

THE EDUCATIONAL REVIEW.

FOR THE ATLANTIC PROVINCES OF CANADA.

VOL. XVII.

No. 8.

ST. JOHN, N. B., JANUARY, 1904

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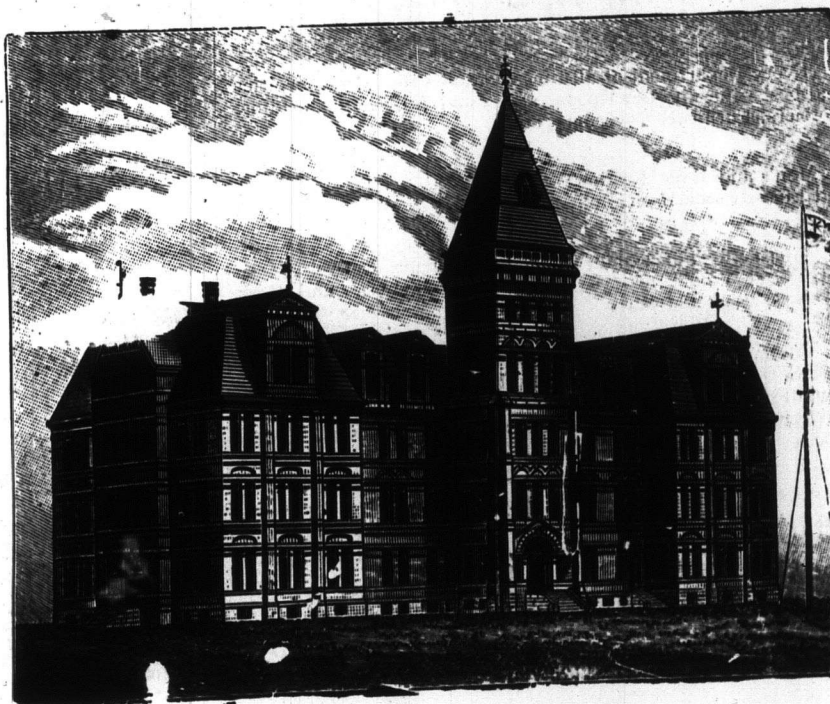
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THE EDUCATIONAL REVIEW.

Office, 51 Leinster Street, St. John, N. B.

PRINTED BY BARNES & Co., St. John, N. B.

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THE greetings that have been extended to the *REVIEW* at the present season have been very pleasant. We wish our many readers a happy and prosperous year, and that recognition of their labors that should be extended for work earnestly and faithfully performed.

IT IS a canon of good teaching that example counts for very much. How much will be gained in the end if a teacher takes the time to put her very best written work on the blackboard? Her pupils will be more pleased to imitate her best work. Do teachers think of this when they are preparing work for the board?

SOME interesting announcements of summer schools for this year will be found on another page. This is the time for teachers to procure a calendar, form their plans, decide what course they will pursue, and shape their reading during the winter for that course. This preparation will enable them to reap greater advantage from a course at a good summer school than they otherwise would.

A FEW days ago a fire broke out in one of the large schools of Toronto. In less than five minutes the children were all safe in the street, such was the perfection of the fire-drill in the school. If there is any way to avoid a panic and the destruction of human life like that in the Chicago theatre horror, it is instilling in children everywhere the habit of prompt obedience and being ready for any emergency.

THE January number of *Acadiensis*, D. Russell Jack, editor, opens with a suggested programme for the ter-centenary of Champlain's discovery of the St. John river, and the action that has been already undertaken in Nova Scotia and New Brunswick looking towards a suitable celebration of the event. *Acadiensis* enters upon its fourth volume with this number, and our best wishes are extended to it for a year of increased prosperity and usefulness.

MARKLAND, or Nova Scotia, is the title of Mr. R. R. McLeod's latest book. It is a handsomely bound volume of over 600 pages, containing a history of Nova Scotia, its resources and chief natural features, all charmingly woven together in that pleasant and readable style so characteristic of the author. It is illustrated by many appropriate sketches of scenery and places. It will interest teachers to know that this book is recommended for supplementary reading in the schools of Nova Scotia. It can be procured from the publisher, Mr. W. V. Brown, Berwick, N. S., at prices ranging from \$2.50 upwards, according to the style of binding.

Teachers' Organization.

The teachers of New Brunswick have organized themselves into an association, the objects of which are stated on another page. The convention held in Moncton was a business-like one; very little oratory was indulged in, and the members earnestly and quietly proceeded with the business in hand. Their claims are reasonable, and they should have the sympathy of all right-minded and thinking people in their demands for recognition and improvement in salaries. This recognition can in large measure be obtained by the legislature and leading men throughout the province acting in harmony with the body of teachers. Their claims are so patent to every one that teachers themselves should not be expected to bear the brunt of the discussion. They have taken the initiative after bearing patiently for years a state of things that they could no longer bear and maintain their self-respect, and it remains for the public to extend to them the encouragement and support they so well deserve.

It is for the best interests of this country as it is of others to have a progressive system of education effectively and wisely administered. It is impossible to administer it effectively without proper rewards which would tempt and retain in the service teachers of the right quality, properly trained and equipped for the work, and paid a sufficient wage to enable them to live with some comfort, meet the needs of their position in society, and make some provision for emergencies and old age.

What does it mean to have the present low salaries of teachers continue? It means a poorer and more superficial quality of teaching. Many of our best teachers have left or are leaving the service for other countries or other vocations where there is more assurance of a living competence. Those who are taking their places are not preparing themselves for teaching as a life work, because they have no encouragement to do so. If salary is the measure of appreciation that people bestow on teachers the people will finally receive just what they are willing to pay for—a meagre service. This is not a pleasant thing to contemplate for those who would like to see our country keep up the good reputation it has already won for its schools and scholars, nor is it a pleasant prospect for those teachers who have given some of the best years of their life to qualifying themselves for teaching, and who are not now in a position to seek other positions or other homes.

The minimum salaries which the members of the new association propose to accept are very moderate. It is not much over fifty cents a day for a teacher

of the lowest class. This is as modest a recompense as the most illiterate and untrained wage-earner receives. The male teacher of the highest class may get a little over a dollar a day, which is not much more than a fourth of what a stone-mason gets. We forbear to comment further on these figures. There is hope that a better state of things is setting in. In nearly every state of the Union and nearly every province of Canada public sentiment is setting strongly in favor of higher salaries for teachers. Intelligent men and the press are everywhere favoring this as an act of simple justice. More than this, they regard the low wages of teachers as a serious menace to the efficiency of education and consequently to the welfare of the country.

In the United States the average wealth per head in the year 1800 is said to have scarcely exceeded \$100; in 1900 it was estimated at \$1,200 per head for men, women and children, workers and idlers. It is probably much under the figure to estimate that the average wealth per head in Nova Scotia and New Brunswick has doubled in the past twenty-five years. Is it not reasonable to ask that teachers who have been so great factors in this material increase should share in the prosperity and general advance in the wealth of the country? But their salaries have not increased. Nay, more, teachers are now poorer financially than were the teachers of a quarter of a century ago, for the cost of living is much greater. And during this period the wages of all other classes of workers have increased! "Are not teachers mean-spirited if they submit longer to this state of things?" said an earnest teacher in our hearing the other day.

But it may be urged that some communities are paying as much now for education as they can afford. That may be true of some sparsely settled country districts, but it is *not* true of cities, towns and the great majority of country districts. Where it is true the remedy is in consolidation of weak districts. Parish instead of district boards of school trustees would help to bring about a better state of things.

The association deserves success. It should have the sympathy and active support of every teacher in the province. The teachers of Nova Scotia, where a union exists already, may give encouragement and support by a more active organization along the same lines. Those of Prince Edward Island are in sympathy with the movement. Teachers will best show that they deserve the active co-operation and support of the community, by keeping in view all the objects of the association, especially "to exalt the character and efficiency of teachers," and "to improve the condition of teachers and school." Steadily working with such objects they will win support and success.

Owls.

By R. R. McLEOD.



As I have before, in another paper, remarked, birds have descended from reptiles. The evidence is entirely convincing from fossil remains, to say nothing of the testimony to be gathered from the embryology and structure of birds.

Two specimens of feathered reptiles have been discovered in Bavarian quarries. If it seems desirable in a future paper, I will tell the story of the evolution of the bird.

We are absolutely certain that the first birds were predaceous; they were not "cooing doves" nor tuneful thrushes, but toothed and clawed for fierce fray with flying reptiles, furnished with bat-like wings, with whom they disputed the dominion of the air in the Cretaceous times, millions of years behind us. Hawks and eagles are but modified descendants of those ancient marauders; so too, is a humming bird, but he is a side branch that could only be evolved when there were flowers stored with nectar, and that was a long stretch of more than a million years from the date of the Bavarian archeopteryx.

Owls are a specially modified group of day-hunting hawks, and as such, are of later appearance than other birds of prey. When most other creatures are locked in the embrace of sleep, and all are left in darkness, that is the time to get meat, provided

there are eyes that can still see, and ears keenly alert to the slightest noise. While the rule is that night is the time for sleep, still there are many species that are out for food in preference to the daylight, although they are not in search of prey. Such are hares, flying squirrels, wild mice, moles, moths, lions, tigers, leopards and other flesh-eating quadrupeds that have acquired a vision and hearing that enables them to successfully hunt the sleeping deer and other animals.

Owls are the feathered equivalents of these blood-thirsty beasts. They are an organic response to the opportunity that night offers to obtain food. "How shall I be filled?" is the question asked by every living thing. Wherever there is a chance for a mouth to get a morsel, there is the hungry applicant with teeth, bill and snout, and hundreds of other contrivances to secure the coveted portion. *In* the soil, and *on* the soil; *in* the water, and *on* the water, and *in* the air. On poor creatures and in them are parasites, and

"Big fleas have little fleas upon their backs to bite 'em,
And these again have other fleas, and so on *ad infinitum*."

In the very long ago, some birds of prey found it advantageous to be out late in the "drape of the day," as Walt Whitman has it. They were provided with eyes slightly better for night work than their fellows.

Organic peculiarities pass by the action of laws of inheritance to the offspring; habits are also inherited. In the strenuous and ceaseless struggle for food, the feathered night prowlers were set apart as a highly specialized group, adapted in every way for the prosecution of their business in life. Eyes, ears, claws, plumage and bills, have been modified for nocturnal use. They pounce upon sleeping birds, and feeding hares, on mice and frogs. No member of this suborder is clothed in brilliant plumage, and the colors of the sexes are alike. "All the red, and blue, and green, and yellow, and bronze feathers have been secured for protective purposes to mimic surroundings, or have resulted from the females selecting for mates, the most highly colored suitors. At night, a bright plumage would be dark, and could therefore serve no better purpose than brown or black." Owls choose their partners at a time of day when pretty color-schemes would not be likely to catch the eyes of these females in search of a mate, and therefore sexual selection could play no part in this group of birds.

We have, as rather rare natives, two species of

owls that are not strictly nocturnal. Both of them are to be seen in pursuit of prey in broad daylight. The one is the Snowy owl, the other the Hawk owl; the former is a native of the far north, but occasionally appears in winter in considerable numbers in the Maritime Provinces and United States; the latter breeds over the whole of Eastern Canada, but is far from common, as owls go.

Both of them are probably later departures from the typical owls; whether they are or not, is worth thinking about. I could give good reasons in support of my view.

This group of birds is hated by all the feathered tribe; they are mobbed wherever discovered in the daylight.

"Not a bird of the forest e'er mates with him,
All mock him outright by day;
But at night, when the woods grow still and dim,
The boldest will shrink away."

They have not met with a favorable reception from mankind. Literature abounds with uncomplimentary references to them. The old Bible prophets pounced upon them as fit company for satyrs and dragons. "Their house shall be full of doleful creatures, and owls shall dwell there; and satyrs shall dance there, the owl and the raven shall dwell in it, and it shall be an habitation for dragons and a court for the owls."

Both their looks and their voices have been against them, to say nothing of their nightly frays on weaker creatures. Screeches, and dismal hoots uttered mostly in the darkness, were calculated to impress ignorant and superstitious people with a dread and fear. Into the hell-broth of the witches' cauldron on Forres Heath, went "Owlet's wing with lizard's leg and blind worm's sting" along with other bedeviled tid-bits calculated to make the "gruel thick and slab." Indeed, Shakespeare leaves us in no doubt about the general reputation of these birds:

"Out on ye owls, nothing but songs of death," exclaims Richard the Third. When King Duncan was about to be murdered in the Castle of Macbeth: "It was the owl that shrieked; a fatal bellman, which gives the sternest good night."

That Shakespeare did not share the popular dislike for owls, may be learned from these lines:

When blood is nipt, and ways be foul,
Then nightly sings the staring owl:
Tu— Whoo,
Tu-whut To-whoo, a merry note,
While greasy Jack doth keep the pot.
The owl group is represented in the Maritime

Provinces by nine species. Of these the most common are the Great Horned owl (*Bubo Virginianus*), and the Barred owl (*Syrnium nebulosum*). The former is about two feet in length, has ear-tufts and yellow eyes; the latter is considerably smaller, lighter plumage barred with light and dark, has no ear-tufts, and the eyes are dark. The Great Snowy owl (*Nyctea scandiaca*) is as large as *Bubo*; plumage either white, or white barred with dark brown, no ear-tufts.

Great Gray owl (*Strix cinerea*) is very rare, large as *Bubo*, no ear-tufts, and yellow eyes. Screech owl (*Megascops Asio*), a small copy of *Bubo*, ten inches in length. Long-eared owl (*Asio Wilsonianus*), rare, fourteen inches in length, long ear-tufts, eyes yellow; above, blackish mottled with whitish; below, brown and gray. Short-eared owl (*Asio accipitrinus*) rare, color much like *Wilsonianus*, a little larger, smaller ear-tufts. In the long-eared owl the first primary is emarginate, that is to say, the feathered portion of web of the outside wing-quill is abruptly narrowed on the inner edge near the outer end. In the short-eared, the first and second primaries are emarginate.

American Hawk owl (*Surnia ulula*) rare, very much resembles a hawk; fifteen inches in length, tail very long, color grey and white. Acadian owl, or Saw-whet, (*Nyctala Acadica*) seven inches in length, strong, not very rare. This bird cannot be mistaken for any other species; closely resembling it, but some four inches longer is Richardson's owl, (*Nyctala Richardsons*), a rare bird.

Perhaps this list with brief descriptions may be useful to those who take an interest in birds, but are not provided with books.

A man or woman in public or private life, who ever works only for the sake of the reward that comes for the work will in the long run do poor work always. I do not care where the work is, the man or woman who does work worth doing is the man or woman who lives, breathes, and sleeps that work; with whom it is ever present in his or her soul; whose ambition is to do it well and feel rewarded by the thought of having done it well. That man, that woman, puts the whole country under an obligation.—*Sel.*

A correspondent writes: "You have published a good December number. The Nativity picture is particularly well done, and I congratulate your printers on the result as well as the editor on his selection."

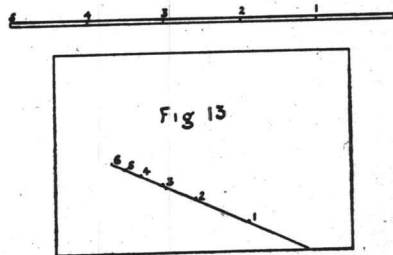
Another adds: "I thought the Christmas number excellent."

DRAWING—No. III.

F. G. MATTHEWS, TRURO MANUAL TRAINING SCHOOL.

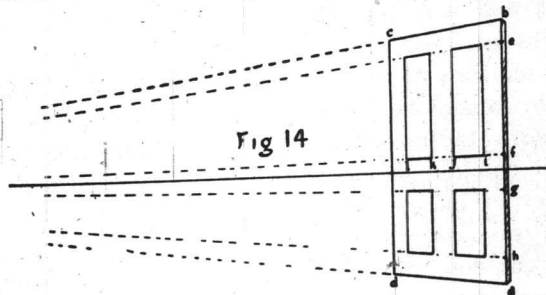
NOTE.—To avoid repetition, references will frequently be made to figures appearing in preceding numbers. It will be well, therefore, readers who wish to follow these articles to keep back numbers by them.

Attention has already been drawn to the changes in the apparent breadths of rectangles when placed either perpendicular or horizontal. The only occasion on which this change is not seen is when the plane is parallel to the tracing plane, or in other words, at right angles to the line of sight. This change, or to give it its proper term, foreshortening, should now be studied a little closer. Referring again to Fig. 1 and 2, it will be seen that the windows on the right and left appear to get narrower towards the further end of the court, and that this narrowing is gradual. To show this more effectually, take a strip of paper and mark it off into equal divisions, numbering them 1, 2, 3, 4, etc. Place this strip on a table at various angles behind the tracing plane, and after making the tracing of it, note care-



fully the results. (Fig. 13). In the accompanying figure the space between 2 and 3 appears about half of that between 1 and 2, while that between 3 and 4 is little more than a quarter of the same, and so on, the effect being more noticeable when more points still are taken. Good concrete examples may be found in the rows of street lamps, or the sleepers on a railway track.

Now to return to the drawing of the door. We

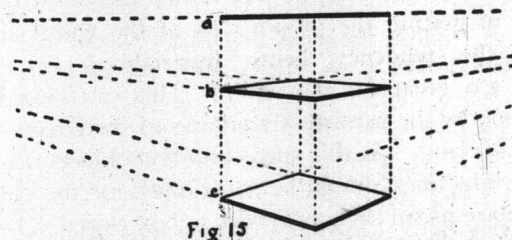


left this in outline and will now proceed to put in the panels. Hold the pencil at a convenient distance

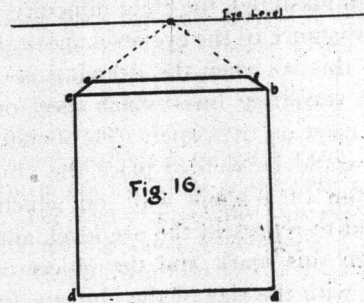
from the eye in a line with the top edge of the upper panels. Imagine this line continued to the front edge of the door, and after noting the apparent distance from *b*, mark it on the drawing (*e*, Fig. 14). In a similar manner mark off *e f g* and *h*. From each of these points draw lines to meet on the eye level at the same spot as *a d* and *b c* produced. With the pencil held horizontally, this time in line with the lower edge of the upper panels (because it is so nearly horizontal), note the apparent positions of *i j k* and *l*, and mark them off on the drawing. Vertical lines through these points will complete the outlines of the panels.

3.—THE CUBE.

The drawing of a cube will be a fairly easy matter after the difficulties of the vertical and horizontal



planes have been overcome. Fig. 15 shows three planes at different levels. This forms a splendid exercise, and at the same time shows how a cube may be represented. If *b* be the top of the cube and *c* the bottom, vertical lines joining the corner will represent the edges of the perpendicular sides. While the horizontal sides run to meet on the eye level. If the top of the cube be on a level with the eye of the observer the four edges of the horizontal surface will appear as one straight line, as at *a* in the figure.



The student should now endeavor to make drawings of a cube in various positions. The first and easiest is as Fig. 16. The front face is practically a square, and the top is simply a repetition of the horizontal plane with one edge facing the observer. A more difficult view is shown in Fig. 17. To draw this, place a vertical line *a e* in suitable position on the paper. At *a* draw *a d* and *a b* exactly as when draw-

ing the horizontal plane in Fig. 7, producing them to meet on the eye level. From *e* draw lines to the same points on the eye level. Find points *d* and *b* as in Fig. 8. Verticals from *d* and *b* will give *h* and *f*, while lines from *d* and *b* to the points on the eye level will give the back edges meeting in *c*.

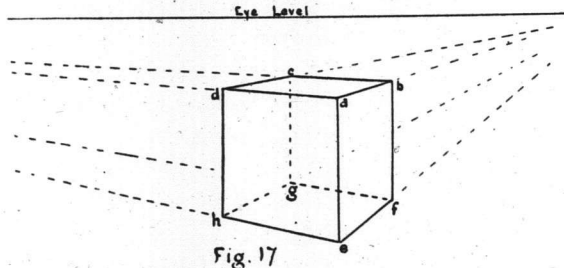


Fig. 17

The square prism is drawn in the same manner as the cube, but the student will notice increased difficulty in getting the proportions of the width and length, the tendency being invariably to get the length too great for the width. This can only be overcome by the persistent studying of the effects of foreshortening. At this stage common objects made up of right lines should be substituted for the cube and square prism such as a brick, a box closed, a box

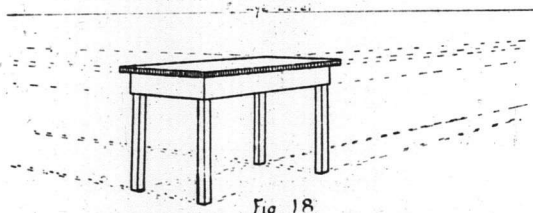


Fig. 18

open with the lid vertical (sloping planes will be dealt with later), a plain table such as Fig. 18, etc.

When the principles of vanishing and foreshortening have been mastered, the chief difficulty will be in judging the distance of the eye level above the object, especially is this so when the drawing is of such a size that the vanishing lines which meet on the eye level do not meet on the paper. To obviate the first difficulty it would be well to place the object to be drawn in front of a blank wall, on which a mark may be placed to represent the eye level, and the distance between this mark and the object can easily be compared with the size of the object. In the second case it is a good plan to first draw the object small in the corner of the paper, placing in all the vanishing lines, thus getting a better idea of the look of the object when drawn.

Intelligent disagreement is morally and substantially healthy. Watch the man who always tries to agree with you. He may be an incapable, if nothing worse.

English Literature in the Lower Grades.

BY ELEANOR ROBINSON.

ELEGY WRITTEN IN A COUNTRY CHURCHYARD.

No doubt many a teacher wonders how it is possible to interest young people in this poem, and why it should be chosen to be read in the lower grades. It is all very well for the notes to say that this is "one of the most beautiful poems of the English language," but can the average child who has to read it recognize the beauty?

In the introduction to that excellent collection of poetry for children, "Golden Numbers," Kate Douglas Wiggin answers these doubts in this way:

"Perhaps you will not for a long time see the beauty of certain famous reflective poems like Gray's *Elegy*, but we must include a few of such things whether they appeal to you very strongly or not, merely because it is necessary that you should have an acquaintance, if not a friendship, with lines that the world by common consent has agreed to call immortal. They show you, without your being conscious of it, show you by their lines, 'all gold and seven times refined,' how beautiful the English language can be when it is used by a master of style. Young people do not think or talk very much about style, but they come under its spell unconsciously and respond to its influence quickly enough. To give a sort of definition: style is a way of saying or writing a thing so that people are compelled to listen. When you grow sensitive to beauty of language, you become, in some small degree at least, capable of using it yourself. You could not, for instance, read daily these 'honey-tongued' poets without gathering a little sweetness for your own unruly member."

There are no strange or very remarkable thoughts in this poem. Rather, the ideas are such as would come to any thoughtful person when his mind was engaged with the same subject. It is because the thoughts are familiar to us all, but expressed in such perfection as can only be attained by a great poet that the *Elegy* is one of the best known poems in our language. Dr. Johnson said of it, "The 'Churchyard' abounds with images which find a mirror in every mind, and with sentiments to which every bosom returns an echo."

In the class of poetry to which the poem belongs, are the famous *In Memoriam* of Tennyson, Milton's *Lycidas*, Matthew Arnold's *Thyrsis*. The attention of the children should be drawn to such specimens as they are likely to know, such as Cowper's *Loss of the Royal George* and *The Burial of Sir John Moore*. They can note the difference in subject, *i.e.*, whether one person, or a number of persons is celebrated, and in tone, *i.e.*, whether it is that of personal grief, or, as in the *Elegy*, of sober meditation. The poem

should also be compared, both as to subject and tone, with Addison's *Westminster Abbey*.

Gray is buried in the churchyard at Stoke Pogis, near Slough, about twenty miles west of London, and this spot is generally accepted as the "churchyard" of the *Elegy*. There is nothing in the poem to fix the description to any particular place.

The first three verses give us the scene and time of day. Is there anything to suggest the time of year? (18th century poets are not as definite and accurate in describing nature as more modern writers are). How much of this description would apply to any churchyard you have ever seen? Note how the thought passes on from the scene to those who sleep there, and how the following verses (5 and 6) hang on that word "sleep." Listen to the repetition in lines 20 and 21.

Are such simple, obscure people worth thinking and writing about? Yes, the poet answers, because here, by their graves, we think how the hour of death comes to all, rich and poor, high and low, alike, and how little difference is made then by fame and honor and flattery. And perhaps, the thought goes on, some of the humble people buried here lacked only opportunity to be wise, and great and famous. But, they were also protected from great temptations, and now that their quiet life is over, they lie here, their graves protected, showing that they are cared for and remembered. From their memorials others may learn to die, for death is hard to meet, and we crave help and sympathy and remembrance. Then the poet speaks to himself, and tells what will be said of him after he is dead, if anyone who, like himself, is "mindful of the unhonored dead" shall inquire about him. Follows the imagined account of his life and death given by some gray haired peasant, and the epitaph that will mark his grave.

I have given this skeleton of the poem because I remember how very hazy were my own ideas of it long after I was familiar with the words, and I think most young readers fail to grasp the sequence of thought, and the connections, *e.g.*, the force of the first word in the line

"For who, to dumb forgetfulness a prey."

But with judicious help, adapted to the pupil's stage of advancement, each one ought to be able to name the leading thoughts of the *Elegy*, tell which verse contains each one, and how many groups of verses there are.

How does the epitaph compare with those described by Addison?

NOTES ON PARTICULAR PHRASES AND WORDS.

Verse 1. *parting*=departing.

Verse 2, l. 2. Is air subject or object?

l. 12. *Reign*=realm.

l. 16. *Rude*=unlearned, humble.

l. 22. *Ply her evening care*. What does this mean? Make it definite.

l. 30. What does *homely* mean here? What do you mean when you use it?

l. 33. *The boast of heraldry*. Heraldry, the knowledge of the different coats of arms which belonged to those who had done, or whose ancestors had done, brave deeds. Hence, *boast of heraldry*=pride of long descent.

l. 35. Some editors read *awaits*, making *th' inevitable hour* subject instead of object.

ls. 37-40. Compare Irving's *Westminster Abbey*, par. 3.

l. 41. *Storied urn*. An urn, such as is sometimes placed upon tombs having an inscription or "story" about the dead person engraved on it. *Animated bust*=life-like statue.

l. 43. *Provoke*. Latin *pro-voco*=call forth.

l. 46. *Pregnant with celestial fire*=full of divine inspiration.

l. 50. What is meant by the *spoils of time*?

l. 51. *Rage*=enthusiasm.

l. 57. For Hampden, see English History, reign of Charles I.

l. 58. Who would be *the little tyrant of his fields*?

l. 59. Prof. Hales asks: "Could a Milton ever have been mute or inglorious? Or would a genius so vast have in some sort overcome all the circumstances that obstructed it?"

l. 60. Do you consider Cromwell guilty of his country's blood?

ls. 61-72. Their lot forbade them to be great orators or statesmen, to do good to their country and read the record of their acts in the contented looks of the people; but it also prevented them from doing great harm, being merciless tyrants, or (l. 69) hiding truth that they knew and should have spoken, or ceasing to be ashamed of wrong, or being false, flattering poets.

l. 73. Hales asks: "Are ignoble strifes confined to towns, and impossible in villages?"

ls. 73-74. (Since they were) far from the madding etc. l. 73 does not modify *stray*.

l. 76. *Tenour*=continuous course.

l. 84. Explain the use of the plural verb *teach*.

ls. 85-86. For who ever resigned this pleasing, anxious being to be a prey to dumb forgetfulness, *i. e.*, who ever gave up this life, with its pleasures and its pains, reconciled to being forgotten?

ls. 89-92. Hales' note must be quoted: "In this stanza he answers in an exquisite manner the two questions, or, rather, the one question twice repeated, of the preceding stanza. His answers form a climax. The first line seems to regard the near approach of death; the second, its actual advent; the third, the time immediately succeeding that advent; the fourth, a still later time. What he would say is, that every one, while a spark of life yet remains in him, yearns for some kindly, loving remembrance; nay,

even after the spark is quenched, even when all is dust and ashes, that yearning must still be felt. We would never not be loved."

l. 90. *Pious drops*—"tears of dutiful affection."

l. 105. *Hard by*—"Fast by their native shore."

l. 115. *The lay*, properly, a song here=verses.

ls. 117-following. These lines are generally taken to refer to Gray himself. He often speaks of his melancholy in his letters.

A Difference in Meaning.

To the Editor of the Educational Review:

DEAR SIR.—Miss Robinson does such good service in her department that one hesitates to criticize; but the enclosed may be worth noting, and she herself will be interested to have her attention called to it. In the interesting notes on Christmas poetry in your December number she publishes Ben Jonson's familiar poem with some explanations. On a line in the second stanza, "He, whom the whole world could not take," she adds the comment that it means, "whom the whole world could not captivate or charm." This meaning of "take" is, of course, quite possible, but its application in this passage seems rather obscure. On the other hand, the meaning, hold, contain, makes a fine antithesis: He whom the whole world could not contain, who was the maker of both heaven and earth, "was now laid in a manger." The passage is usually explained in this way; it is quoted, indeed, in the Century Dictionary as an illustration of this meaning (see take v. meaning 27). 'Take' in this sense is, as has been pointed out, apparently a Latinism, after the analogy of a well-established use of *capio*.

T.

[Miss Robinson will always be glad to have any criticism of her work or to receive suggestions from any correspondent.—EDITOR.]

It is worthy of remark that but for the brightness of the sky the stars could be seen in daylight. Even as matters stand, some of the brighter of them have been seen after sunrise by explorers in high mountains, where the air is very clear and the sky dark blue. If we could go above the atmosphere the sky would appear perfectly black, and stars would be visible right close up to the sun. Astronomers observe bright stars in daytime by using long focus telescopes, the dark tubes of which cut off the side light; and persons in the bottoms of deep wells have noticed stars passing overhead, the side light being reduced by the great depths of the wells.—T. J. J. See, in the January Atlantic,

Mineralogy and Geology in Schools—No. IV.

L. A. DEWOLFE.

We have studied the more abundant minerals and rocks, and have learned something of the geologic agencies concerned in their formation. Let us devote a little time to the various forms under which any given mineral may occur. Take, say, quartz—one of the first specimens studied. The kind we found in our granite was doubtless glassy or milky quartz. When we compare it with other samples which should be in our collection, we find it hard to believe that minerals of so varied appearance can really be the same in composition. Let us divide our quartz specimens into two groups. (1) Milky quartz, rose quartz, amethyst, rock-crystal, etc., and (2) agate, jasper, chalcedony, and flint. The pupils will soon notice that those of one group are smooth, while those of the other are more or less rough. This will probably be their first lesson on crystallization. Have them notice the shape of the crystals in "rock crystal" and amethyst. Notice, too, the parallel striations on each crystal face. Are they longitudinal or transverse? Compare them with those on a cubical crystal of iron pyrites. By comparison with calcite, selenite or orthoclase, the pupil will readily learn to distinguish a crystal face from a cleavage surface. The teacher will see the necessity of having samples of all the common minerals at hand for illustration. Here the question of cleavage has come up, so here is the place to teach it if you have not already done so. One can scarcely teach *cleavage* apart from *fracture*. Our quartz specimens are good for the latter. Notice the conchoidal fracture in all the cryptocrystalline group—jasper, flint, etc.

The pupil will wonder why all these minerals—whether red, yellow, white, colorless, green, purple, etc.—are put down as one and the same mineral. Let him powder fragments of each. He finds that when powdered their color disappears. It could not, then, have been an essential part. The color of the powder is always called the *streak*. The streak, which is a very important thing to note, is often very different from the color. Try the hardness of the quartz specimens. They all scratch glass easily. They even scratch a steel knife. It is the quartz grains in a grindstone that wear away the axe or chisel.

Now, what have all these varieties of quartz in common? They are all of about the same hardness,

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They all have a white or light colored streak. They are all more or less glassy in lustre. They differ in color, but that is not an essential property unless the substance is a powder. They apparently differ in crystallization, but it is found that under the microscope even the jasper and flint are crystalline. Chemists can prove that they are all of similar composition. The only difference is, that in the colored varieties the quartz is stained with some substance present as an impurity and not as a part of the mineral. For example, jasper is quartz stained with iron. Amethyst is quartz thought to be stained with manganese, and so on for other colors. The different names are merely given for convenience, but do not imply any difference except that due to impurities. The question of crystallization should be illustrated by allowing crystals to form from evaporating solutions of sugar, salt, alum, bluestone, etc. Notice that the shape of the crystal depends upon the substance, while the size depends upon rapidity of evaporation. Every substance has its own system of crystallization. Iron pyrites may be found in cubes, octahedrons, and dodecahedrons, but all these are of the isometric system. Quartz belongs to the hexagonal. True there are a few exceptions to this rule. Calcium carbonate, for example, crystallizes in two systems, one represented by calcite, the other by aragonite. The smooth, pearly inside of a sea shell is proved by the microscope to belong to the aragonite type, while the rougher outside belongs to the calcite.

Now just as all varieties of quartz were taken for study, so should we take other groups. The ores of iron can best be taken together. Compare and contrast magnetite, hematite, limonite, and siderite. The last one is very different from the other three. Try the effect of acid on its powder. The children have long ago learned the acid test for lime. They see the same here, but less energetic in its action. It is time now for them to know that escaping carbon dioxide causes this *effervescence*. Then siderite and limestone have this gas in common. The other three ores mentioned are oxides. Be sure to notice their streak, for it affords the safest mark of distinction. A short talk on the manufacture of iron and steel from the iron ore would interest the boy, especially if he has ever been where iron is mined or manufactured. With the iron ores, pyrite may be brought in incidentally as an important iron compound, but is worked for its sulphur instead of its iron.

Another suitable group for study may be found in the three forms of gypsum, the glassy selenite, the fibrous variety, and the hard, white, compact kind, which when free from all stains is called alabaster.

After the lesson on quartz, have the boy examine cuff-buttons that may resemble, say, agate. Are they agate? When he studies amethyst, tell him manganese is used to stain glass one shade of blue. Rock crystal is used for cheap jewelry. The practical use appeals to the average boy.

Education in Japan.

Japan is attracting so much attention now that a few lines from Henry Norman's "The Real Japan," in relation to education in that country, will prove of interest and may serve to show how real education may hasten the development of a people. Scarcely a generation ago (1872) the Emperor issued an order "that henceforth education shall be so diffused that there may not be a village with an ignorant family, nor a family with an ignorant member." Education in Japan is compulsory and secular, but not gratuitous. It consists of five parts: Kindergartens, elementary schools, middle schools, special schools and university.

Let us in Canada mark well that it has kindergartens and special schools, and that it is compulsory. The spirit of Japanese education is summed up in three words by the late minister of education, Count Mori:

"It is our aim to inculcate and develop three qualities in our people—obedience, sympathy and dignity. Obedience, because only through obedience come regularity and serenity of life. Our people are irregular at present, and the influence of our rebellion ten years ago has been widespread, for one thing, in making them so. Therefore obedience ranks first among the qualities they need. Sympathy we must inculcate, because it is the crowning virtue of civilization and the indispensable basis of the democracy we hope, like other nations, to become. Our people have emerged too recently from feudalism to possess sympathy to any great degree, and without sympathy the best man is but a savage. Finally, dignity is the handle of all the blades of character. The Japanese are an impulsive people, and now that they are about to meet the outside world on equal terms for the first time, the value of dignity cannot be over-estimated. These three, again, are the characteristic of an ideal army—invariable obedience, perfect sympathy of high with low, and low with high, equal dignity in victory and in defeat. To aid in their development, therefore, we have established military drill in our schools."

On the Present Confusion in the Names of American Plants.

BY W. F. GANONG.

Every person seriously interested in botany has suffered inconvenience from the confusion now prevailing in the nomenclature of American plants. It arises from the existence in this country of two schools of nomenclature employing different systems in their treatment of the older names of plants. If one compares representative books of the two schools he will find that, aside from other differences, upwards of one-third of the names are different in the two works. Some changes of names represent real scientific advances and hence are unavoidable, but the great majority of changes made in recent years result merely from a difference of system, and hence would be avoided if the workers in this field could come to an agreement. It is difficult for those not specialists in classification to understand the merits of so complicated a question, and most persons, having in mind the wonderful advances being made in science, are apt to suppose that anything new represents an advance, and hence they accept it without further inquiry. It is true that the newest things in science usually are the best, but this is by no means necessarily or always so; and in the present case, I, for one, am firmly convinced that the newer system is not the best, and that it will not prevail. I shall try to present the subject very briefly as I understand it.

Of the two American schools of nomenclature, the older is that of Asa Gray (and hence well-termed the Grayan School) and of his successors at Harvard. The widely-used Gray's Manual, with nearly all American botanical literature prior to ten years ago, and much of it since, are in accord with its principles, which, moreover, are for the most part those in use in the principal botanical centres of England and continental Europe. The newer, or Neo-American School, originated ten years ago with the adoption of a set of rules by a group of American botanists, since which time great industry and skill have been devoted to its propaganda. It is led by the botanists of the New York Botanical Garden, and is most familiar through the Illustrated Flora and the Manual of Dr. Britton, but its distinguishing tenets have not found acceptance outside of America. There are differences between the two schools other than those of nomenclature, but I shall confine myself to this one subject.

Nearly all botanists agree upon the general principle that nomenclature shall be based upon priority of publication beginning with the "Species Plantarum" of Linnaeus, of 1753, the first work to use binomial or double names in the modern scientific sense; that is, the first published name for a plant accompanied by a description, in or subsequent to that work shall be recognized as its name. Now if this principle, universally observed for all recent names, could have been rigidly and uniformly acted upon from the beginning, there would now be no nomenclature question to vex us; but unfortunately it was not, and as a result there arose a great body of nomenclature based rather upon usage than upon strict priority. The real issue between the two schools is this, shall this great quantity of nomenclature be retained, despite the technical flaws in its title, (Grayan School), or shall we now abandon it and attempt to bring all nomenclature into conformity with the principle of priority (Neo-American School)? The reasons for each position, so far as they concern the two most important points involved, are very briefly as follows:

First, it happened often in the past that certain plants were given more than one specific name, and, through misunderstanding of their affinities or other causes, bore one or more generic names before being transferred to the genus now recognized as scientifically correct. The question now arises, shall we adopt as the name of that plant (a) the first combination of generic and specific names the plant bore when finally placed in its correct genus, or (b) an addition of the very earliest discoverable specific name applied to the species to the name of its correct genus? The former can be justified in principle on the ground that a scientific name is primarily a combination of generic and specific names, and that hence the first *correct combination* is the true prior name of that plant, while in practice it has the advantage of giving a more definite and readily traceable starting point for the names, and it helps to retain a large part of the existent nomenclature of American plants. This is the position of the Grayan School, and of the workers at Kew in England; in practice it is known as the Kew rule. The other school acts on the principle that a scientific name is not primarily a combination of generic and specific names but rather a specific plus a generic name, and that the first specific name ever given to a plant should be retained for it no

matter what its subsequent fate as to transfer from genus to genus. It must be admitted that there is much theoretical reasonableness in this position; and it is taken not only by the Neo-American School, but has long been acted upon by most of the botanists of Continental Europe. Its practical disadvantage in this country is that it both entails marked changes in the existent nomenclature of American plants, and also, as will be noted later, is impossible of exact application. It is a fact, however, that the Neo-Americans give this principle an extension far beyond that followed by any of the continental botanists.

Second, it happened in early Post-Linnæan days that the names first given to Genera very often became replaced by others, either because the later botanists did not know of the earlier names, or because they thought the earlier names not well considered or properly published, or for various other reasons; and thus the later generic names very often became firmly fixed in botanical nomenclature. The Grayan School holds that in such cases the well-established name is to be retained, even though of later date, and in this they are in agreement with all the leading botanical workers of England and Continental Europe. Since many puzzling questions have arisen as to just where the line should be drawn between those names which should be displaced for earlier ones and those which should not, the Berlin botanists adopted a rule, known as the Berlin rule, now followed by most botanists except the Neo-Americans, that any generic name which failed to achieve acceptance for fifty years after its publication should not now be revived to displace a name which has become well fixed. The practical effect of this rule is to retain the great body of existent nomenclature. The Neo-American School, on the contrary, holds that the very earliest name given to a genus should be its name, and that these earliest names should be restored, regardless of whether or not they have been used in the meantime. The application of this rule necessitates an immense number of changes, and to it more than to any other cause is the present confusion in nomenclature due. The Neo-Americans, however, have not been able to win the support of any of the English or Continental botanists, and they stand quite alone in their application of it.

The difference between the two schools then lies primarily in this, that while both accept priority as the basal principle, the one school maintains that, so

far as the past is concerned, this is to be applied with judgment, and in such a way as to cause a minimum of inconvenience by retaining the great body of existent nomenclature; the other school holds that priority should be applied rigidly and absolutely to all names, judgment being allowed no place in the system. In defence of their position the Neo-Americans hold that finality in nomenclature is not possible under the Grayan system, because, where judgment is given a place, there will be differences of opinion and hence instability, while they claim that under the absolute priority system final stability is possible. They admit that the application of absolute priority will cause much inconvenience through the abandonment of so much of the existent nomenclature, but they hold that the final advantage of stability will more than compensate for the temporary inconvenience. Now as to these positions two things are to be said. First, the Grayan School has met the difficulties as to instability due to individual differences of opinion by the adoption of the Kew and Berlin rules, which give as absolute and definite a basis for their system as absolute priority gives to that of the Neo-Americans, while their system retains most of the existent nomenclature where the Neo-American system abandons it. Second, priority applied absolutely, and excluding the instability due to differences of opinion or judgment, is proving impossible of application. In many cases it is impossible to tell which of two names for a given plant is the oldest, since early publications are often not dated or bear dates known to be wrong; in other cases it is impossible to tell to which of several species or genera a given early very generalized description applies; and in other cases it is impossible to say whether certain names are not inadmissible through the brevity, indefiniteness errors or obscurity of their publication. In all these and many other cases; judgment does come into play, and with it differences of opinion and instability. That this is the case is shown by the fact that the members of the Neo-American School do not always agree among themselves as to the names which should be chosen under their own system. Furthermore, the Neo-Americans do not make all the changes in nomenclature which their system requires, which indeed they admit, but confess in explanation that the number of changes thus entailed would be too appalling. Now the Neo-American School has but a sole claim to consideration as compensation for the immense inconvenience

to which it putting the public by its many changes, and that is, that it will give finally an automatically stable system. But this they are not succeeding in doing, and there appears to me no prospect that the nature of the subject will ever permit them to do so. Further, they cannot possibly secure stability by themselves, for there can be no stability as long as the other botanists of the world persist in using a different system. During the ten years of their propoganda, they have not been able to secure a single convert among the prominent workers of other countries. Their system promises no greater stability than the Grayan system, while it causes immense confusion by overturning the great body of existent nomenclature which the Grayan system conserves. This is why I believe all disinterested persons should give their support to the Grayan system.

There are two other reasons why I think the botanists of eastern Canada should adhere for the present to the Grayan system. First, all of our botanical associations have been with Gray's Manual and with the botanists who have followed its system, and it is known that the future editions of the invaluable manual will adhere to these principles. Second, the entire subject of nomenclature is to be considered fully by an International Botanical Congress to meet in Vienna in 1905, and it is altogether probable that a set of rules will then be adopted which all botanists, concerned for the advancement of the science, will agree to follow. The Neo-American system will there be given full opportunity to illustrate its advantages to a body of experts, and if its principles are then adopted we should all give them our support. Until then it is obviously wise to adhere to that system with which our botany has always been associated.

The teacher who is not a member of the reading circle, or fails to attend the teachers' meetings; is not a subscriber of a school journal, labels herself as indifferent to success. These are three of the most potent factors in determining her activity; a failure in either is a step backwards.—*School Herald*.

For a hundred people who can sing a song, there are not ten who can read a poem.—*Tennyson*.

There are many kinds of love, as many kinds of light,
And every kind of love makes a glory in the night.
There is love that stirs the heart, and love that gives it rest,
But the love that leads life upward is the noblest and the best,
—*Henry Van Dyke*.

Curious Arithmetical Results.

A recent number of *Success* publishes the following, which was sent by Henry Tanenbaum of Toledo, O.:—

123456789 times 9 plus 10 equals IIIIIIIII
123456789 times 18 plus 20 equals 222222222
123456789 times 27 plus 30 equals 333333333
123456789 times 36 plus 40 equals 444444444
123456789 times 45 plus 50 equals 555555555
123456789 times 54 plus 60 equals 666666666
123456789 times 63 plus 70 equals 777777777
123456789 times 72 plus 80 equals 888888888
123456789 times 81 plus 90 equals 999999999

This table is still more interesting when it is noticed that each multiplier is divisible by 9, and that, when the figures of each answer are added together, and the added number is subtracted, the answer is 0. For example, the sum of I, III, III, III is 10; 10 minus 10 is 0.

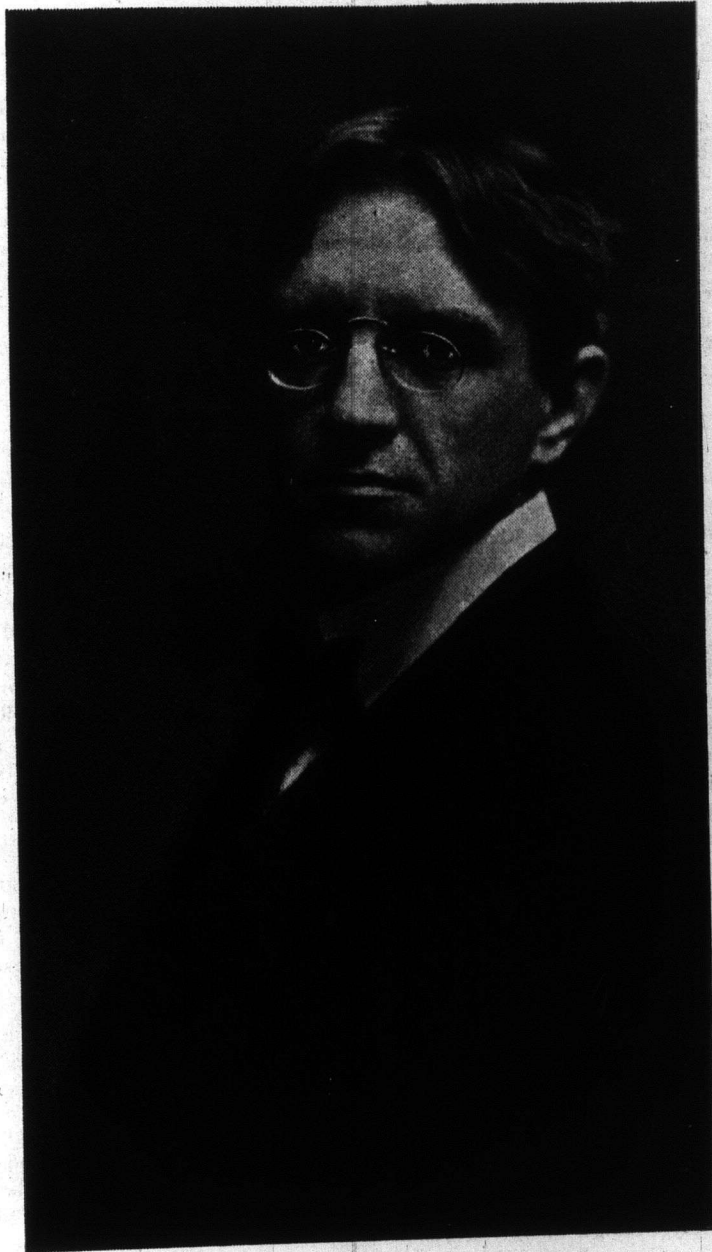
Mr. Tanenbaum also sends the following:—

987654321 times 9 equals 888888888
987654321 times 18 equals 1777777778
987654321 times 27 equals 2666666666
987654321 times 36 equals 3555555556
987654321 times 45 equals 4444444445
987654321 times 54 equals 5333333334
987654321 times 63 equals 6222222223
987654321 times 72 equals 7111111112
987654321 times 81 equals 8000000001

In this table it will also be noticed that each multiplier is divisible by 9, and that, if the figures in each answer are added together, they will form a total which, if added together, will equal 9. For example, take the second answer, 1777777778. 1 these figures, added together, equal 72, and 7 plus 2 are 9.

[It will be a good exercise for classes to work out and prove the above interesting results.—
EDITOR.]

When a class seems particularly unenergetic, hopelessly slow, and generally unresponsive, what is a teacher to do? She cannot elicit facts from pupils who have nothing to give. How demoralizing it is to receive from several pupils in succession, the answer "I don't know!" Is there really no hope in such a situation? Yes. Avoid the "I don't know" portion of the class for a time in the hope of leading them to emulate the ready few who are to be found in every class and who may be called upon to volunteer answers. Let the teacher tell the class that she is about to hear all those who are ready and that she will record the names of those ready pupils and give them credit for correct answers; indeed, she may give credit for honest effort although the answer may not be correct. At first there may be only one or two ready ones; but usually that will be found sufficient to act as an incentive for others to try, and trying usually ends in success.—*Popular Educator*,



Chas. G. D. Roberts

CHAS. G. D. ROBERTS.

Charles George Douglas Roberts, poet and prose writer, was born at Douglas, York County, New Brunswick, January 10th, 1860. He is a son of Rev. Canon Roberts. His mother was the daughter of the late Hon. Geo. P. Bliss, of Loyalist descent, at one time Attorney-General of the Province. He was educated at the Collegiate School, Fredericton, whose principal was then Geo. R. Parkin, a teacher fitted "to lead boys and make men." Mr. Roberts graduated with honors from the University of New Brunswick in 1879, and was appointed principal of the Grammar School at Chatham, which position he held for three years, when he accepted the principalship of the York Street School, Fredericton, which he resigned at the end of a year to become editor of the *Week*, Toronto. Later he was professor of English Literature and Economics in the University of Kings College, Windsor, until 1895, when he quitted teaching, and from that time until the present he has devoted himself entirely to literary work, making his home of late years in New York.

Mr. Roberts is a poet first; and his best work in verse was done during those years when he had, as he tells us in his ode to Bliss Carman,

"A little space for dreams
On care-unsullied streams—
'Mid task and toil, a space
To dream on Nature's face!"

When he delighted in those great stretches of Acadian forests and their wild folk, the wide salt marshes of Tantramar and Avon, the floating in birch canoe on "rivers brown and strong," and in the quaint legend from the mouth of his Indian guide. The poet has pictured our woodlands, streams and farms—subjects, many of them common-place enough, as "The Potato Harvest"—in language that we delight to linger over and that charms all true lovers of those quaint scenes, descriptive of our own country and its life. Mr. Roberts has many warm admirers here, and they will love him best for his poetry. But poets must live; and though our "poet is bidden to Manhattan Island" to address large audiences, yet he still finds his themes in Acadian forests and streams.

Mr. Roberts is best known to the people by his short stories, novels, and his animal stories. In the latter his genius has been shown in a degree no less marked than in his poetry. His interpretation of the actions and motives of animals is remarkable, and he is a peer among such writers as Ernest Thompson Seton and William J. Long. Mr. Roberts differs from these two in the fact that he is a poet as well as an observer, and with the poetic instinct he has a wonderful intuitive perception of the nature of animals. But he is a poet—first, last and always—evolving from his own imagination a kinship with the wild and a sympathetic effort to give them attributes which they may or may not possess.

The following is a list of the poems and principal prose writings of Mr. Roberts, arranged nearly in the order of their publication: *Orion*, and other poems; *In Divers Tones*; *Poems of Wild Life—An Anthology*; *Canadians of Old* (a translation); *The Canadian Guide-book*; *Ave—An Ode for the Shelley Centenary*; *Songs of the Common Day*; *The Raid from Beausejour* and *How the Carter Boys Lifted the Mortgage*; *Reube Dare's Shad Boat*; *Earth's Enigmas and Around the Camp Fire* (stories); *The Book of the Nations* (poems); *The Forge in the Forest*; *A History of Canada*; *New York Nocturnes*; *A Sister to Evangeline*; *The Heart of the Ancient Wood*; *Book of the Native*; *How Fiardeau Found the Black Abbe*; *Marshes of the Minas*; *Colonial Days* (a novel); *Complete Poems*; *The Kindred of the Wild*; *Barbara Ladd*, a novel; *Prisoner of Mademoiselle*; *Book of the Rose* (poems).

Mr. Roberts was a Fellow of the Royal Society of Canada until he took up his residence in New York. He was married in 1880 to Mary Isabel, daughter of Geo. E. Fenety, Esq., of Fredericton.

Extracts from the Writings of Chas. G. D. Roberts.

THE POTATO HARVEST.

A high bare field; brown from the plough, and borne
Aslant from sunset; amber wastes of sky
Washing the ridge; a clamor of crows that fly
In from the wide flats where the spent tides mourn
To yon their rocking roosts in pines wind-torn;
A line of gray snake-fence, that zigzags by
A pond, and cattle; from the homestead nigh
The long deep summonings of the supper horn.

Black on the ridge, against that lonely flush,
A cart, and stooped-necked oxen; ranged beside,
Some barrels; and the day-worn harvest folk,
Here emptying their baskets, jar the hush
With hollow thunders; down the dusk hillside
Lumbers the wain; and day fades out like smoke.

IMPULSE.

A hollow on the verge of May,
Thick strewn with drift of leaves. Beneath
The densest drift a thrusting sheath
Of sharp green striving toward the day!
I mused—"So dull Obstruction sets
A bar to even violets,
When these would go their nobler way!"

My feet again, some days gone by,
The self-same spot sought idly. There,
Obstruction foiled, the adorning air
Caressed a blossom woven of sky
And dew, whose misty petals blue,
With bliss of being thrilled athrough,
Dilated like a timorous eye.

Reck well this rede, my soul! The good
The blossom craved was near, tho' hid.
Fret not that thou must doubt, but rid
Thy sky-path of obstructions strewed
By winds of folly. Then, do thou
The Godward impulse room allow
To reach its perfect air and food!

—In *Divers Tones*.

THE WATCHERS OF THE TRAIL.

The trail through the forest was rough and long un-
used. In spots the mosses and ground vines had so over-
grown it that only the broad scars on the tree trunks, where
the lumberman's axe had blazed them for a sign, served
to distinguish it from a score of radiating vistas. But
just here, where it climbed a long, gradual slope, the run
of water down its slight hollow had sufficed to keep its
worn stones partly bare. Moreover, though the furrow-
ing steps of man had left it these many seasons untrodden,
it was never wholly neglected. A path once fairly differ-
entiated by the successive passings of feet will keep, almost
forever, a spell for the persuasion of all that go afoot.
The old trail served the flat, shuffling tread of Kroof, the
great she-bear, as she led her half-grown cub to feast on

the blueberry patches far up the mountain. It caught the
whim of Ten-Tine, the caribou, as he convoyed his slim
cows down to occasional pasturage in the alder swamps
of the slow Quah-Davic.

On this September afternoon, when the stillness seemed
to wait wide-eyed, suddenly a cock-partridge came whir-
ring up the trail, alighted on a gnarled limb, turned his
outstretched head twice from side to side as he peered with
his round beads of eyes, and then stiffened into the move-
less semblance of one of the fungoid excrescences with
which the tree was studded. A moment more and the
sound of footsteps, of the nails of heavy boots striking on
the stones, grew conspicuous against the silence. Up the
trail came slouching, with a strong but laborious stride, a
large, grizzled man in grey homespuns. His trousers were
stuffed unevenly into the tops of his rusty boots; on his
head was a drooping, much-battered hat of a felt that had
been brown; from his belt hung a large knife in a fur-
fringed leather sheath; and over his shoulder he carried
an axe, from the head of which swung a large bundle.
The bundle was tied up in a soiled patch-work quilt of
gaudy colors, and from time to time there came from it a
flat clatter suggestive of tins. At one side protruded the
black handle of a frying-pan, half wrapped up in a news-
paper.

Had he been hunter or trapper, Dave Titus would have
carried a gun. . . . Observant, keen of vision, skilled
in woodcraft though he was, the grave-faced old lumber-
man saw nothing in the tranquillity about him save tree
trunks, the fallen, rotting remnants, and mossed hillocks,
and thickets of tangled shrub. He noted the difference,
not known to the general eye, between white spruce, black
spruce, and fir, between grey birch and yellow birch, be-
tween withewood and viburnum; and he read instinctively,
by the lichen growth about their edges, how many
seasons had laid their disfiguring touch upon those old
scars of the axe which marked the trail. But for all his
craft he thought himself alone. He guessed not of the
many eyes that watched him.

In truth, his progress was the focus of an innumerable
attention. The furtive eyes that followed his movements
were some of them timorously hostile, some impotently
vindictive, some indifferent; but all alien. All were at
one in the will to remain unseen; so all kept an unwinking
immobility, and were swallowed up, as it were, in the
universal stillness.

The cock-partridge, a well-travelled bird who knew the
Settlements and their violent perils, watched with indig-
nant apprehension. Not without purpose had he come
whirring so tumultuously up the trail, a warning to the ears
of all the woodfolk. His fear was lest the coming of this
grey man-figure should mean an invasion of those long,
black sticks which went off with smoky bang when they
were pointed. He effaced himself till his brown mottled
feathers were fairly one with the mottled brown bark of
his perch; but his liquid eyes lost not a least movement of
the stranger.

The nuthatch, who had been walking straight up the
perpendicular trunk of a pine when the sound of the alien
footsteps froze him, peered fixedly around the tree. His
eye, a black point of inquiry, had never before seen any-

thing like this clumsy and slow-moving shape, but knew it for something dangerous. His little slaty head, jutting at an acute angle from the bark, looked like a mere caprice of knot or wood fungus; but it had the singular quality of moving smoothly around the trunk, as the lumberman advanced, so as to keep him always in view.

Equally curious, but quivering with fear, two wood-mice watched him intently, sitting under the broad leaf of a skunk-cabbage not three feet from the trail. Their whiskers touched each other's noses, conveying thrills and palpitations of terror as he drew near, drew nearer,—came—and passed. But not unless that blind unheeding heel had been on the very point of crushing them would they have disobeyed the prime law of their tribe, which taught them that to sit still was to sit unseen.

A little farther back from the trail, under a spreading tangle of ironwood, on a bed of tawny moss crouched a hare. His ears lay quite flat along his back. His eyes watched with aversion, not unmixed with scorn, the heavy, tall creature that moved with such effort and such noise. "Never," thought the hare, disdainfully, "would he be able to escape from his enemies!" As the delicate current of air which pulses imperceptibly through the forest bore the scent of the man to the hare's hiding-place, the fine nostrils of the latter worked rapidly with dislike. On a sudden, however, came a waft of other scent; and the hare's form seemed to shrink to half its size, the nostrils rigidly dilating.

It was the scent of the weasel—to the hare it was the very essence of death. But it passed in an instant, and then the hare's exact vision saw whence it came. For the weasel, unlike all the other folk of the wood, was moving. He was keeping pace with the man, at a distance of some ten feet from the trail. So fitted, however, was his colouring to his surrounding, so shadow-like in its soundless grace was his motion, that the man never discerned him. The weasel's eyes were fixed upon the intruder with a malignancy of hate that might well have seared through his unconsciousness. Fortunately for the big lumberman, the weasel's strength, stupendous for its size, was in no way commensurate with its malice; or the journey would have come to an end just there, and the gaudy bundle would have rested on the trail to be a long wonder to the mice.

The weasel presently crossed the yet warm scent of a mink, whereupon he threw up his vain tracking of the woodman and turned off in disgust. He did not like the mink, and wondered what that fish-eater could be wanting so far back from the water. He was not afraid exactly,—few animals know fear so little as the weasel,—but he kept a small shred of prudence in his savage little heart, and he knew that the mink was scarcely less ferocious than himself, while nearly thrice his size.

From the mossy crotch of an old ash tree, slanting over the trail, a pair of pale, yellow-green eyes, with fine black slits for pupils, watched the traveller's march. They were set in a round, furry head, which was pressed flat to the branch and partly overhung it. The pointed, tufted ears lay flat back upon the round brown head. Into the bark of the branch four sets of razor-edged claws dug themselves venomously; for the wild-cat knew, perhaps

through some occult communication from its far-off domesticated kin of hearth and door-sill, that in man he saw the one unvanquishable enemy to all the folk of the wood. He itched fiercely to drop upon the man's bowed neck, just where it showed, red and defenceless, between the gaudy bundle and the rim of the brown hat. But the wild-cat, the lesser lynx, was heir to a ferocity well tempered with discretion, and the old lumberman slouched onward unharmed, all ignorant of that green gleam of hate playing upon his neck.

It was a very different gaze which followed him from the heart of a little colony of rotting stumps, in a dark hollow near the trail. Here, in the cool gloom, sat Kroof, the bear, rocking her huge body contemplatively from side to side on her haunches, and occasionally slapping off a mosquito from the sensitive tip of her nose. She had no cub running with her that season, to keep her busy and anxious. For an hour she had been comfortably rocking, untroubled by fear or desire or indignation; but when the whirring of the cock-partridge gave her warning, and the grating of the nailed boots caught her ear, she had stiffened instantly into one of the big brown stumps. Her little red eyes followed the stranger with something like a twinkle in them. She had seen men before, and she neither actively feared them nor actively disliked them. Only, averse to needless trouble, she cared not to intrude herself on their notice; and therefore she obeyed the custom of the wood, and kept still. But the bear is far the most human of all the furry woodfolk, the most versatile and largely tolerant, the least enslaved by its surroundings. It has an ample sense of humour, also, that most humane of gifts; and it was with a certain relish that Kroof recognized in the grey-clad stranger one of those loud axemen from whose camp, far down by the Quah-Davic, she had only last winter stolen certain comforting rations of pork. Her impulse was to rock again with satisfaction at the thought, but that would have been out of keeping with her present character as a decaying stump, and she restrained herself. She also restrained a whimsical impulse to knock the gaudy bundle from the stranger's back with one sweep of her great paw, and see if it might not contain many curious and edifying things, if not even pork. It was not till she had watched him well up the trail and fairly over the crest of the slope that, with a deep, non-committal grunt, she again turned her attention to the mosquitoes, which had been learning all the tenderness of a bear's nose.

These were but a few of the watchers of the trail, whose eyes, themselves unseen, scrutinized the invader of the ancient wood. Each step of all his journey was well noted. . . . The old lumberman walked amid no more imminent menace than that which glittered down upon him from four pairs of small bright eyes, high up among the forking limbs of an old pine. In a well-hidden hole, as in a nursery window, were bunched the smooth heads of four young squirrels, interested beyond measure in the strange animal plodding so heavily below them. Had they been Settlement squirrels they would, without doubt, have passed shrill comments, more or less uncomplimentary; for the squirrel loves free speech. But when he dwells among the folk of the ancient wood he, even he,

learns reticence. and, in that neighbourhood, if a young squirrel talks out loud in the nest, the consequences which follow have a tendency to be final. When the old lumberman had passed out of their range of view, the four little heads disappeared into the musky brown depths of the nest, and talked the event over in the smallest of whispers.—*The Heart of the Ancient Wood.*

Teachers in Convention.

N. B. TEACHERS' ASSOCIATION.

The teachers of Albert County formed a union, November, 1902, the primary object of which was to effect an improvement in teachers' salaries. Through its influence unions were formed in various other counties of the province during the past year. Delegates from these unions and the St. John Teachers' Association met at Moncton on the 22nd of December, Mr. R. Ernest Estabrooks, president of the Albert County Union, in the chair, and organized the NEW BRUNSWICK TEACHERS' ASSOCIATION with the following officers:

President, R. Ernest Estabrooks, Harcourt; Vice-president, Miss Ella A. Copp, Sackville; Secretary-treasurer, H. H. Stuart, Hopewell Hill; additional members of executive, W. M. McLean, St. John; A. E. Pearson, Richibucto; Miss Bessie M. Fraser, Grand Falls, and R. D. Hanson, Bathurst. These are to hold office until their successors are elected at the next annual meeting of the association, at the time of the Provincial Teachers' Institute in St. John.

The reports of the various delegates were heard and after some discussion the following objects were set forth and a constitution adopted:

Objects.—To aid the cause of education; to exalt the character and efficiency of teachers; to lengthen the period of service for teachers; to increase the salaries of teachers and so render the profession more attractive and permanent; to use all honorable means to secure the passage of laws beneficial to the profession and to improve the condition of teachers and schools.

Article I.—This association shall consist of its officers and representatives from the various city and county associations.

Article II.—The officers of this association shall be a president, a vice-president, a secretary-treasurer, and four additional members of executive.

Article III.—Each subordinate association shall be entitled to one delegate and one additional delegate for every 25 members or major fraction thereof in excess of 25 members.

Article IV.—This association authorizes the executive to spend such sums as necessary to complete the organization of the province, and at our next meeting apportion the expenditure among the different subordinate associations.

Article V.—A minimum salary schedule for the whole province shall be fixed by the executive; and each subordinate association may fix a local schedule that shall not be lower than the provincial schedule.

The association passed a resolution opposing the issue of local licenses.

After adjournment a meeting of the executive was held, when the following minimum salary scale was adopted, subject to change as indicated in article 5 above:

- First class, males, \$275 a year.
- Second class, males, \$200 a year.
- Third class, males, \$150 a year.
- First class, females, \$160 a year.
- Second class, females, \$130 a year.
- Third class, females, \$115 a year.

In poor districts the extra government grant is considered a part of salary from trustees.

ST. JOHN COUNTY TEACHERS' INSTITUTE.

Over 250 teachers were present at this meeting, held December 17th and 18th, which proved to be one of the most interesting institutes ever held in the county. The impartial and prompt manner in which the president, M. D. Brown, conducted the proceedings, helped to produce this result, while the excellence of the papers read secured the undivided attention of the teachers. Papers were read by Principal Crocket, of the Normal School, on the Ideal in Education; Principal Owen, on Truancy; Miss Edna W. Gilmour, on Manual Work and Writing; Miss Florence Rogers, on Physical Culture, and Dr. H. S. Bridges on School Government. These papers were very fully discussed. The presence of Chief Supt. Dr. Inch and Inspector Carter added to the interest of the meeting. The St. John High School Orchestra and accomplished soloists furnished music. The following officers were elected: President, J. Frank Owens, B. A.; vice-president, J. S. Lord; secretary-treasurer, Miss A. M. Hea; additional members of executive committee, Miss Edna W. Gilmour and A. Lindsay Dykeman.

CARLETON COUNTY INSTITUTE.

The twenty-sixth annual session of the Carleton County Teachers' Institute was held in Woodstock December 17th and 18th, President I. N. Draper in the chair. It was the largest and one of the most successful institutes ever held in the county. Mr. Murray H. Manuel, of Richmond, read an excellent paper, Measures and Multiples. Inspector Meagher opened the discussion, which proved quite an interesting one. D. W. Hamilton, principal of the Kingston consolidated school, gave an excellent address. Mr. Perry read a very comprehensive paper on English Literature in our schools. Mr. Brittain dealt with Gardening and Nature Study. D. W. Hamilton discussed the subject, giving his experience in work preparatory for the consolidated school work.

At Friday morning's session a number of interesting questions were asked by the teachers and answered by Inspector Meagher, Mr. Brittain and others. Miss O'Brien read a clear and concise paper

on The Place of Manual Training in our Schools. This paper produced an interesting discussion, there being a general agreement that manual training was of much benefit to the schools. John M. Keefe read a paper on The Teaching of Arithmetic. The following officers were elected: President, C. H. Gray; vice-president, Miss J. Neales; secretary, G. H. Harrison; additional members of executive, Mr. Perry and Miss Inez Bradley.

A very successful public meeting was held on the evening of the 17th, presided over by Inspector Meagher.—*Condensed from Woodstock Press.*

RESTIGOUCHE COUNTY INSTITUTE.

The first institute in Restigouche County for several years was held at Campbellton on the 17th and 18th of December, Inspector Mersereau in the chair. The attendance was comparatively large and the proceedings of much interest, owing to the efforts of Inspector Mersereau, Professor McCready of Fredericton, and the leading teachers of the county. Mr. McCready gave a valuable address on manual training, and Miss Wetmore, teacher of that department in the Campbellton schools, gave an admirable illustrative lesson of her methods in conducting a class. Mr. McLatchy, M. P. P., gave an excellent address to the teachers. A paper on Primary Number was read by Miss Christina Richards, and Principal Lewis explained clearly a practical method of teaching geometry. An excellent feature of the institute was the number of illustrative lessons given to classes,—one on Color, by Miss Mary Reid; on Liquid Measures, by Miss Melissa Cook; on the Metric System, by Miss Katie Mair; on Minerals, by Miss Beatrice Richards.

The following officers were elected for the ensuing year: President, E. W. Lewis; vice-president, Miss C. Richards; secretary, P. R. McLean; additional members of executive, Miss Lizzie Cook and Miss Wetmore.—*Condensed from Campbellton Events.*

CURRENT EVENTS.

Japan and Russia are preparing for war, a war which many think to be inevitable, though its coming may yet be delayed for some time. The two nations have conflicting interests in Corea, from which country Japan draws much of her food supply, and to which Russia is looking for ice, free ports and other natural advantages to develop her Siberian provinces.

The British expedition to Thibet, which has recently advanced from India to the southern provinces of that land of mystery, though accompanied by a small body of troops, is diplomatic, rather than military. Its purpose is to secure the observance of certain treaty obligations concerning trade and commerce; and also, no doubt, to establish British influence at Lhasa, the capital of Thibet, and the religious centre of the Buddhist world.

Few foreigners have ever returned from the forbidden city of Lhasa, the seat of the Dalai Lama, who is, according to the Buddhist faith, the incarnation of Buddha. The latest of such visitors to get back to his own country alive is a Japanese priest, who remained there for over two years before his nationality was discovered, and he was obliged to flee for his life. He describes the present Dalai Lama as a young man, 28 years of age, of excellent qualities, and bent upon reforming the corrupt civil service of the country. Few Dalai Lamas before him, the traveler says, have lived to rule; the corrupt ministers of the government usually poisoning each one before he came of age, and setting another infant Dalai Lama in his place. The Thibetans are nominally under the government of China, and it was by being mistaken for a Chinese priest that the Japanese traveler gained admission to the Grand Lama's presence.

The new year finds the British armies engaged in warfare only in Somaliland, and it is rumored that the Mullah is ready to treat for peace.

Great Britain has recognized the independence of Panama. The new republic, small though it is, is larger in area than Costa Rica, Salvador, or Santo Domingo, and about twice as large as Switzerland.

The new uprising in Santo Domingo has made such progress that there are now two provisional governments in the country, the adherents of one preparing to defend the capital city from an unexpected attack by the other party. Neither one of these provisional governments is yet fully recognized by other nations, and foreign interests will be protected by foreign war ships.

The allusion to "the pen of a ready writer," in Psalm xlv., has been thought to refer to shorthand writing, which is not a modern invention. A recently discovered Egyptian document, of the third century of our era, shows a contract with a shorthand teacher for instruction, and there is no reason to suppose that it was then a new art.

To carry on its great railway service from ocean to ocean, and its Atlantic and Pacific steamboat lines, the Canadian Pacific Railway employs from thirty-five thousand to forty thousand men.

There are more British troops in Halifax now than there have been for some years past, and the number, it is said, will be further increased. It is also reported that a Canadian regiment will be sent to India for training.

Hudson Bay, in which United States whalers claim the right to carry on their business and the right of free trade with the natives, is almost certain to be, within a few years, the chief outlet in the summer months for the grain trade of the west. The distance from Hudson Bay ports to England is less than from New York; and the land haul, even from the wheat fields south of the boundary line, is comparatively short. It is, therefore, not surprising that the idea of claiming some sort of port privileges on the bay has been broached in the United States.

The western part of the desert of Sahara is said to contain nitre beds richer than those of Chili.

The nitrifying bacteria, so called, which are found at the roots of clovers and certain other plants, are known to all students of agriculture. They have the power of fixing the nitrogen of the air, and so making it available for plant food. A German scientist has found a way of inoculating the soil with the bacteria. The United States Department of Agriculture has taken up the plan, and will distribute these living fertilizers in parts of the country where they are not now abundant.

A new sugar producing plant has been discovered in South America, if sugar is the right name for a product which is twenty or thirty times as sweet as cane sugar. The plant is a species of eupatorium.

The yak, which is used as a beast of burden in the cold mountain regions of Central Asia, and will be engaged in the transport service of the British expedition to Thibet, will possibly be introduced in certain parts of Sweden and Norway, for which it is thought from recent experiments to be better fitted than the Lapland reindeer.

The latest explanation of a lightning flash and its accompanying thunder makes it an explosive combustion of hydrogen, set free by electric action and ignited by the electric spark—an explanation which certainly does not fully explain. Heat lightning, formerly looked upon as the reflection of distant lightning, is now regarded as the glow of a silent electric discharge.

The hydroscope is a newly invented instrument for examining the bed of the sea. By its use, objects lying on the bottom, fishes moving through the water, or the bottom of the ships on which it is carried, can be seen reflected on a screen on deck. Another invention, by the same man, an Italian engineer, is a machine for lifting heavy objects from the bottom of the sea. It is said to be strong enough to lift the heaviest ironclad from the greatest depths.

Manual Training.

Compliments of the season to all the readers of this department.

I regret that in the list of manual training teachers given in the last issue of the REVIEW, the name of Brother Remigius was inadvertently omitted. Brother Remigius is instructor in manual training at St. Patrick's Industrial School, Halifax. Those who saw the excellent exhibit of models from this school at the last provincial exhibition must have wondered at the omission which I take the earliest opportunity of correcting.

Some months ago information was promised regarding the manual training exhibits at the local exhibitions. From the various papers and other sources is gleaned the following information: The exhibits I have seen mentioned were made by the schools at New Glasgow, Lunenburg, Bridgewater,

Pictou, and Glace Bay. The models and drawings of the New Glasgow schools were entered in competition with those made at the Pictou Manual Training School. They attracted a great deal of attention at the Pictou County exhibition and were very favorably commented upon.

The schools of Bridgewater and Lunenburg, under the instruction of Mr. V. W. Messenger, competed against one another at the exhibition held at Bridgewater. The *Bridgewater Bulletin* says the manual training exhibit was the central attraction of the exhibition. The exhibit comprised models, drawings, and collections of native woods, showing transverse and cross-sections. For all of these, prizes were offered. The secretary of the Bridgewater School Board, Mr. J. A. Curll, was instrumental in having manual training given a prominent position in regard to prizes, etc. About \$18 found its way into the pockets of the bright boys who produced the excellent work exhibited.

The Glace Bay Manual Training School made an exhibit at the industrial fair held in that town. The *Halifax Herald* gave a very flattering account of the exhibit, which deserved all the praise given it. Mr. T. B. Kidner, Provincial Supervisor of Manual Training, who was at Glace Bay at the time, made an exhibit of cardboard work. Mr. Cook, who is in charge of the manual training department there, had charge of the exhibit.

It is probable that some other schools besides those of the places above mentioned and those of Halifax (already mentioned) exhibited, but I have not seen any others noticed. It is to be hoped that this year will find all the schools exhibiting and that the teachers will see that the prizes offered are commensurate with the importance of the exhibits. The move made by the Lunenburg and Bridgewater schools in exhibiting collections of native woods, is especially to be commended and should find favor with all.

The Sydney Academy *Record* has the following paragraph in the December issue: "The manual training room is now electrically lighted and presents a busy scene until a late hour every day. Some magnificent work has lately been turned out, showing that among the two hundred boys there was some latent talent that only needed opportunity to develop." The *Truro Sun* adds: "Mr. J. C. Dawson, of Folly Village, is in charge of this department, and his many friends in this neighborhood will be glad to know that his work is so appreciated. The Sydney School Board has recently increased the accommodation for manual training in woodwork, but the demand is still much greater than can be supplied without equipping another room and engaging a second teacher."

The success of the manual training movement in Sydney is helping on another very important matter, viz., the establishment of a system of evening school instruction in technology. A strong committee in Sydney has the matter in hand, and Premier Murray,

in reply to a deputation from the school board, which interviewed him recently, has promised his support if a good scheme can be arranged. Mr. Kidner, the Provincial Supervisor of Manual Training Schools, is to assist in the details of such a scheme, which will come before the legislature early in the new year. All such movements as this should help on the matter of higher technical education which has been taken up in such a spirited manner by Dalhousie University. We want trained hands and heads for the "rank and file," as well as highly trained scientific "captains" for our industrial development, and it seems as if the various sides of technical education are in a fair way to receive attention in Nova Scotia.

A conference was held at the education office between the superintendent and the Macdonald teachers of manual training in Nova Scotia and Prince Edward Island, at which important matters relating to the conduct of these schools were discussed.—*Halifax Herald*, Jan. 2.

SPECIAL COURSE FOR MANUAL TRAINING TEACHERS.

The shortened course of training for those teachers who have passed through the Provincial Normal School at Truro, and have achieved distinction in mechanic science, commences in February.

H. W. HEWITT,

Sec'y M. T. T. A. of U. S., Dartmouth, N. S.

SCHOOL AND COLLEGE.

The Provincial Teachers' Institute of New Brunswick will meet in St. John, June 28-30. Active committees are at work to provide a suitable programme and make other arrangements for a successful meeting.

A rearrangement of the inspectoral districts of New Brunswick has been made, owing to the recent appointment of another inspector, Mr. Hebert, who will take part of the schools of Westmorland and Kent; Mr. J. F. Doucet will have the schools of Gloucester, Madawaska, and portions of Restigouche and Northumberland. Mr. O'Brien, recently appointed, will take charge of the schools of Albert and part of Westmorland, and the schools of eastern St. John County will be added to Inspector Steeves' district.

Miss Kate Girdwood, on concluding a two years' engagement in district number twelve, parish of Lancaster, St. John County, was the recipient of many and valuable presents, including a beautiful writing desk, letter case, toilet case, teacher's Bible, etc. Rev. L. A. McLean, in making the presentation, expressed the regret of the community at her decision to leave, and spoke of how she would be missed, not only in the school, but in the social and church work of the district.

Sydney, C. B., began its career as a city on New Year's day of this year. Principal Stewart, of the Academy, in an interesting review in the *Post*, of educational progress, says

that Sydney has a good system of public schools full of vital force, keeping pace with the times and the general progress of the community. Some idea of the advance already made may be seen from the fact that in the last five years the town more than doubled its staff of teachers. These teachers are enthusiastic and devoted to their work; the academy is well equipped with a good laboratory and a well stocked library, provided by the exertions of students and the generosity of citizens. The new city will have the honor during the year of being the first place in Nova Scotia to recognize the value of technical training by establishing a school of the kind that has given Germany her industrial greatness.

RECENT BOOKS.

TEACHER'S MANUAL, to accompany Lessons in Language and Grammar. By H. S. Tarbell and M. Tarbell. Ginn & Co., Boston.

This is a useful guide to the teacher of English, especially of the Lessons above named.

STORIES OF THE ANCIENT GREEKS. By Charles D. Shaw. Cloth. Illustrated. Pages, 264. Ginn & Co., Boston.

These stories of the Greek mythology, old but ever new, which have been told to eager listeners for thousands of years, are here re-told in a simple and picturesque style by an author in sympathy with his subject.

LA MARE AU DIABLE. By George Sand. Edited, with brief introduction, notes, and full vocabulary, by Leigh R. Gregor, Lecturer on Modern Languages in McGill University, Montreal. Cloth. vi+100 pages. Ginn & Co., Boston.

This story of French peasant life in the middle of the last century is a masterpiece of the most brilliant woman writer of modern times. It is suitable for reading in mixed classes. The notes consist of renderings of difficult passages into English, and brief comments on the type of civilization represented by the story.

ELEMENTARY GUIDE TO LITERARY CRITICISM. By F. V. N. Painter, A. M., D. D., Professor of Modern Languages in Roanoke College, Virginia. Cloth. Pages 195. Ginn & Co., Boston.

The laboratory method of literary study is well illustrated in this useful little work. It aims to show the student what to look for in a piece of literature, points out matters of technique and furnishes a basis of interesting comparison between different authors. It should help to give definiteness and pleasure to a study that has so often been vague and discouraging from the want of just such a guide.

A SCHOOL GEOMETRY. Parts IV and V. By H. S. Hall, M. A., and F. H. Stevens, M. A. Macmillan & Co., London.

These little books—Parts Four and Five of the Series on School Geometry—contain the substance of the second and third and the sixth book of Euclid's elements, with additional theorems and examples.

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School Geometry, already noticed here and in different numbers of the REVIEW, has been received from Macmillan & Co. It is a convenient volume of 340 pages, with nine pages of answers to numerical examples. The whole provides an adequate and not too difficult course for students without special aptitude for mathematical study, but who may derive real intellectual and practical advantage from lessons in pure deductive reasoning, followed up by copious examples involving graphical or numerical work.

Book I. THE TREE-DWELLERS. By Katharine Elizabeth Dopp. Illustrated. Cloth. 160 pages. For the primary grades. Rand, McNally & Co., Chicago.

This volume makes clear to the child how people lived before they had fire, how and why they conquered it, and the changes wrought in society by its use. The simple activities of gathering food, of weaving, building, taming fire, making use of the body for tools and weapons, wearing trophies, and securing co-operative action by means of rhythmic dances, are here shown to be the simple forms of processes which still minister to our daily needs. This attractive book is the first of a series of industrial and social history readers which Rand, McNally & Co. are preparing to publish.

JANUARY MAGAZINES.

In the January *Atlantic* Professor T. J. J. See explains The Blue Color of the Sky, its cause and character; Robert Herrick begins a strong serial novel, The Common Lot; and there are papers on other important subjects, biographical and literary essays and poems. . . . The *Canadian Magazine* for January is an Imperial number, with an emblematic cover, containing articles on this subject by Hon. J. W. Longley, J. M. McEvoy and Herman W. Marcus. An Aquatic Reminiscence, by George Stewart, D.C.L., with a photograph, recalls the famous four St. John oarsmen who won the championship at Paris in 1867. A notable feature of the issue is the first instalment of A. G. Bradley's Fight for North America, the new serial dealing with the events between 1750 and 1763. . . . The January *Delineator* contains literary and art features of exceptional value and reliable fashion information. The pictorial presentation of the season's styles is excellent. An inspiring paper on The Joy of Living, by Lillie Hamilton French, will appeal to thoughtful persons. There are house building and house furnishing ideas, and entertaining stories and pastimes for children.

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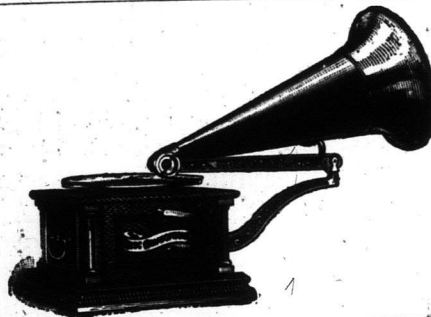
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Official Notices.

I. SCHOOL YEAR 1903-4—NUMBER OF TEACHING DAYS.

The number of Teaching Days for School Year is as follows: Ordinary Districts 216; Districts having eight weeks summer vacation 206; St. John City 205.

The First Term ends on Friday, December 18th, 1903, and the Second Term begins on Monday, January 4th, and ends on June 30th, 1904. The Second Term has 125 Teaching Days in all Districts except the City of St. John where the number of Teaching Days for the Term is 124.

II. DEPARTMENTAL EXAMINATIONS.

The several Departmental Examinations will be held as in former years in accordance with the provisions of Regulations 31, 32, 45 and 46.

The subjects for the Leaving Examinations shall consist of English Language, English Literature, History and Geography, Arithmetic and Book-keeping, Algebra, Geometry, Botany and Agriculture, with any two of the following: Physics, Chemistry, Physiology, Latin, Greek, French—(Nine papers in all).

All candidates for Matriculation shall take the following subjects: Latin, Arithmetic and Algebra, Geometry, History and Geography, English Language, English Literature, Chemistry: also, either Greek or French and Natural History.

All candidates for the Matriculation and Leaving Examinations must send in their applications to the Inspector within whose inspectorate they propose to be examined, not later than the 24th day of May. A fee of two dollars must accompany each application. Forms of application may be obtained from the inspectors or from the Education Office.

The English Literature Subjects for the Matriculation and Leaving Examinations will be the same as for the First-Class Candidates at the Closing Examinations, viz: Tennyson's *Princess* and Shakespeare's *Hamlet*.

HIGH SCHOOL ENTRANCE EXAMINATION MEDALS.

His Honour the Lieutenant-Governor has been pleased to offer Thirteen Silver Medals to be competed for by the pupils of the Eighth Grade at the High School Entrance Examinations in June next, and thereafter annually during his term of office.

The examinations will be held in accordance with the provisions of Regulation 46 at the several Grammar Schools and at such of the Superior Schools as shall make application to the Chief Superintendent not later than the First day of June.

One medal will be competed for by the pupils of each County, except that for the purposes of this competition Madawaska and Victoria will be reckoned as one County, and Sunbury and Queens as one County.

The medal will be awarded to the pupil making the highest aggregate marks in each case, provided that no candidate falling below the Second Division shall be entitled to a Medal. The papers of the candidates awarded the highest marks by the local examiners shall be submitted for a final examination to special Examiners appointed by the Board of Education whose decision shall determine the award.

J. R. INCH,
 Chief Supt. of Education.

Education Office, Fredericton, Dec. 7th, 1903

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