

THE EDUCATIONAL REVIEW.

FOR THE ATLANTIC PROVINCES OF CANADA.

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ST. JOHN, N. B., FEBRUARY, 1897.

WHOLE NUMBER, 117

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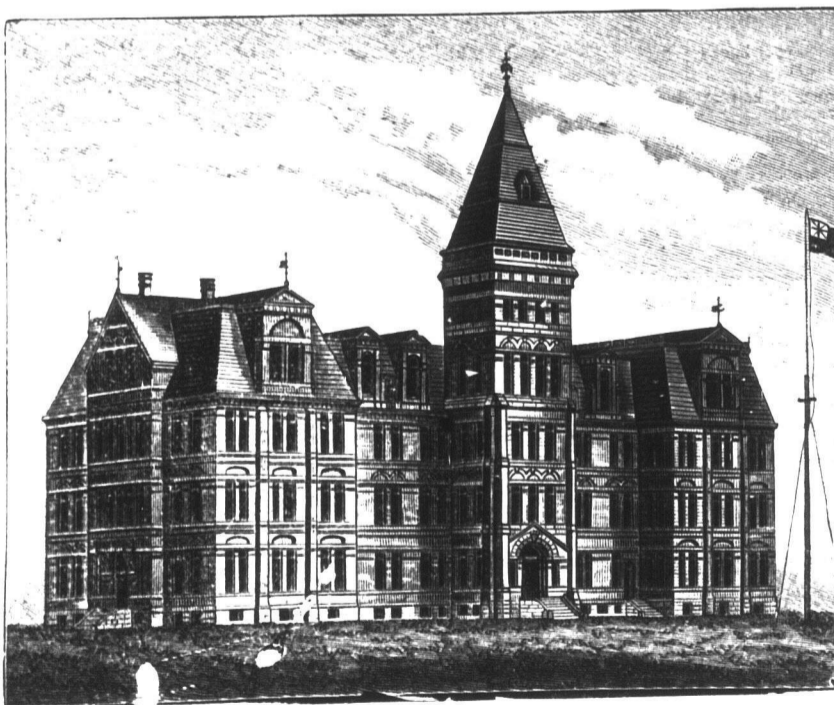
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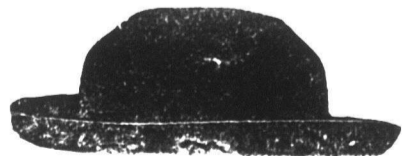
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G. U. HAY,
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J. D. SEAMAN,
Editor for P. E. Island

THE EDUCATIONAL REVIEW.

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We are compelled to hold over to the March number the "Question Department" with answers that should have appeared this month. We regret this, as we would like to make this department a special feature of the REVIEW, where our subscribers might at all times bring their difficulties with a reasonable prospect of prompt and correct solutions. We hope to have it so in future.

The Calendar of the Summer School of Science, for the Atlantic Provinces, has just been issued. It contains useful information to those who are expecting to attend next summer's session, which will be held in Yarmouth, beginning July 7th. Copies of the calendar may be obtained by addressing the Secretary, J. D. Seaman, Charlottetown.

We are indebted to Geo. W. Parmelee, Esq., Secretary of the Protestant Committee of the Council of Public Instruction, Province of Quebec, for the Educational Report for 1895-6. It is a volume of 318 pages and contains much valuable statistical and other information. Its representations of plans of a series of

school buildings at a cost of \$250 to \$2500 are interesting. The report shows 303,619 children attended school during the year. The average attendance was 76 per cent. The average salary of male teachers was \$343; female, \$144.

The *Normal Light* is a paper published by the students of the N. B. Normal School, Fredericton. The first number for this year has just made its appearance and is very creditable both in make-up and matter. The articles are decidedly above the average of school papers, especially those on "Educational Reform" and a "Visit to a Model School," which latter is reproduced in another column.

The celebration of sixty complete years of Queen Victoria's reign, will be observed throughout Her Majesty's empire in June next. Already preparations are being made for the event on a great scale, and it is to be hoped that the day will be appropriately observed by the schools of these provinces. In addition to fitting exercises, the establishment of something of permanent value, such as a school library, beginnings of well-kept grounds or noteworthy additions thereto, should distinguish the event.

DR. I. ALLEN JACK, of St. John, has written two interesting articles in the King's College *Record*, Windsor, on College life in that institution thirty-six years ago, in which he draws some interesting pen pictures of the teachers of that time.

A Notable Celebration.

The Royal Society of Canada will meet this year in Halifax, which will be its first meeting in the Atlantic Provinces. Significance is added to this visit of the Society by the fact that it will commemorate the 400th anniversary of the landing of the Cabots on the Atlantic coast. Preparations are already being made in Halifax to celebrate this notable event in a becoming manner, and to extend a cordial welcome to the members of the Society.

An appropriate brass tablet, commemorating the discovery of the Atlantic Coast of Eastern North America and its islands by John Cabot in 1497, will be placed with due ceremony by the Royal Society in the Legislative Building, now the oldest structure of the kind in the oldest maritime city of the region first seen by the

famous Italian navigator. Invitations have been extended to the Corporation of the City of Bristol, from which Cabot sailed in 1497, to notable geographical and historical societies in Europe and America, as well as to the City of Venice, and it is expected that a number of distinguished gentlemen will be present at the meeting of the Society. During the week, when the Society will hold its meeting, of which the Cabot celebration will be an incident, interesting naval and military displays will be given by the Imperial ships and garrison in honor of the Diamond Jubilee.

A History of New Brunswick.

Among the papers read at last year's meeting of the Royal Society of Canada was one by W. F. Ganong, on a plan for a general history of the Province of New Brunswick. Dr. Ganong sets forth his plan in brief and in detail. In brief it is as follows:

- Vol. I. General Introduction to the entire work.
 Sec. I. The Physiography and Natural History of New Brunswick.
 Sec. II. The Indian Tribes.
 Vol. II. Sec. III. The Early Explorers—Norwegian, English, Portuguese, Spanish, French, 1000-1604.
 Sec. IV. The Period of French Occupation, 1604-1760.
 Vol. III. Sec. V. The New Englanders and the English, 1760-1783.
 Sec. VI. The American Revolution and the coming of the Loyalists. The Founding of the Province of New Brunswick.
 Vol. IV. Sec. VII. The Progress of the Province of New Brunswick down to Confederation.
 Sec. VIII. Critical Study of the Character of the New Brunswick People in the light of their origin, surroundings and history.

This is certainly an attractive table of contents, and the full details show a plan so comprehensive and full of interest, that a feeling of keen disappointment is felt at the preliminary announcement made by the author of the paper that he is compelled to abandon the design. It is well known that Dr. Ganong has spent many years of his active life in collecting and arranging material for his work. His plan is so excellent that one wishes that he would reconsider his decision, and give to his native Province a work that promises so much of interest and value.

The Natural History Society of New Brunswick has on hand ten sets of Volume I (Bulletin I-V), which are being offered for sale. Students of science in the Maritime Provinces who want these publications should apply at once to Mr. P. G. Hall, the secretary of the Society, St. John.

TALKS WITH TEACHERS.

A parent said to a teacher a few days ago, "I have a boy and a girl in the same grade in different schools. It takes the girl three solid hours to do her homework, while the boy does his in less than half the time, and I think he cannot be getting along as well as the girl."

On inquiry, it was found that with the girl's teacher the out-memorizer system prevailed, and she was spending her time in the useless and heart-breaking task of committing her home lessons to memory, word for word. The boy was getting ideas and knowledge, and acquiring the faculty of expressing them. He was making far better progress with less than half the exertion. It shows the competency of the average parent to judge of the nature of home work. The parent mentioned thought his girl was doing the most satisfactory work, while she was merely becoming an automaton, repeating in parrot-like manner the words of the texts.

What shall be said of the two teachers? I would say that one of them was trying to do his duty according to modern and progressive methods of teaching, and the other was either disregarding all the maxims of the normal school or was too indolent to make the effort to draw from the child what was in her, finding it easier to be a hearer of lessons than to be a teacher. I can fancy to see her with the text book before her, the only effort required being to note that the lesson was recited word for word.

This happened in a city in which it is doubted whether a superintendent is required or not. It is time these old-fashioned teachers awoke to the signs and requirements of the times.

I think it is most desirable that an opportunity be afforded teachers to visit other schools, especially those having the same grades. This can be arranged very well in cities where there are reserve teachers. A comparison of ideas and methods must be of mutual benefit; especially is it requisite that young teachers should be given the chance to visit those of larger experience. Theory is first rate, but practice is better; and an hour or two devoted to observation of actual class work will convey more instruction than any amount of telling how it may be done. Avail yourself of all opportunities to visit other teachers at work, but go with the spirit of the learner, not of the critic.

Which arrangement is the best in city schools—One grade with two classes or two grades?

Nearly every teacher will answer at once—*one grade!* I agree if the two class idea is carried out as it should be. This is not always done. Teachers very often

have two classes in name only, and that not until the second term. These classes have the same lessons each day and are combined in some subjects. Unless one class is distinctly in advance of the other, this plan is not of much benefit. There are bright and regular pupils and there are dull and irregular ones. They should be sifted in order that the one class may not retard the other, and the first will forge ahead while the second will drag. Promotion and degrading will be found an excellent lever with all. If there are two grades in one room the pupils fit to grade at the end of the first term generally get justice done there and are advanced, which is seldom done when it involves a change of room.

For the REVIEW].

Notes on English.

Here is a clipping from what professes to be an educational periodical, a 'sample copy' of which has just been received. I hope the REVIEW printer will let his readers have the little poetic gem *without italics*.

When a mounting skylark sings
In the sunlit summer morn,
I know that heaven is up on high,
And on earth are fields of corn.

But when a nightingale sings
In the moonlit summer even,
I know not if earth is merely earth,
Only that heaven is heaven.

— Christina Rossetti.

- (a) Analyze the extract so as to show the clauses of which it is composed, stating their kind and connection.
(b) Classify the words in italics, and give their functions.
(c) Select the (I.) adjectival clauses, (II.) adverbial clauses, and show clearly their grammatical relation to the words with which they are connected in sense.

If any one thinks he can do justice to such an outrage on such an exquisite bit of poesy, let him do it by all means. I give it up.

The same periodical fills a gap at the foot of a column with this maxim of Locke's:—"The great thing to be minded in education is, what habits you settle." Do the grammar-fiends ever think of this when drilling their pupils into the habit of looking upon poetry as mere raw material for exercises in parsing and analysis and other grammar-mongering abominations!

* * * *

The following note on the figurative use of *chewing* may interest some student of our language and literature. It was handed in by a member of a Shakespeare class, in connection with the first passage quoted.

A FEW WORDS UPON CHEWING.

"Till then, my noble friend, *chew* upon this."

— *Julius Caesar*, I. 2. 111.

"He left a promise to return again

Within an hour, and pacing through the forest

Chewing the food of sweet and bitter fancy."

— *As You Like It*, 4. 3. 100.

Perhaps if the commentators who stumbled over the meaning of the quotation from "As You Like It," had adopted the comparative method, and read these two passages in relation, the one from Julius Caesar might have assisted them. Then they might have found in Bacon's Essay on Studies, "Some books are to be tasted, others to be swallowed, and some few to be *chewed* and digested." In the Church of England collect, we pray that we may read, mark, learn and inwardly *digest* the scriptures, which certainly presupposes *chewing* them. I wonder if the saucy small boy in Shakespeare's day said to his mother, if she looked troubled, "What's *chewing* you, old lady!"

The "As You Like It" passage is usually misquoted, "Chewing the *cod*, etc." If readers will turn up their Shakespeares to verify this statement they may find the line reading "chewing the *cod*," but until forty years ago no edition of the play ever gave it that way. It was Staunton in 1858 who first changed the *food* of all the old texts into *cod*, and he has been followed by Dyce, Collier and Hudson. But long before 1858 the *cod* form was that in which the line was generally quoted. In the fourth chapter of *Waverley* (written in 1805), Scott quotes it so, and in his introduction to *Quentin Durward* (1823) he makes the strange statement that "all authorities" are in favour of that reading.

Except in the editions mentioned, the word *cod* does not occur anywhere in Shakespeare. And the same is true of *tobacco*, although this word is quite common in the plays of his contemporary, Ben Jonson.

* * * *

A correspondent asks about the pronunciation of the name of the last letter in our alphabet. *Our* alphabet is the English one, and the English pronunciation of *z* is *zed*. The last letter in the United States' alphabet seems to be *zee*. That probably goes quite well with *know* for *cow*, and *destrick* for *district*, and *skool* for *school*, and *waarm* for *warm*. It is often amusing to see the pitying contempt for our ignorance of our own language which United States folks show when they hear us say *zed*. They seem to think us in the same state of educational darkness as the cockney found the country-people in. On his return to London he told his chums that these poor ignorant wretches didn't know any better than to call an 'oss, *a hooss*.

How long *z* has been called *zed* we shall not probably know for certain until that dim date in the distant

future when the Oxford Dictionary shall reach the letter. But the name is nearly three hundred years old at any rate. Shakespeare uses it in *King Lear* 2, 2, 69. The Quarto spells it *g* and the Folio *g*.

"Flou, unnecessary letter," Kent says in that line. This seems to have been the general opinion of the grammarians of the time. In the English grammar which Ben Jonson made "for the benefit of all strangers," as he says, it is said to be "a letter often heard among us but seldom seen." The idea that the letter is unnecessary has not yet died out. It flourishes perennially in the minds of young folks who are learning to write. Readers of Adam Bede may remember the difficulty that Jacob Storey had with his 's, "all with their tops turned the wrong way, and he, with a puzzled sense that they were not right somehow. But he observed in apology that it was a letter you never wanted hardly, and he thought it had only been put there to finish off the alphabet, like the ampersand would be done, as well for what he could see.

Jacob was one of Bartle Massey's pupils, of course. And, especially of course, the thought of Bartle, coming in connection with the absurd idea entertained by our Yankee friends about their peculiar linguistic usages, recalls the reply made by the old schoolmaster to Casson when the latter claimed to be one of the select few "as talks the right language."

"Ay, ay, man," said Bartle, with a tone of sarcastic consolation, "you talk the right language for *you*. When Mike Hodsworth's goat says *ba, ca*, it's all right — it would be unnatural for it to make any other noise."

A. CAMERON.

Yarmouth, February, 1897.

For the Review

Longfellow's Birthday.

As this is the month of Longfellow's birthday some of my fellow teachers may gain a few hints from the way it was observed in my school last year.

It was the 27th of February. A small portrait of Longfellow on the wall attracted attention before school, and the discovery was made that this was Longfellow's birthday.

Grade I found on the board

Yes, it was a swallow's nest
Built of clay and hair of horses!

They enjoyed the story, drew tent and nest, learned four or five words and went to their seats eager to work by themselves.

Grade IV copied an account of Longfellow's life and longer poems; the other grades copied selections that they had learned to read on Friday afternoons. For

the reading in the other grades we used Longfellow's poems, "The Lullaby," "Miss Cyrus' Second Reader," and the selections on the board. Some one volunteered a verse or two of "The Village Blacksmith."

Arithmetic gave the dates of Longfellow's birth and death and asked his age. This led to other similar problems about their own ages.

However, my most vivid recollection of the day is the geography lesson. The map of Massachusetts with coast running up to St. John was sketched on the board at recess. A few minutes were given to talking over where Longfellow had lived, and marking places — Portland, Boston, Cambridge, Massachusetts and Cape Cod — the last was noticed and the names asked for by several pupils. Grade II were then anxious to join the ranks of the map drawers, so after the others were settled to work, they were allowed to find seats where they could see in a vacant seat or two, a spare bench, a few even on the edge of the platform. Then all was very quiet for fifteen minutes as the earnest, happy workers studied that interesting bit of coast line.

The morning closed with writing in copy book fashion. "Longfellow was born February 27, 1807."

The whole was a review of part of their Friday afternoon work on the Children's Poets.

Some of these favorite poems were "Hiawatha," "The Children's Hour," "Rain in Summer," "Moonlight and Sunlight." I should say only one verse of the last mentioned.

"In broad daylight and at noon
Yesterday, I saw the moon,
Sailing high, but faint and white,
Like a school boy's paper kite."

D.

Australian Poetry.

What though the icy winds of June
Around my cottage sweep and roar,
And bitter blizzards tell that soon
July's deep drifts shall block my door.

Each April leaf that passed away,
Each blade that died on mead and glen,
Each flower slain by cruel May,
December's sun shall see again.

The mild nor'easter's balmy breath
Shall kiss the vale and mountain side;
The stream by August chilled in death
Shall leap and laugh at Christmas tide.

Public School Journal.

I hope the REVIEW will have a very successful year.

M. E. F.

For the REVIEW.]

Geography.

INTRODUCTION TO STUDY OF SOUTH AMERICA.

NOTE. The object of the teacher is to interest the pupils in the study of the continent by presenting the main geographical features. The class is supposed to have taken a few lessons on the earth as a whole and to have had special instruction on North America. Wall maps of the Hemispheres, a globe, and outline blackboard map of South America should be before the class. In the absence of wall maps use the textbooks. Show as many diagrams and pictures as possible.

TEACHER. Notice the map of the hemispheres and tell me where South America is situated.

PUPIL. South America is situated in the southern part of the Western Hemisphere.

T. What is its position in regard to North America?

P. It is southeast of North America and united to it by the Isthmus of Panama.

T. Well, Hilda.

P. How wide is the Isthmus of Panama?

T. The isthmus is only about thirty-five miles wide and a man could easily walk across it in a day. An attempt has been made to dig a ship canal through the Isthmus. Why is a canal needed?

P. Vessels going from the east of North America to points on the Pacific coast have now to go around Cape Horn. A canal would greatly shorten the distance.

T. What canal have we in our province?

P. St. Peter's canal in Cape Breton, connecting Bras D'or Lakes with St. Peter's Bay.

T. Let us notice the position of the continent more particularly. In what latitude is it?

P. It is principally in south latitude.

T. 12° N. + 55° S. would place it correctly. In what longitude is it?

P. West.

T. Yes. 35° - 81° west longitude. (Note latitude and longitude on blackboard.) I have here cardboard forms of North America and South America. Which is the larger continent?

P. North America is the larger continent.

T. South America is only about seven-eighths the size of North America. You may draw a square on the blackboard to represent the size of North America. Divide the square into eight equal parts. How many of the parts represent the size of South America?

P. Seven of the parts represent the size of South America.

T. This chart will give an idea of the relative size of the various continents. How does South America with the others?

P. It is smaller than Asia, Africa or North America, but larger than Europe or Australia.

T. You may open your book at the map of South America. Notice the scale and ascertain by measurement the greatest length and width of the continent.

P. South America is about 3,000 miles wide and about 4,800 miles long.

T. You may compare its length and width with the greatest length and width of North America.

P. North America is about 800 miles longer and 400 miles wider than South America.

T. Travelling at the rate of 48 miles a day, how long would it take you to travel the length of South America?

P. It would take one hundred days, or over three months.

T. When you learn more about this continent you will be able to judge whether you would enjoy a trip in this part of the world. You may represent the form of South America in straight lines. Harry may represent the same on the outline map.

P. I have made a triangle.

T. What did straight line boundaries of North America make?

P. They made a triangle too.

T. Yes, both continents have the same general outline, narrowing towards the south. The two lands also resemble each other in their surface forms. This we will notice in a future lesson. Are the coasts of South America regular or broken?

P. They are quite regular. The Atlantic coast is not as regular as the Pacific coast.

T. Which is the longer coast?

P. The Atlantic coast is the longer.

T. The entire length of coast-line, measuring all the indentations, is about 16,000 miles. I will write this number on the blackboard. What did you learn about the length of coast-line of North America?

P. We learned that it is longer than the entire distance around the earth, which is 25,000 miles. The coast-line of North America is 30,000. Is it not?

T. Yes, you are quite right. You may represent the coast-line of both continents by straight lines parallel to each other.

P. North America is nearly twice as long. I know why that is so. North America is the larger continent and has so many more indentations.

T. That is a thoughtful answer. Of what benefit is the length of coast-line?

P. It gives a country greater advantages for trade or commerce.

T. That is true the deeply indented continents have had much intercourse with each other. They are and have always been the abode of the most civilized nations. Notice which these are.

P. The northern continents, Europe, Asia and North America have many indentations.

T. Yes, the northern continents have well been styled "beautiful trees with abundant spreading branches."

P. And the southern one simply trunks?

T. Yes, the unindented continents, shut up within themselves, have been styled "trunks without branches."

P. Can we copy the diagrams?

T. Certainly, you may do so after the recitation. We will now take a quick journey along the coast and learn the names of the most important projections and indentations.

P. From what will we start?

T. From Cape Horn. We will have to imagine ourselves in some kind of a flying machine.

P. Oh yes, an electric flying machine?

T. Very well; this will insure our moving along very quickly. This cape, as you see, projects from an island of the same name. It is a huge black, naked rock, rising many hundred feet above the sea. (Show picture of cape.) If we were in a steamer it would be safer for us to go through the Strait of Magellan.

P. Why do you not go round the Cape?
 T. No, Cap. Horn, the sea is often made very rough by the strong westerly winds. For this reason steamships do not go to the Strait of Magellan. Small bands of the birds known as Larks, live on the islands south of the Strait. Not a very large island here.

P. I have read of this island being called the Red Fox.

T. Yes, the island has many volcanic mountains and is very fertile. As we turn to the east, about 300 miles from here, we notice a group of 200 islands only a few miles apart of moderate size.

P. East Falkland and West Falkland. To whom do they belong?

T. These islands belong to Great Britain. Make a sketch of St. George's Bay and Gulf of St. Matias, to our right.

P. As we go along the coast of the Argentine Republic, we see many of birds on the sea shore and they are dressed as if they were clothed in heavy overcoats.

P. Are they penguins?

T. Yes, some kinds of penguins are called rock penguins. Some carry their eggs in a pouch between their feet. Do you see that they not only have overcoats

P. But they are in their overcoats.

T. We now pass the mouth of a large river which is some 200 miles long.

P. Is it the Rio de la Plata?

T. Yes, the waters of this river are very turbid and are about 200 miles from the shore. We now come to the Cape Horn.

P. Cape Horn. Is it as high as Cape Horn?

T. No, it is not. South of this cape is Rio Janeiro Bay, one of the best harbours in the world. Farther south is the Bay of Santos. There are some "flying penguins" here.

P. What are they?

T. Birds of sea level below the sea level are called flying penguins. They are very dangerous to the fisherman and are much dreaded by those who traverse the sea.

P. We are now in what region?

T. The Tropics.

P. They are clouds so softly over land and sea that it is difficult to distinguish the dividing line. We have just passed another cape, Cape St. Roque. Being a flying machine we will be perfectly safe when we pass the mouth of the Amazon River.

P. Why?

T. Because at certain times a high upright wave of water from the sea rushes up the river and is sure destruction to small vessels. This is called the Bore. The waters of this river can also be traced several hundred miles from the shore.

P. The Amazon is 3,000 miles long and is the longest river in the world. Is it not?

T. I am glad to find you have read something of it. We find much that muddy land along the northern coast. British Guiana is often called "the land of mud" on account of its extensive alluvial formation. We now pass on to some of the smaller West India Islands.

P. I've heard of Trinidad. We send missionaries there.

T. On the island grows a curious tree called the "picture tree," because the leaves seem to be covered with maps and pictures. Some people call it the geographical tree. Its leaves are green and have yellow and white markings which are in strange forms and seem to form pictures.

(This journey may be continued around the coast noticing the most striking peculiarities of the coast.)

P. Can we make an outline map in our blank books?

T. You may, and represent on it the principal capes, gulfs and bays. The islands, too, properly belong to the coast. Which has the more islands, North America or this continent?

P. North America.

T. You may also draw the diagrams and copy the topics we have noticed in this lesson.

SOUTH AMERICA.

- 1. Position. 4. Coasts. 7. Islands.
- 2. Size. 5. Projections. 8. Comparisons.
- 3. Form. 6. Indentations. (North America.)

T. Think over all we have learned in this class and gain all the additional facts you can concerning these topics, for our next lesson.

A. H. HAMILTON.

For the Review

Arithmetic in Country Schools.

In many ungraded schools undue prominence is given to reading, arithmetic being considered apparently, by many teachers, a matter of not much importance. Having always taught in ungraded schools, I am speaking from actual facts in connection with the subject of which I wish to write a few simple words.

Take, for example, a class of pupils in Standard II. As a rule they may read fairly well, but when it comes to number—well, in many cases they have not been instructed how to perform operations with numbers up to ten, much less one hundred.

Last term, a class in Standard II, could hardly do work required for Standard I, and yet the teacher who had left at the close of the previous term was strongly commended by many of the parents for "bringing the children along so fast."

Another unpleasant feature to be noticed is the lack of attention to practical arithmetic. Now I do not mean by that to do away with text-books by any means, but to teach the pupils to be independent of text-books, or in other words, to be able to do ordinary work without reference to text-books.

I had recently, a rather unpleasant proof that in higher grades the book is used almost exclusively. A few days after school opened, a visitor, interested in school work, came to the school one afternoon and wishing to examine Standard V, in arithmetic, placed a few simple questions in fractions on the blackboard; also one question in division of decimals. Not one of

the class could do the question in decimals, and only one or two could do the work in fractions. I at first attributed their failure to nervousness, but as I began to review their work in arithmetic, I found it was "too much text book" instead.

It certainly is discouraging to teach arithmetic to five grades every day, perhaps no part of the daily routine is more tiring, but it is a plain duty, and certainly even if one's labor meets with but little encouragement from the parents (who almost invariably judge of their children's progress by their reading alone) yet the knowledge that one is doing one's very best for the true advancement of education should be sufficient reward, and also an incentive to yet greater exertions on the part of the instructor.

The writer does not intend to imply that other subjects should be slighted and only arithmetic and reading taught.

There is not enough review work done in many schools. When a rule is once taught to a class it is passed over and something else taught, and little review work is done. Children forget arithmetic more quickly than almost any other subject, hence the necessity for frequent drill upon the subject.

With primary grades, in schools not provided with ball frame, buttons, pieces of card-board or paste-board may be used. It is more trouble certainly, but in many cases in poor districts, after the teacher's salary is paid there is but little money left to spend on school furniture.

The importance of the subject in question cannot be denied. To farmers, tradesmen and all classes, a good practical knowledge of arithmetic is indispensable. It must indeed be embarrassing for the man who cannot correctly calculate, for example, the interest due upon money lent or borrowed, or the amount to be paid for a few feet of lumber, without being obliged to consult others as to what is really the correct amount.

Of course the pupils have themselves to blame in many cases, for not being attentive to what is taught in school and not being diligent in their studies, but the instructor who neglects other subjects equally important for the sake of giving nearly half of the time to reading is also to be blamed.

A parent once said to me, "Why have you not put Maggie in the third book? Mr. M., our last teacher, was asking me yesterday about her and I told him she was still in the second." He said "Oh, she ought to have been in Standard III long ago. I intended to have graded her last term, had I remained." I replied, "Mr. H. I have not advanced your child in reading because she was not qualified in other branches for Standard III." The next I heard from that source was that

"the children were not learning one bit." Now that of course was hard to bear, but still "Maggie" remained in Standard II, until she received instruction necessary for Standard III.

Another peculiar circumstance might also be mentioned and that is the habit some instructors have of grading their pupils into Reader No. VI. *Why* this is done is something not easily understood. The writer would be glad to hear the opinion of other teachers in explanation of this subject. VEGA.

Stone Bushes Wanted.

Dr. A. H. MacKay, Education Office, Halifax, Nova Scotia, writes:

"I would be very much obliged to any of your readers would look along the shores this spring and send me specimens of a very peculiar seaweed in which interest is now being taken. I shall be glad to correspond with those who take an interest in the matter, exchange specimens with them, or otherwise be of use to them. And after studying the plants I shall have very much pleasure in describing their nature and appearance in the REVIEW as a "Nature Lesson."

The plants belong to the red seaweeds, although when lying on the shore they soon bleach from the original purple red to white. They do not look like plants at all. They grow as incrustations on stones and shells, some species forming thicker crusts than others: the crust in still other species rising up in numerous nodule like points, sometimes into short, rounded, stubby branches of limestone. They are generally looked upon as coral incrustations: but they are not, because there is no coral insect. The seaweed, when growing, lays up in each cell of the vegetable structure a large quantity of the carbonate of lime, so that to all outward appearance the plant is a stone bush. If it is placed in a dilute solution of hydrochloric acid for a few hours all the lime may be dissolved out with the evolution of a great deal of carbonic acid gas. Then when well washed in water the gelatinous looking mass has the genuine odor of seaweeds, although the naked eye cannot discern the cellular structure. Many specimens are thrown up by the sea at Point Pleasant, Halifax Harbor.

The genus is called "Lithothamnion," from the Greek "Lithos," a stone, and "Thamnion," a little bush. Farlow mentions two species as found on the American coast, namely, *L. polymorphum* and *L. fastigiatum*. But the species have not been well worked out here.

Natural history specimens, botanical specimens, so marked, and tied as to be capable of examination by the postal authorities, can be mailed at one cent for every two ounces. Any specimens, or suspected specimens, sent to the above address, will be considered a favor to be repaid as best possible.

For the REVIEW

Suggestions.

The teacher should be enthusiastic, energetic, thus will he impress the pupils with the idea that the subjects taught in school are most important.

The teacher should avoid seeming to be cold and uninterested, and yet should guard against being nervous and excitable. Lively interest expresses what he should be. The teacher should not laugh at the mistakes of his pupils, nor draw attention to natural or acquired defects for the purpose of inducing ridicule.

The teacher should aim to induce inquiry. If he cannot always answer the questions elicited, let him acknowledge it, and set to work with the pupil to find out the answer.

The teacher should not be too ready to help a pupil out of a difficulty. The recitation is for the purpose of inciting pupils to think. If it fails in this it fails utterly.

The pupil should look forward to the recitation with something of the pleasure that an athlete looks forward to the field sports.

The teacher's manner should be such as would encourage the timid. These you have always with you, and they need your aid and sympathy more than any others in the school room. The teacher must remember that he is being constantly read by his pupils, he must therefore avoid all mannerisms, all vulgar practices, all things that cultivated persons should avoid, he should.

The teacher should not take up the subject as though it were an old story to him. Get all the new lights on your subject you can, and always come to the class with something fresh.

Be always prompt in calling and dismissing classes. The habit of punctuality and promptness is as necessary a part of education as a Latin declension. If class work is done promptly it becomes a habit with the pupil.

The teacher should show by his manner that his mind is on the answers the pupils give in forming other questions.

The teacher should show himself independent of the text book—should teach the subject, not the book.

The teacher should aim to reach the lower half of the class.

The teacher should not allow his attention to be given exclusively to one pupil, that others may feel themselves unnoticed—then is the opportunity for disorder.

Teachers govern your temper—never scold—never nag—be pleasant—be firm.

Do not take the time of recitation in reprimanding

pupils. Discipline by the eye, or a simple shake of the head. Leave reprimanding until the close of the session, then take the offender by himself.

The teacher should be watchful that his pupils use correct speech. Even in the arithmetic class you may teach English.

The teacher's own language should be well chosen. What you are in speech your pupils will probably become.

The teacher should remember that the pupil is daily reading his character, and as a rule forms a correct estimate; let him therefore have noble purposes in life and strive after the attainment of a noble character worthy the emulation of his pupils.

Unless the teacher is himself advancing, the pupils will not advance. As Dr. Arnold says, "All prefer to drink from a spring rather than a pond."

A teacher animated by a noble purpose in life, an unfeigned love for his pupils, a consuming desire for their moral as well as intellectual welfare, cannot fail to produce impressions for good, lasting as eternity.

To none are given so many opportunities for good as to the teacher. None performing their work in a merely perfunctory manner, will do so much harm as will the teacher.

Insufficient pecuniary as the rewards usually meted to teachers are, to the faithful will come the "well done."

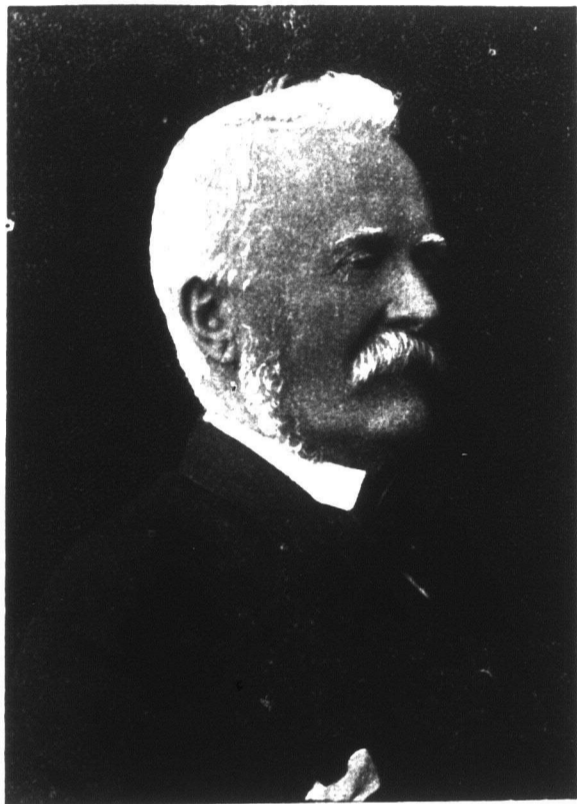
8

A Boy's Team.

Learn patience, boy, and self control,
 You own a team that's full of fire,
 Two wayward steeds that draw your soul,
 One's called *Self Will* and one, *Desire*.
 With quivering limbs and tossing mane,
 And flashing eyes behold them stand,
 Just ready now for you to rein,
 They wait the touch of your young hand.
 O guide them, boys, 'tis this they need,
 They'll bear you on to life or death,
 They're fierce as Arab's untrained steeds,
 Or docile things as ever drew breath.
 Hold fast, dear lad, nor let them slip,
 Feed well, groom well, nor overload,
 Urge on, but use no reckless whip,
 And always keep the plain, straight road.
 This life may be one pleasant drive,
 If thus you go at good sense rate,
 Tired at God's palace you arrive,
 And hitch your team before the gate.
 But reckless, random—on slap dash,
 Wild as the winds—no guiding check
 Ah! soon or late there comes the crash,
 And you go down amid the wreck.

Sunny Hours.

**Wm. McKerron, Esq., Commissioner of Schools,
Halifax, N. S.**



About five miles from the Moray Firth, on the quiet but romantic Lossie lies a small town called Elgin. Having been on several occasions the residence of some of the Scottish kings, it claims to be called a city. Here was born over fifty years ago Mr. Wm. McKerron, the subject of our sketch. He was educated partly at the Incorporated Trades School and partly at the academy of his native city. He was a pupil in the latter school when Dr. Morrison now rector of the Glasgow Normal College, was head master.

Early in life he turned his attention to commerce and while a mere lad went to St. Johns, Antigua, as head clerk to a West India firm. But not liking the climate he remained but two years. He came to Halifax in 1867 and entered the employ of the late George S. Yates as book-keeper. In 1870 he was created notary and labellion and has since devoted his attention principally to marine work. He is chief agent for Nova Scotia in the Canadian Mutual Loan and Investment Company. He was trained in the military school at Halifax, receiving a first-class certificate. He is a retired Major of the "Halifax Rifles," in which he served for several years as an officer. He is a director

of the Nova Scotia Institute of Science and of the Halifax Agricultural Society, and secretary of the N. S. Poultry Association. There are few men in the province so well posted on all that relates to the theory of agriculture in all its departments. As secretary for several exhibitions, and afterwards as commissioner, he has devoted much time and study to the science of agriculture and the related subjects. He also served his adopted province for several years as Government Commissioner of Public Charities.

He writes clearly and vigorously and has contributed largely at different times to various newspaper discussions.

From this brief description of his life's work so far, it will be seen that he has exceptional qualifications for the position to which the Fielding Government appointed him in 1894 that of Commissioner of Schools for Halifax city. As might have been expected he took a broad and enlightened view of educational questions. In 1895 he attended the N. S. Provincial Educational Association as delegate from the Halifax school board. He was one of the most effective speakers in support of the pensioning of teachers, in urging the necessity for their professional training, in advocating the formation of a teachers' union, and in showing that there can be no real science teaching without a direct appeal to nature.

Largely owing to his intelligent grasp of this idea the Halifax Academy has now (nearly completed) one of the best arranged chemical laboratories in the province.

There are few abler defenders of the policy that it pays the state to make all education free to all who have the brains to receive it as free to the poor as to the rich.

In short, Commissioner McKerron's reading and opinion on educational subjects entitles him to rank with our most enlightened educationists.

An Educator.

"In learning," proudly said the birch,
"I once played quite a part:
Whenever little boys were dull,
Why, I could make 'em smart!"

St. Nicholas.

I find the REVIEW a most faithful ally in my school work besides giving valuable information, which could not be obtainable from any other source in regard to changes of teachers, etc. Wishing you every success,

E. A. C.

I wish you every success with your grand paper which if deprived of I would feel lost.

R. E. G.

President's Address.

Read before the St. John County Teachers' Institute by Principal John MacKinnon, Charlotte Street School, St. John, N. B.

LADIES AND GENTLEMEN, FELLOW TEACHERS,

We are so accustomed, on public occasions when education is considered, to hear speakers indulge in fulsome praises of the teacher, the school system and its efficiency, that I expect, in referring to any weakness, or in making any criticism of the work done by our schools, many teachers will resent the sacrifice.

While we have so much to be proud of and to rejoice over, it would be strange indeed if no defects or dangers whatever were perceived. Not to see them would be blindness; and, seeing them, and not mentioning them, would be cowardice.

The tendency of the times, and of the schools, is too much towards expediency and utility. A boy equipped to earn money, and make a show, is turned out on the world "educated." The individuality of a boy—the finer sensibilities, and ideas of truth and honor in a boy or girl, are of more value to them and to mankind than all of the mathematics, science, language and culture that can be carried away by the brightest scholar.

In our gatherings, at Teachers' Institutes and elsewhere, we talk much of school curricula, of furniture and apparatus, of methods of teaching this or that subject, and we do well, for these are important subjects and well worthy our most earnest and careful consideration; but we must not lose sight of the fact that the teacher himself is the supreme important factor in education. To avoid becoming mechanical should be the constant care of every teacher. There is a danger of becoming slaves to the course of instruction, of trusting too much to devices for teaching, etc., to the neglect of our own personality.

The late President Garfield, in speaking before a convention of teachers, once said: "It has long been my opinion that we are all educated, whether children, men or women, far more by personal influence than by books or the apparatus of the schools. If I could be taken back into my boyhood to-day, and had all the libraries and apparatus of a university, with ordinary routine professors offered me on one hand; and on the other, a great, luminous, rich-souled man, such as Dr. Hopkins was twenty years ago, in a tent in the woods alone, I should say, give me Dr. Hopkins for my college course rather than any university with only routine professors. The privilege of sitting down before a great, clear-headed, large-hearted man, and breathing the atmosphere of his life, and being drawn up to him and lifted up by him, and learning his methods of thinking and living, is in itself an enormous educating power.

Smaller schools and more teachers, less machinery and more personal influence, will bring forth fruits higher and better than any we have yet seen." A man that could utter such noble sentiments as these deserved to be President of "the Great Republic."

While it is true that the character of the child determines the character of the man, it is also true that the teacher determines the character of the child, and the old couplet "that the hand that rocks the cradle is the hand that rules the world," should read, "the mind that trains our children is the mind that rules the world."

Again, there is a danger of trusting too much to class instruction, to the neglect of the *individual*. One has said "we should no more think of teaching children in herds than of doctoring them in herds." Classes must be taught by teaching the individuals, instead of relying upon class instruction to develop the individual. Here I will quote from His Eminence, Cardinal Gibbons, on "The Teacher's Duty to the Pupils," in the *North American Review* for July: "The teacher who would aim at shaping the character of all his pupils according to one uniform standard, would be attempting the impossible, because he would be striving to do what is at variance with the laws of nature, and of nature's God. In all the Creator's works there is charming variety. There are no two stars in the firmament equal in magnitude and splendor, 'for star differeth from star in glory'; there are no two leaves of the forest alike, no two grains of sand, no two human faces. Neither can there be two men absolutely identical in mental capacity or moral disposition. One may excel in solid judgment, another in tenacity of memory, and a third in brilliancy of imagination; one is naturally grave and solemn, another is gay and vivacious; one is constitutionally shy, timid and reserved; another is bold and demonstrative. The teacher should take his pupils as God made them, and aid them in bringing out the hidden powers of their soul. If he tries to adopt the levelling process, by casting all in the same mould, his pupils will become forced and unnatural in their movements; they will lose heart, their spirits will be broken, their manhood crippled and impaired. Instead of laboring to crush and subdue their natural traits and propensities, he should rather direct them into a proper channel."

The real fact is, most teachers have too many pupils to develop the powers of each and every child—and the temptation is to cram the bright ones and let the others get what they can. In our city schools there are from forty to sixty pupils in a class room. It is utterly impossible for any teacher to give the individual attention necessary to the proper instruction of all the pupils

under such circumstances. Some of the best educators of the United States agree that thirty pupils should be the maximum number in charge of a teacher. I believe we are all too apt to look at the marked success that our best pupils achieve, and congratulate ourselves upon what the school has done for them, regardless of what has been done for the weaker ones—those whose future success or failure is far more dependent on the school. We must learn to measure our success more by what we do for the dull and stupid ones. We must endeavor to give adequate training to each child according to his capacity, dealing with the slow and weak, and even with the indifferent, as carefully and intelligently as with the clever and brilliant. A school which crams prize-winners, to the neglect of commonplace, or even stupid children, is not doing honest and truthful work. Your industrious, studious and thoughtful boys would acquire an education, even take a medal, if they never saw a school-room, the other *never* would.

Emerson says, "When nature has work to be done she creates a genius to do it," and he adds, "Follow the great man and you will see what the world has at heart in these ages." In quoting this, recently, some one pertinently remarked, "But we have come to an age when it is necessary to follow the great woman as well as the great man to see what the world has at heart." It could hardly have been dreamed a few years ago that it would be thought necessary for a man to speak in defence of man's rights in any of the professions, but I am actually alarmed lest the male teacher as a species shall become extinct in this province. There certainly exists to-day a conspicuous disproportion in the number of male and female teachers in New Brunswick.

Woman has proved her efficiency in all departments of school work, yet the most happy families, according to my observations, are those in which the number of male and female members are nearly equal, and where the influence of neither sex predominates in a pronounced degree over that of the other. I believe that the best interests of our educational system will be greatly conserved by retaining in nearly equal proportions the best teachers of both sexes. The boys and girls in our schools, even in primary grades, need the influence of both men and women teachers.

There is an important field, however, to the work of which woman is particularly adapted and of which the sterner sex will not dispute the monopoly.

The age requires kindergartens. New Brunswick is behind the age in providing them. St. John should lead the way. Are there no Elizabeth Peabodys or Sarah Coopers in this city to take up and carry on this good and necessary work?

The Chief Superintendent of Education, in his opening address at the Educational Institute, in viewing our educational system from the nursery to the university, called attention to this missing circle or weak link in the educational chain. Steps can be and should be taken to remedy this defect. The influence for good of a kindergarten training would not only be felt throughout the primary grades, but I believe all the way up to and through the university itself.

Byron Mathews on "Ethical Education," in a late number of the *Popular Science Monthly*, says, "Nothing is more important for our children and youth to understand than the nature and character of human relations; but these are ignored, as if there were no such relations. Here, in our judgment, is the most serious defect of our schools, and not in the lack of proper 'correlation' of studies." And he goes on to say, "The moral result of the work in the kindergarten, where the little ones are unconsciously instructed in their relation to each other, cannot be overestimated."

As our schools are at present constituted, in my opinion, many of our children enter too young, and until kindergartens are provided for the younger ones the minimum age of admission should be changed to seven years.

Just now the popular demand is for manual training, technical schools, etc. These are good in their places, but not so necessary to a complete education as a kindergarten training. Because education has to do with the whole of life, with man, and not with any one or any group of his petty activities. He must take an acceptable part in the life of effort; and to do this he must be prepared.

There is a time when special technical training is advisable, when it is the proper usurper of the time; but this is quite secondary, a mere supplement to the main business of education. It is a deplorable intrusion if it ever take the place of education. It is unpedagogic to introduce the work into the higher grades only of our public schools. According to Fröbel and Herbart it is extremely unpedagogic, unless it is connected with and closely dovetailed into all actual school work. If we consider manual training an educational factor, the kindergarten is its true foundation.

But I have little sympathy with the cry, that because this is a practical age the school training should be in line with every special occupation of life, without regard to the educative value of the studies pursued. The most practical education is that which develops the child's powers, which acquaints him with, and shows him how to use, the tools nature gave him, so that

he can take up and pursue with pleasure and success the work of any profession or calling in life.

The elements of manual training are but one phase of kindergarten work. The teaching that a child receives in the primary department largely determines his entire career as a student. The methods of study, the habits of thought, the enthusiasm for learning are all begotten in the lower grades; all subsequent acquisition and development are largely dependent upon the primal impetus given to the faculties.

The kindergarten is the best agency for setting in motion the physical, mental and moral machinery of the little child, that it may do its own work in its own way. It is the rain, and dew, and sun, to evoke the sleeping germ and bring it into self-activity and growth. It is teaching the little child to teach himself. The kindergarten devotes itself more to ideas than to words; more to things than to books. Children are taught words too much, while they fail to catch ideas. *Give a child ideas.* The world does not need fine rhetoric—valuable as that is—half as much as it needs practical, useful ideas.

If Fröbel was right, and where is the well-read teacher to-day who doubts it, the kindergarten ought to be the foundation stone of our Public School System. Fröbel intended that kindergarten principles should extend from the nursery through the university, but his life was too short to work out a system suited to the mental, moral and physical requirements of *alder chibbren*. That work was reserved for this age, and as far as I know is still unfinished, for I doubt if either Sloyd or Hailmann's methods have solved the problem.

Did some one say, but these are not questions for teachers to discuss here! If it is true, as we sometimes hear, that the schools are not fulfilling their purpose, will the public not hold the teacher responsible? Do our trustees, and the authorities generally, not expect us, the teachers—yes, even we who serve in the ranks, to diligently seek the cause, bring it constantly to their notice, and, as far as we can, help to apply the remedy!

The schools *are* the fountainheads of progress, and they can and *must* be made successful. The press frames public sentiment, the physicians cure the diseases of the community, the clergy give hope and cheer to that within which is immortal, but the teacher *makes* the community. Then the teacher must not only know his age, but keep his finger on the pulse of its needs. In this day of specialties, when entire devotion is the price of eminence, it behooves the teacher to choose carefully his line of work. Here he must run with the hare and hunt with the hounds. He must know something

about everything, but he falls behind the spirit of the age if he does not strive to know everything about something. In much of his work he must grow through the experience of others—in some one branch he must aim at originality, discovery, or, at any rate, to exercise independent thought. This means time and energy; it means persistent, faithful investigation in whatever direction he has focused his glass, until others are imbued with his own enthusiasm.

Any real advance in educational work must include a more careful study of the child, and the means to be employed for its highest and best development.

"Every educational reform," says Stanley Hall, "has been the result of closer personal acquaintance with children and youth and deeper insight into their needs and life." The teacher who would know this psychology of childhood must study it inductively, that is, by observation of the children themselves. He must not depend on the statements and generalization of others, except as an aid to the better understanding of the individual child.

As observed by a thoughtful writer, "A second hand knowledge of an average of mental capabilities, borrowed from a few scientific observers, cannot serve as a substitute for the personal study which has become the duty of every teacher." Added to the fact that averages are very deceiving things and average human nature not less so than averages in general, is the equally valuable truth that averages change from age to age in childhood, as well as from one age to another of the race. What each teacher needs is something that will enable him to place his finger upon the strong and weak points of his pupil, then no matter what the average of the grade may be, he knows where that child needs strengthening.

An American writer says, "Neglect to study children is one of the sins of the profession." Earl Barnes, professor of education in Stanford University, replies, "One of the best signs of the times, educationally, is the constantly increasing interest in child study."

The school-room of the future is to be a laboratory of research: the child is to develop power by expending energy investigating his enlarged and enriched environment; and the teacher is to investigate the investigating child. Thus, and thus only, can be built up a true psychology of childhood; and upon such a basis only can pedagogic science find sure foundation."

But child study has another purpose of greater value still: to intelligently strive to develop a child from what he now is towards what he ought to become, it is necessary to know each individual child's present condition, and how his various powers respond to stimulation. Individual teaching and hence individual child-

study, is a necessary condition of success, whatever general plan may be pursued.

Of all a teacher's studies then, the most constant and eager of all should be the study of the child at first hand. He should be ever watching the workings and development of the bodies, minds and moral sense of the pupils under his charge, and allowing the child to lead him how to teach. Of teachers it must be especially true, if they would advance towards perfection in their art, "A little child shall lead them."

Fellow-teachers, what are we doing along this line of original investigation in reference to the children themselves: their ways of seeing things and thinking about them; their ambitions, passions, and fears, their plays, their language, their various forms of expression. For example, to come down to particulars, are we seriously considering such questions as—What elements in our common punishments do children consider just? And then again. What elements do they consider unjust? If discipline is to be remedial, rather than revengeful or merely fear-inspiring, we must know how children react against various common punishments usually imposed for the offences which they commit.

There is another kind of knowledge which many teachers fail to take into account. Experience of men and affairs is necessary to character and social refinement. The teacher will be measured, socially, by his ability and desire to contribute to the well-being of society. He should fit into the social life of the world, touching humanity at all points: be the motive force of all that is good and great in the complex machinery of life, determining that example, both in the classroom and out of it, shall take precedence of theory and precept.

Our profession has not usually been regarded as a social one. Some writer, with a touch of sarcasm has said that teachers, like other carnivorous, flesh-bruising animals, generally go alone: that they may sometimes be found in pairs, but that they are hardly ever gregarious. However that may have been in the days gone by, we think it can truthfully be said that in late years teachers have found that strength lies in communion: that encouragement and help are found in the glance of human eye, in the grasp of human hand.

If "in the multitude of counsellors there is wisdom," it is immensely wise on the part of teachers, frequently to assemble, in order that they may be enabled to remedy defects and adopt more efficient means for the advancement of all the interests appertaining to their profession.

Our profession involves many duties, and unless we are willing to spend and be spent in its service, giving

it our highest thought and most earnest effort, it should be left for others more worthy.

It is generally acknowledged that we owe certain duties to the family, to the community in which we live, and to our country; but there is as truly an allegiance due to the profession one follows. The power of society is in its spirit of mutual helpfulness. Loyalty to our profession demands that we take up every burden, if burden there be, and bear it bravely to the end; and that with enthusiasm for the past, and boundless hope for the future, we take the heritage bequeathed by those who have gone before, and standing far above the murky mist of ignorance and selfishness—far beyond the gods of worldly splendor, work—work not for to-day nor to-morrow, not for this generation nor the following, but for the on-rolling ages, for—

"When a true teacher dies, for years beyond our ken
The light he leaves behind him lies upon the paths of men."

Educational Notes.

The American Institute of Instruction will meet at Montreal in 1897.

In Bridgeport, Conn., 30,000 people signed a petition for free text books and stationery for use in the public schools.

The students of Johns Hopkins University are not permitted to publish any periodical.

The Chinese government has ordered the establishment of schools in all the large towns and cities of the empire for the teaching of the English language and Western sciences.

Oxford University consists of twenty-two colleges.

During the present century the number of universities in the United States has increased from 9 to 451.

The authorities of the Cambridge University strike from the rolls of the Alumni the name of a graduate guilty of crime and take from him his degree.

Nine thousand students are registered at the University of Paris. No other educational institution in the world has as many names on its rolls.

Do not explain what you pupils already know. Give no muddled explanations to conceal your ignorance. Do not ask pointless questions, or such as can be answered by "yes" or "no." Wake up their minds by plain, pointed questions that require some mental effort on their part to answer them.

PRIMARY DEPARTMENT.

A writer in *School Education* proposes the following reformed course in arithmetic for children below twelve years of age.

1. Comparatively little number work of any kind during this period. The chief value of number work lies in its contributing to the habit of accuracy, and children are not and can not be accurate in the earlier stages of their development, as latest investigations show. Hence, what number work there is, should be massed mainly in the higher grades.

2. No attempt should be made during this period to teach the *theory* of notation, the nature of factor and product, the analysis of the processes in fractions, the principles of decimals and percentage—in fact, no general or universal truths should be formulated. Such formulation does not belong to children's schools. On this point, every arithmetical text-book is faulty. They make a bee line for general principles and universal laws, which are all adults' thoughts, not children's. They cannot healthily and naturally become children's thoughts by any amount of pictures, "pies," "apples," or degenerate nursery vocabulary.

3. Number work for this period should consist of: (a) The solution of problems which do not require any explicit analysis of general laws. These may involve both integers and fractions. (b) Exercises in computation to form the habit of accuracy. The four elementary processes with both integers and fraction may be used for this purpose. The pupil is not harmed in any way whatever by being taught to perform these processes mechanically without knowing a reason in the world for them.

Our fore-fathers were much more in accord with the results of modern child-study when they told the child interested in the multiplication of fractions to multiply the numerators together for a new numerator and the denominators together for a new denominator, and then *set them to work multiplying*, than we are when we spend a quarter of the pupils' school life in vainly attempting to "develop" in him the universal principles of numerical relations, for which he is not ripe and in which he consequently can have no healthy interest.

Every primary teacher should strive to encourage the children's natural curiosity about all the facts or phenomena that come under their notice, to teach them to reproduce their observations truthfully, to feel a kinship with all animal and plant life, and to be brave and uncomplaining at all times, in addition to the ordinary studies. This is a great work, it is true, and it will take much thought and careful preparation in order that none of these little one be allowed to go astray.

The Essential Element.

The first and most essential element in a good lesson is that it has a well defined aim. The teacher must know clearly at every step just what he wants to accomplish. Mere purposeless entertaining and random shots with tricks and devices that have been picked up in educational papers and teachers' meetings, are a waste of valuable time. Economy in the use of time is one of the most important laws of school teaching. Let no teachers flatter themselves that their happy-go-lucky procedure is new education style, and must, in some mysterious way, develop the children's minds. Mental development is one of the convenient screens furnished by modern pedagogic terminology, behind which much slipshod teaching is hidden. The trained eye of a wide-awake supervisor is not deceived by pretences of this nature; he wants to see the purpose of the work. "Mental development" and "waking up mind" with a purpose—that is the demand of the new education, and it is this which must characterize every lesson and every step in a lesson. *The School Journal*.

Rest of the Attention.

When the attention is fixed upon one subject for some time it becomes weary in one direction; and if given to a series of subjects, though each may afford a relief to the other, in time the whole stock of vital energy which is at the service of attention is exhausted, and the attention itself needs rest. The power of sustained attention varies with age and development. Children soon weary of the effort to fix their attention, and for this reason their lessons should continue but a few minutes at a time upon one subject, nor any considerable time upon a variety of subjects. Calisthenics do not constitute a means of rest for the attention when tired, as they themselves require attention. The proper rest for wearied attention in children is spontaneous plays, and in students or business men is the entire change which comes in the summer vacation by hunting, fishing, camping out, and visits to the sea or mountains.

Principles and Practice of Teaching.

What is a Teacher?

The *Teachers' Program* offered a prize of five dollars for the best definition of a school teacher. Here are a few of the samples selected from the definitions received:

That individual which is seen by all, is admired by some, despised by some and holds the destiny of humanity in his hands; he is the second station on the road to eternity; he holds the keys to both roads and has the power to send humanity either to eternal enjoyment or to eternal destruction.

A vigilant, progressive, enlightened compound of love, order, virtue, diligence and equity.

A peculiar machine, which is expected to lead the procession, gather up the thorns by the wayside and scatter in its path beautiful garlands of flowers.

One who should possess the zeal of Luther, the firmness of Peter, the wisdom of Solomon and the love of John.

A five days' growler, a Sunday night prowler.

One who governs, instructs and imparts science.

An automatic machine manufactured by his patrons, lubricated by his pupils, worn out in moulding civilization and the remains a monument inscribed, "Pauper."

The only person in this world who spends his life working for others with no hope of a reward this side of the Celestial City.

A person who is qualified in dropping small seeds that by years of cultivation may grow into spreading trees.

An angel without wings.

A guide that leads the children through the thorny wilderness, School days, to the beautiful city, Education.

That mechanic who makes and sets in motion the machinery of the soul, called education, and the fabric which it weaves is character.

A moulder of character and thereby of statesmen and nations.

The real guardians of a nation's safety in time of peace, as well as the primary bulwark against coming dangers.

A dictatorial machine; an up-to-date instrument of torture; a testing apparatus; a long drawn out negation; a never-failing source of information; a being all-seeing, all-hearing; a perfectionist; a moulder, a chiseler and a polisher of mankind.

One who teaches by precepts and actions and instructs others by words or signs.

A Visit to a Well-Managed School.

Come with me, and I will take you for a short visit to a school, which is my *ideal* of a well-conducted one.

The building itself, is plain and unpretentious, but the grounds are tidy and well-kept. Our knock at the door is answered by a pupil, who conducts us to a seat. The teacher, who is busy at the other end of the room, comes forward and greets us kindly. She looks happy and bright, and seems to be thoroughly interested in her work. As she soon leaves us, to hear the next class recite, we have a good opportunity of observing the room and its occupants.

The room is large, airy and well lighted, and the floor is free from the litter of paper, etc., so often seen in our schools. The walls are hung with maps (some drawings

of the pupils), a few nice engravings, and several pictures of noted personages—poets, soldiers, etc.,—and the blackboards give evidence of the busy work that has been going on.

But now let us look at the pupils. There are between forty and fifty of them, and all working busily. Our presence does not seem to attract their attention from their work for it goes steadily on. Each one seems to know *what* he has to do and *how* he has to do it.

The pupils speak to one another without permission from the teacher, so we see that talking is not prohibited. They do not, however, abuse this privilege by talking *too* much but only take advantage of it when really necessary.

The classes follow one another in quick succession, but there is no commotion or noise caused by the class movements. When a lesson is ended, the teacher gives certain signals and the pupils march quietly to their seats, and at once go to work at some slate exercise which has been assigned. Certain other signals are given and the next class takes its place in the same orderly and quiet manner.

It is pleasant to watch the class during the recitation. There seems to be a thorough understanding between the teacher and the pupils, and it is hard to tell which is the more interested in the lesson. Occasionally, there is a few minutes' singing between the classes, or the teacher helps some one who has met with a difficulty in his slate exercise.

Soon, however, the time comes for dismissal. Slates and books are put quietly away, and after the closing exercises the scholars go to their cloak room, but before leaving the school each one bids the teacher a kind good-night.—*E. L. M. in Normal Light.*

Lesson on Iron Pyrites.

Minerals may be studied at any season, but I have found them especially attractive as objects for winter study because other things are less abundant and less suited to the season.

Iron pyrites has been selected because (1) it is very common; (2) it appears in so many forms; (3) it is so often mistaken by children for gold; (4) it is crystalline and its crystals are almost always plainly discernible; (5) its chemical composition is easily shown by experiment, and (6) it may easily stand as a type of crystalline solids and thus form the first of a series of lessons on crystallization as well as a series on minerals.

The teacher should supply herself with as many specimens as possible. It is found in many shales, slates, and some other rocks, where it exists in cubical crystals of a dull yellow color not unlike brass. Its crystals are

often found in the form of eight-sided and of twelve-sided solids, called octahedra and dodecahedra respectively. The commonest variety consists of masses of cubes pressed or fused together. Almost any gravel pile will be found to contain many samples of pyrite. Thin plates of it may also be seen on breaking soft (bituminous) coal. The best coal contains but little, poor coal contains more of the pyrite.

It is the presence of this substance which gives to a coal fire its sulphurous fumes.

Pass your specimens around the class and permit each pupil to examine them to his satisfaction. If the cubical crystals are not large enough to see well with the unaided eye, use a simple magnifying glass. With such help, the eye can usually make out a series of fine lines on each face. These lines are always parallel to two edges of the face, but they are never perpendicular with the lines on adjoining faces, so that it is never possible for lines to be traced entirely around a cube.

Lead the pupils to discover the form of the crystals. The type form is a *cube*, but all are not perfect cubes. Many will be found to be parallelepipeds and others will often be found whose corners are cut off by a plane.

Have the type form drawn upon paper. If your specimen is a good one having large cubes, these may be modeled in clay. I have found it helpful in teaching crystals, to have the type form of a crystal made very large of bristol board.

Having studied the crystalline form of iron pyrites, a small portion should be broken off and reduced to a fine powder. Then take from the stove a shovel full of red hot coals and sprinkle the pyrite powder upon the coals. A strong smell of sulphur will at once be detected and the blue color of the sulphur flame will also be seen.

Another way of proving that iron pyrites contain sulphur, is to put some of the powdered pyrite into a glass test tube and heat in the flame of an alcohol lamp. The sulphur will separate from the pyrite and collect in yellow ring farther up the tube when the glass is cold. The principal use of iron pyrites is in preparing sulphur. It is mined in some localities for this purpose. Large beds of it are found in Spain. At Rowe, Mass., and in some parts of Virginia it is mined for the sulphur it contains.

Some kinds of pyrites, when left in a damp place for some time, will change to a whitish powder. This is anhydrous green vitriol. It is formed by moisture of the air combining with the pyrite.

The story of how some of the first colonists in Virginia sent a shipload of pyrite home to England, thinking it to be gold, will interest the children. Perhaps this is the reason that it is called "fool's gold."

Pupils should test the hardness of iron pyrites by scratching other substances with it. In the scale of hardness pyrite ranks about 6.

When struck with steel a spark is produced. That is the reason this substance is called *pyrites*. Define *pyrites*. What is a *funeral pyre*? Its specific gravity is 5. This means that it weighs five times as much as an equal volume of water. If a fragment be rubbed over a piece of ground glass, or unglazed earthenware, it leaves a dark greenish *streak*. This streak which most minerals give when drawn across ground glass, is often an important feature in determining what mineral is under examination. *Visit Our a Paper in N. Y. School Journal.*

The Bad Boy.

"How much extra time and attention shall the class teacher give him, and what shall be done if she fails to reform him?" was the subject of an interesting discussion by the New York Suburban Educational Council in the University building, Jan. 16. It depends on what is meant by the "bad boy" thought the Council. If it is the mischievous, active young fellow, full of animal spirits to the tips of his fingers and toes that is meant, then it is the foolishness of the teacher to so interest him that, for the time being, at least, he shall forget fun and mischief in the pleasures of acquiring knowledge and in doing the work of his class. If, however, by "bad boy" is meant the incorrigible boy, the boy with his moral nature all awry, who in spite of kind and skilful treatment continues to annoy teacher and classmates and to defy the rules of the school, then the members of the council were divided as to what should be done.

A strong minority, headed by a Newark principal, held that but little of the time of the class teacher should be given to efforts to reform the really bad boy, that the state has provided institutions where he can be cared for and trained, and that it is unfair both to the teacher and to the well-meaning members of the class that much extra time and attention be given in school to such a boy. A large number seemed to think that it is not so much extra time and attention in the classroom that the bad boy needs as extra thought outside the classroom as to how to reach and bring him into line. It is a mistake to hastily dismiss the so-called "bad boy" from school. One superintendent declared that in forty years experience he had found it necessary to dismiss but two boys from school for misconduct, and he now believed from what he had since learned that their dismissal was both unnecessary and harmful. The "bad boy" can be reached and reformed by the

skilful teacher, principal and superintendent, and the result is worth all the effort it takes. The same superintendent told how a bad boy in his schools had been thoroughly conquered by referring his outrageous conduct to the judge of the local court who secured the boy's promise to do better if he was not punished that time. Corporal punishment is by no means the best remedy. *N. Y. School Journal.*

To the Singers of Minas.

RAND.

Thou long a poet at the lyric shrine,
Made not a prayer to any muse or power ;
Letting the seasons go as but an hour,
Until the afternoon of life did shine,
Thy silent lips now move to verse divine ;
And Minas adds a jewel to her dower
With every song of thine that like a flower
Unfolds with hue and fragrance pure and fine,
Fundy and Blomidon and the dark Isle
Recumbent seem like servants at thy feet ;
And elemental forces but the birth
Of messengers at thy late singing-while,
To bear thy music to our hearts that greet
Thee as a singer, just found on the earth.

ROBERTS.

Is green walled Acadie a later Greece ;
And thou a classic come to life again,
From thy historic home to modern men
In this green world of beauty and of peace ?
A sculptor then, a poet now, whose lease
Of labor is to carve and chisel clear
Each form or lyric shape, until I hear
Not song ; but see thy pictures rest at ease,
The broad green plain of level Tantramar,
Is but the Temple of thy ancient time,
The tides, and all the Fundean crystal ways
Live as thy blue Aegean was in far
Dim yesterdays ; and all the suns that climb
This sky, knew thee in Helle's brightest day.

CARMEN.

Thou mystic singer whose spontaneous song,
Vague as the tide-tones of the Fundy flood ;
Sweet as the sweetest singer of the woods ;
Thou too hast raised thy lyric voice among
The places where the ebb and flood so strong
Fill with red life the veins of Acadie ;
And in thy wondering voices call to thee
Sad with remembrance of the deathless wrong,
Yet thou art in the circle of the few
Who tune their voices to these singing meads ;
And know the assonance of shore and tide ;
And the swift stroke of wavelet slipping through
The grasses : learning from the river reeds
The deepest chorus of the ocean wide.

The dykelands, and the meadows of the sea
Have been my inspiration many a day
Not less the hallowed willows of Grand Pre.

And its dark tale of crime and misery,
The Gaspereau still flows as peacefully ;
And Minas separated from the Bay
By gloomy Blomidon, and the array
Of beauty on their shores, bind you to me,
For we have loved till lips have filled with song :
Your English blood and my Acadian veins
Unmindful of the hatred of that yore
That made our fathers foeman. Be we strong
In peace, as they in war, and bloody stains
Will fade in union ruling all this shore.

J. F. Herbin in Acadia Athenaeum.

One Thousand Dollars in Prizes.

The American Sunday-School Union offers one thousand dollars in two premiums : \$600 for the best book, and \$300 for the next best book written for the society, upon "Forming and Maintaining Character on the Principles of the Bible."

Each writer is expected to suggest an appropriate title to his work. The widest practicable freedom will be allowed in the form and style of treatment, *e. g.*, didactic, descriptive, narrative, or a tale illustrating the principles and methods of forming and maintaining Christian character in close conformity with the teachings of the Bible under every condition of life. The society seeks practical and useful works free from the bias of current customs, and from the spirit of controversy and dogmatism.

The works must be popular in character, of a "high order of merit," and each consist of not less than 50,000 nor more than 100,000 words.

The MSS. must be submitted to the Committee of Publication on or before October 1, 1897. Each MSS. should have a special mark, and the name and address of the author should be sent at the same time in a sealed envelope (not to be opened until after the award), bearing the same mark, and both addressed, post or express prepaid, to The American Sunday-School Union, 1122 Chestnut Street, Philadelphia, Pa.

The two MSS. gaining the prizes are to become the exclusive property of the union, and the prizes will be paid when the copyrights are secured by the society.

The society reserves the right to decline any and all MSS. offered, if unsuitable for its purpose.

Unaccepted MSS. will be returned to the writers at their expense.

These prizes are offered in accordance with the terms and conditions of the John C. Green Income Fund.

THE AMERICAN SUNDAY-SCHOOL UNION,
1122 Chestnut St.,

Philadelphia, January, 1897.

If your pupils are inattentive, wait. Ask yourself why they are inattentive. Perhaps physical conditions are not such as to insure their best mental condition. Look to the temperature and to the ventilation of your room. Be earnest and interested yourself, and they will be interested and attentive.

Do not repeat questions. Ask them in terms understood by your pupils, for they have the inalienable right to know just what your questions mean. When an answer is given, do not repeat it yourself to impress it upon the mind of the inattentive. As well might you try to illumine a cavern with an unlighted torch.

Do not speak in harsh, loud tones. Bring into the class-room your "home voice," your "society manners." Be at your best in the presence of your pupils. Your eyes will often be more effective than your voice in bringing back to the work in hand the pupil's wandering mind, and in preventing or in correcting a thoughtless movement or utterance.—*Ex.*

SCHOOL AND COLLEGE.

His Honor Lieutenant Governor Howland, of P. E. I., has recently given another evidence of the deep interest he takes in all matters educational, by arranging with His Excellency the Governor General for the distribution of ten medals annually in the schools of the province, as follows: To Prince of Wales College, *two*; Charlottetown schools, *three*; Summerside, *one*; Georgetown, *one*; Souris, *one*; Montague, *one*; Alberton, *one*.

Robert Maxwell, Esq., has been appointed a member of the Board of School Trustees, St. John, in place of D. W. Baskin, Esq., whose term had expired.

A school district in New Brunswick is to be assessed for \$330.00 to pay the costs of an equity suit which grew out of a quarrel some nine or ten years ago. Probably the inhabitants now see that it would have been wiser to settle their dispute in some other way. There would certainly be more money to devote to school purposes. In many districts these unseemly squabbles exercise a retarding influence on educational development.

Mr. Isaac Fay has recently been appointed to the principalship of the (North Side) Mt. Stewart school.

Fredericton has set a good example by increasing the pay of several of its teachers who have distinguished themselves by successful work.

By the resignation of Miss Mabel C. Hunter, Fredericton loses one of the best teachers on its staff.

The list of courses to be given at the Harvard Summer School this year, has just been issued, and in it are found almost all the courses that were given last year, and, in addition, American history, civil government and psychology. Latin was taught last year, but Greek

appears on the list this year for the first time. The attendance at this school has increased very rapidly during the last few years. For several years the average attendance was about 50 or 60, but for the last two years the numbers in attendance have been 600, and have been made up principally of high class teachers, many of them being college professors. Instruction in all courses begins on Tuesday, July 6th.

The many friends of Theodore H. Rand, D. C. L., throughout the Maritime Provinces, as well as those who have admired his contributions to the press and the magazines from time to time, will be glad to learn that a collection of his poems under the title, "At Minas Basin and Other Poems," is being brought out by the Toronto publisher, William Briggs, and will soon be placed on the market. As a poet, Dr. Rand is particularly happy in his sonnets. These reveal a keen appreciation of nature in her varied moods, an admirable interpretation of their moral and spiritual teachings, and are marked by fine poetical diction and musical rhythm. These, we understand, form a considerable part of the volume, which also contains some very fine lyrics, and is sure to give its author a very prominent place among the poets of this country, and indeed of the wider Anglo-Saxon world.

Inspector Mersereau is visiting the ungraded schools of Gloucester County, and in March will take the graded schools of Northumberland County.

BOOK REVIEWS.

THE LIFE AND TIMES OF SIR LEONARD TILLEY, being a Political History of New Brunswick for the Past Seventy Years, by James Hannay, author of "A History of Acadia." Pages 400; cloth; illustrated; St. John, N. B., 1897. Mr. Hannay has done good service in presenting to the public the life of Sir Leonard Tilley, a service that will be gratefully appreciated by all who delight to honor a noble and gifted man, and to set before the youth of New Brunswick an example so worthy of imitation. The book is one we would like to see in every school in the province so that the boys and girls may seek to emulate a life that was both pure and patriotic, and distinguished for those virtues that are an ornament to the citizenship of a country. It was fortunate indeed that the author of the "History of Acadia" should have selected such a subject for his pen, where he had ample scope not only to do justice to the man and statesman, but also to give us a graphic sketch of provincial life for the past three quarters of a century, and deal with those political events that form so important a part of our history. The narrative is carried with spirit and interest down to the death of Sir Leonard, dealing with the character and lives of other public men in the period referred to; and the clear and forcible style in which it is written should win for it instant popularity, and bespeak for it a permanence which the subject and the author's treatment of it fully deserve.

A COMBINED S. S. SINGING BOOK. The enterprising publishers S. W. Straub & Co., Auditorium Building, Chicago, having put into one volume two of their most popular Sunday School Singing Books, "Beautiful Songs" and "Living Fountain," making a work twice the usual size. The price is the same as that of ordinary books, 35c. (The publishers will mail one sample copy for examination upon the receipt of only 20c.) Mr. Straub's books have always been regarded as very excellent, and this combined book with its double amount of the richest music and its extremely low price will be quickly appreciated by our best Sunday Schools.

HERBART'S A. B. C. OF SENSE IMPRESSIONS AND MINOR PEDAGOGICAL WORKS. Translated: with Introduction, Notes and Commentary by Dr. W. J. Eskoff. pp. 288. Price \$1.50. D. Appleton & Co., N. Y. 1896. This book attests the skill of the translator and his mastery of the subject. It deals more especially with those writings of Herbart that relate to the system of Pestalozzi, of whom he was a great admirer. Like Froebel, he soon outstripped the master and conquered a new domain, with this added advantage "over the Noble Swiss," that his solid German training gave him the power to explain, logically, the processes by which he had built up his Pedagogy. "Apperception" is his key-note. This word expresses the fact that the raw material, gathered by the senses, must be appropriated by the mind, by the aid of previous perceptions, and still further assimilated by uniting many other isolated concepts into a single, compact and comprehensive concept. The first A. B. C. of Sense Impression Herbart finds in the spatial forms and measurements of trigonometry. He gives some simple tables for the determination of Model Triangles by measuring the sides, and also the angles, in addition to some very simple ones, which the children are led by an ingenious, but easily understood process, to *make for themselves*. A careful reading of even a few sections, beginning say on p. 183, would convince any intelligent teacher of the feasibility of applying this A. B. C. of form: nor would he doubt that the child so trained would develop a power of attention, comparison and judgment, which would help every study, and by concentration, condensation and correlation, prevent undue multiplication of studies. But there is not only a mathematical A. B. C. of form, but one also of aesthetic form, which cultivates the sense of art, in which is revealed the beautiful as the manifestation of the spiritual. Herbart felt this deeply. In his work (in this volume), "The Aesthetic Presentation of the Universe the Chief End of Education," we find that this alphabet spells out something grander still, and unites man in a still higher relation than is possible with the alphabet that spells out the inorganic, although Herbart, like Froebel, does not relegate morality, or practical reason, as he beautifully calls it, to a special sphere, but interweaves it with the whole of training, so that the production of character is his aim. More, he would even insist that the "educator shall not sacrifice himself to those whom he is educating." Herbart's style is as pleasant as his thought is weighty. The translator has done his work admir-

ably; his analytical index will render reference easy. If our teachers will study this well-arranged presentation of Herbart's main pedagogical points, they may then attack his "Text-book of Psychology," by the same publishers. When we have Froebel by the cradle and in the kindergarten, with Herbart in the school, we may well look hopefully for a nobler type of character, in both men and women, than we are now accustomed to see.

CATH. M. CONDON.

February Magazines.

The February number of *The Ladies Home Journal* contains many papers of more than usual interest and value. Among others may be mentioned "When Kosuth rode up Broadway," by Parke Godwin; "The People of Dickens," by Chas. Dana Gibson; "Mr. Moody's Bible Class;" "Amateur Photography at its Best," by Henry Troth; "Problems of Young Men," and many others which show that notwithstanding its low price of one dollar, the reading matter is of a high order. . . . *The Chautauquan* for February contains an interesting table of contents. . . . *Appleton's Popular Science Monthly* takes the occasion of the recent completion of the Synthetic Philosophy to publish an appreciative account of Herbert Spencer: the Man and his Work, by Prof. William Henry Hudson, who was at one time intimately associated with the philosopher in his literary labors. Prof. Hudson explains the leading principles of Spencer's philosophy, and tells how the great work has been brought to completion. W. S. Blatchley tells How Plants and Animals Spend the Winter, pointing out the ways they have of avoiding or protecting themselves against the cold. . . . In the *Atlantic Monthly* President Gilman (*The Peabody Educational Fund*) tells in detail the history of the administration of the Peabody Fund for thirty years, shows what other great benefactions it has suggested, and points out the unique wisdom of the founder in so directing his wealth as to produce perhaps the best educational results ever produced in the same period by the same amount of money in the history of the world. This article is specially notable because of the extraordinary nature of the subject. . . . The revival of interest in Admiral Nelson gives timely interest to a paper by Capt. A. T. Maban, a distinguished naval critic, on "The Battle of Copenhagen," in *The Century* for February. Captain Maban's graphic and familiar account of this engagement is reinforced in *The Century* by maps and by drawings by Howard Pyle. . . . The February issue of *St. Nicholas* is the Midwinter Holiday number. Frances Courtnevay Baylor, whose story, "Juan and Juanita," was one of *St. Nicholas's* pronounced successes, begins a new serial for girls, "Miss Nina Barrow." George Kennan, in "A Siberian Scare" tells one of his experiences in the wilds of that country. . . . The weekly issue of *The Living Age*, bearing date February 13, is the Monthly Supplement number, and including the supplement, contains 96 pages. Among its most striking features are "All Souls' Eve in Lower Brittany," a delightful sketch of the customs and folk-lore of the Breton peasants, translated for *The Living Age* from the French of Anatole le Braz.

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Full information concerning these Departments is given in the University Calendar. Copies of which may be obtained from the Undersigned.

At the beginning of the Academic year, 1897-98, on the 30th day of September next, the Scholarships for the Counties of Restigouche, Gloucester, Northumberland, Kent, Westmorland, Albert, Charlotte, St. John, Kings, Queens, Sunbury, York, Carleton and Victoria will be vacant.

The Departments of **CIVIL** and **ELECTRICAL ENGINEERING** are now open to properly qualified students.

WILLIAM WILSON, B. A., FREDERICTON, N. B., REGISTRAR

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Although having both the British and the American, the concise treatment, up-to-date character and new points of view from which some of the subjects are considered, have induced me to purchase Johnson's Universal Cyclopaedia. Indeed, for the great majority, Johnson's, on account of the general compactness of the articles and the presentation of all the more important subjects by leading specialists, up-to-date, is specially adapted to be read.

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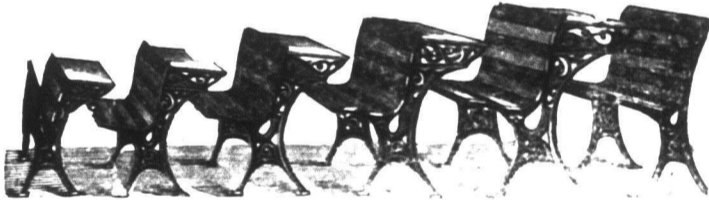
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