. The Bell of Atri.....	111-114
8. Ring out, Wild Bells.....	121-122
9. Jacques Cartier.....	161-163
10. The Ocean.....	247-249
11. The Song of the Shirt.....	263-265
12. Edinburgh after Flodden.....	277-281
13. Canada and the United States.....	289-291
14. The Merchant of Venice—First Reading..	311-316
15. " " Second reading..	321-330

At each examination candidates should be able to quote any part of the selections especially prescribed for memorization, as well as passages of special beauty from the prescribed literature selections for July, 1890. They will be expected to have memorized all of the following selections:—

1. The Short Extracts.....(List given on page 8.)	
2. I'll Find a Way or Make It.....	pp. 22
3. The Bells of Shandon.....	51- 52
4. To Mary in Heaven.....	97- 98
5. Ring out, Wild Bells.....	121-122
6. Lady Clare.....	128-130
7. Lead, Kindly Light.....	145
8. Before Sedan.....	199
9. The Three Fishers.....	220
10. Riding Together.....	231-232
11. Edinburgh after Flodden.....	277-281
12. The Forsaken Merman.....	297-302

For the examination in December, 1890, and thereafter, Nos. 1, 2 and 11 of preceding list will be omitted, and "To a Sky Lark," pp. 317-320, will be added

TIME-TABLE OF THE EXAMINATION FOR 1890.

FIRST DAY.

9.00 A.M. to 11.00 A.M.....	Grammar.
11.15 A.M. to 12.30 P.M.....	Geography.
2.00 P.M. to 3.30 P.M.....	History.

SECOND DAY.

9.00 A.M. to 11.00 A.M.....	Arithmetic.
11.05 A.M. to 11.15 P.M.....	Drawing.
1.15 P.M. to 3.15 P.M.....	Composition.
3.25 P.M. to 4.00 P.M.....	Dictation.

THIRD DAY.

9.00 A.M. to 11.00 A.M.....	Literature.
11.10 A.M. to 11.40 A.M.....	Writing.
1.30 P.M. to 3.00 P.M.....	Temperance and Hygiene or Agriculture.

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

WESTERN ASSURANCE COMPANY.

ANNUAL MEETING.

THE thirty-ninth annual Meeting of the shareholders of the above company was held at its offices in this city, on Friday last, the 21st inst.

The President, Mr. A. M. Smith, occupied the chair, and Mr. J. J. Kenny, the Managing Director, who was appointed to act as Secretary, read the following:

REPORT.

The Directors beg to submit to the Shareholders their Annual Statement of the accounts of the Company for the past year, and its Assets and Liabilities on December 31st, last.

It will be seen from the Revenue Account that the total income of the Company was \$1,719,090.80, and after providing for losses and expenses of management, a profit balance remains of \$54,432.69.

Two half-yearly dividends have been declared at the rate of ten per cent. per annum on the Capital Stock, and after payment of these there is a balance at the credit of Profit and Loss Account of \$12,286.41. This amount added to the Reserve Fund of \$825,000 brings the total Surplus Funds of the Company up to \$837,286.41. From this, however, must be deducted the amount necessary to provide for the Liability on unexpired risks, which is estimated at \$530,196.69; leaving a net surplus over and above Capital and all Liabilities of \$307,089.72. When it is borne in mind that the past year has been marked by an exceptional number of serious conflagrations (in several of which this Company was involved to a considerable extent), and that the experience of companies engaged in marine business has been generally unfavorable, your Directors feel that there is ample cause for congratulation in the figures presented herewith.

Since the last annual meeting of shareholders, the Directors have shared the deep regret felt by the community at large at the death of the late Mr. Wm. Gooderham, who had been a highly valued member of the Board for upwards of twenty years, and Vice-President of the Company for the past four years. The vacancies caused by Mr. Gooderham's death were filled by the election of Mr. George A. Cox to the Vice-Presidency, and Mr. W. R. Brock as a Director.

STATEMENT OF BUSINESS FOR THE YEAR ENDING DECEMBER 31, 1889.

REVENUE ACCOUNT.	
Fire Premium.....	\$1,303,496.81
Marine Premium.....	721,695.77
Less Re-Assurance.....	2,025,192.58
	348,482.62
Interest Account.....	\$1,676,709.96
	42,380.84
Fire Losses, including an appropriation for all losses reported to Dec. 31, 1889.....	\$1,719,090.80
Marine Losses, including an appropriation for all losses reported to Dec. 31, 1889.....	696,887.77
General Expenses, Agents' Commission and all other charges.....	458,032.12
Balance to Profit and Loss.....	509,738.22
	54,432.69
	\$1,719,090.80

PROFIT AND LOSS ACCOUNTS.	
Dividend paid July, 1889.....	25,000.00
Dividend payable January, 1890.....	25,000.00
Balance.....	12,286.41
	\$62,286.41
Balance from last year.....	7,853.72
Profit for the year.....	54,432.69
	\$62,286.41

LIABILITIES.	
Capital Stock paid up.....	\$500,000.00
Losses under adjustment.....	94,142.46
Dividend payable Jan., 1890.....	25,000.00
Reserve Fund.....	\$825,000.00
Balance, Profit and Loss.....	12,286.41
	\$837,286.41

ASSETS.	
United States Bonds.....	529,590.00
Dominion of Canada Stock.....	211,417.50
Loan Company and Bank Stock.....	120,380.00
Company's Building.....	65,000.00
Municipal Debentures.....	84,668.49
Cash on hand and on deposit.....	130,566.25
Bills Receivable.....	47,913.74
Mortgages.....	12,100.00
Re-Assurance due from other Companies.....	41,928.16
Interest due and accrued.....	6,846.73
Agents' Balances and Sundry Accounts.....	196,988.00
	\$1,456,428.87

A. M. SMITH,
President,

J. J. KENNY,
Managing Director.

WESTERN ASSURANCE OFFICES, TORONTO, Feb. 14, 1890.

AUDITORS' REPORT.

To the President and Directors of the Western Assurance Company;

GENTLEMEN,—We certify to having examined the books, securities, vouchers and bank balances of the Western Assurance Company for the year ending December 31, 1889, and find them correct and in accordance with the annexed balance sheet and statement.

R. R. CATHRON,
JOHN M. MARTIN, F.C.A., } Auditors.

Toronto, Feb. 14, 1890.

The President in moving the adoption of the report said:

The report just read and the accompanying accounts present, I think, so clear a synopsis of the business of the Company for the past year that it is scarcely necessary for me to enlarge upon it to any extent. I may say, however, that it must be gratifying to the shareholders to note the position which the Western maintains among the insurance companies of this continent, evidence of which is presented in its premium income of nearly a million and three-quarter dollars (after deducting reinsurances) which comes to us from agencies scattered through out all the Provinces of the Dominion, the United States and the British West Indies. And while it is true that the profit realized upon the year's business is not so large as might be expected under ordinary circumstances, and is, in fact, smaller than has been shown in our annual balance sheets for some years past, it must be remembered that the year 1889 has been in some respects an exceptional one. It is seldom we experience within the period of a few months four such conflagrations as those towards which we were called to contribute during last year, two on the Pacific Coast (which has hitherto been a very profitable field) and two, occurring within a few days of each other in the State of Massachusetts, at Lynn and Boston. So that when, with the calls upon our treasury which these involved, coupled with the unfavorable experience in the Marine branch during the closing months of the year, we are able to meet our shareholders with a large enough profit balance to pay their usual dividend of ten per cent. and add something to our surplus. I think you will agree with me that we are presenting ample proof that our affairs are being conducted in such a manner as to command your confidence and reflect credit upon those responsible for the active management and supervision of the Company's business, both at the head office and at the branches and agencies throughout its extensive field of operations.

In regard to the outlook for the future, I need scarcely remind you that our business, being subject largely to elements beyond human control, is of such a nature that we do not feel safe in attempting to form an estimate in advance of the probable result of any year's transactions. We can only continue to pursue that course which experience and prudence point out as best in the interests of the Company, and rely upon the outcome being in the future, as it has proved in the past, such as to yield shareholders a good return upon the capital invested while affording policy-holders ample security. I cannot close without a further reference than that made in the report to the loss we have sustained since we last had the pleasure of meeting the shareholders in the death of our late Vice-President. His worth and his virtues are too widely known to require more than passing notice here, but I may say that in the death of Mr. William Gooderham we feel that the Company has lost a faithful officer and director and each member of the Board a highly esteemed friend.

The Vice-President, Mr. George A. Cox, in seconding the adoption of the report said:

Mr. Chairman, you have very justly alluded to our late respected Vice-President, who has for many years and with so much satisfaction to the shareholders discharged the duty that now devolves upon me. When I say that I deeply regret the fact that he is not here to discharge that duty to-day, I am sure I but give expression to the feeling of every shareholder and director, every officer and employee of the Company.

The experience of the Company for the year under review affords in my judgment more than ordinary cause for congratulation, notwithstanding the fact that the profits are lower than for several years past. The year of 1889 will long be remembered amongst both Fire and Marine Underwriters as one of unusual severity. In addition to the disastrous storms on the Atlantic Coast as well as on the lakes, we have been heavily interested in no less than four serious conflagrations, and I repeat again that it is certainly a matter for congratulation that the large annual premium income, amounting last year to over \$2,000,000 gross, pouring into the coffers of the Company from nearly every important point on this continent, was sufficient to meet these exceptionally heavy losses on land and sea as well as the ordinary losses of the Company, and to do that without impairing our capital, without encroaching to the extent of one dollar upon our large reserves, without reducing our usual ten per cent. dividend to our shareholders; in short, without in any way disturbing the business of the Company in the even tenor of its way.

It is particularly satisfactory to feel that our business is now so extended and so well distributed as to give us that average risk and that annual income that will safely carry the Company through such disastrous storms and such serious conflagrations as we have experienced during the past year.

It must also be remembered that in years when we escape these exceptional losses, we go on rolling up our reserve funds, and in looking back over the reports of the last five years, including the one just closed, I am gratified to find that we have in that time paid \$322,589.53 to our shareholders in dividends, have transferred no less than \$205,000 to our reserve fund, and increased the amount standing at credit of profit and loss by \$11,298.30; in other words, the Company has earned for you about 20 per cent. per annum on your paid-up capital, about one-half of which has been paid to you in dividends, and with the other half a large reserve fund has been built up to protect your capital in years of unusual disaster. Another very satisfactory feature in this year's report is the fact that our business has been done at a cost of less than 30% per cent., a rate that compares most favorably with that of any other company. Before taking my seat I desire to add that for these highly satisfactory results you are chiefly indebted to your able and energetic Managing Director and his well selected staff, who know their business thoroughly and attend to it promptly.

The Managing Director in reply to an enquiry explained that the amount calculated as necessary to provide for unexpired risks was somewhat less last year than at the close of 1888, owing mainly to the discontinuance of annual ocean hull business. The Marine premiums of the past year being chiefly on cargo risks, written for the trip only, were almost entirely earned at the close of the year.

The report was adopted, and a vote of thanks was passed to the Directors for their services.

Messrs. Fred J. Stewart and John K. Niven having been appointed scrutineers the election of directors to serve during the coming year was proceeded with, and resulted in the unanimous re-election of the old Board, namely: Messrs. A. M. Smith, Geo. A. Cox, Hon. S. C. Wood, Robert Beatty, A. T. Fulton, Geo. McMurrich, H. N. Baird, W. R. Brock and J. J. Kenny.

At a meeting of the Board held subsequently Mr. A. M. Smith, was re-elected President and Mr. Geo. A. Cox Vice-President for the ensuing year.

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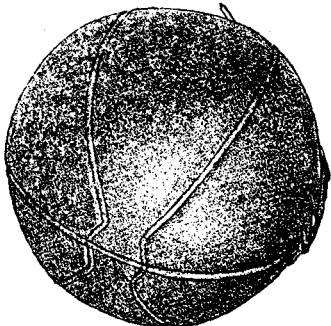
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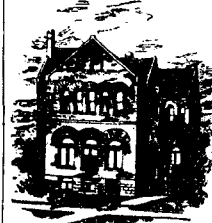
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