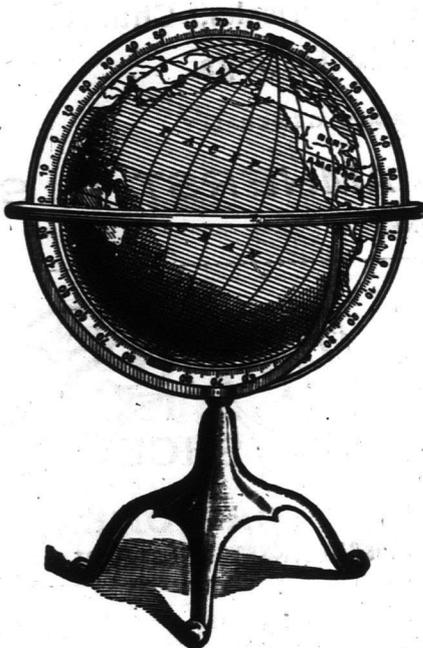


THE EDUCATIONAL REVIEW

Vol. XIX. No. 11.

ST. JOHN, N. B., APRIL, 1906.

WHOLE NUMBER. 227.



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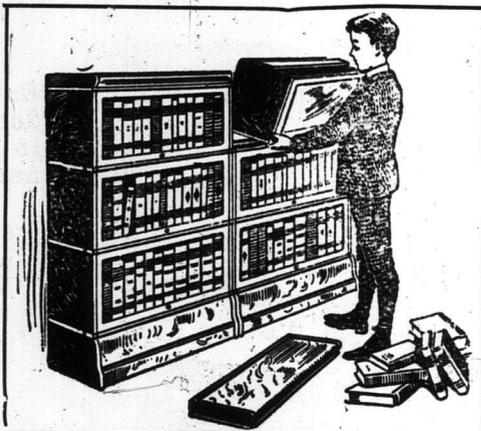


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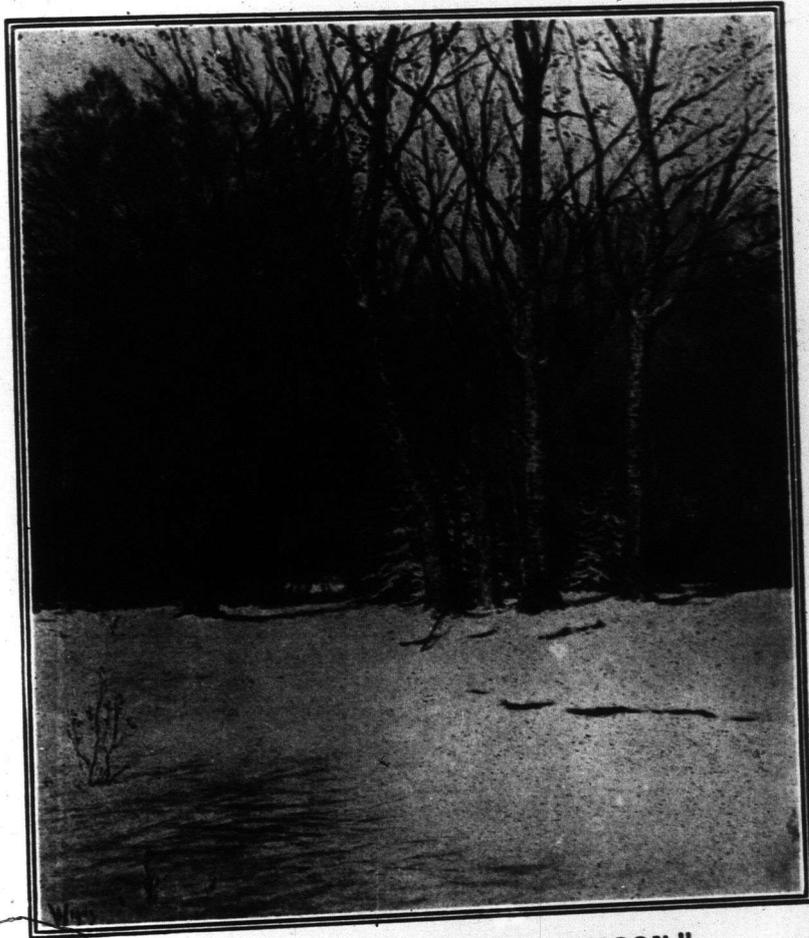
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EASTER.

Awake, thou wintry Earth—
Fling off thy sadness!
Fair vernal flowers, laugh forth
Your ancient gladness!
Christ is risen

—Thomas Blackburn—An Easter Hymn.

The picture this month is a representation of native trees from two pictures by Sir William Van Horne of Montreal. It is something in the life of a busy man of affairs to have a taste—and cultivate it—for nature and art. The skilful delineation of trees and the larger fungi, in which Sir William

has excelled, has not interfered evidently with business but has given a rare pleasure to his eventful and busy life.

The Roman Catholic church loses one of its ablest men in Archbishop O'Brien, who died in Halifax, March 10th. He always manifested a strong interest in educational affairs which he actively promoted by his ready sympathy and co-operation. In addition to his engrossing duties as a churchman, the great questions of the day, literature and political economy found in him a devoted student. He was an active member of the Royal Society of Canada and its president for the year 1896-97.

Our readers will find in this number appropriate material for Friday afternoon exercises in April, and for Easter and Arbor Day. No formal programme is offered for the observance of the latter. The day, should be devoted to a general cleaning and adornment of the school premises; the planting of trees and flower beds; lessons and recitations on trees and other plants, ending with a school entertainment in the afternoon to which parents and friends should be invited, and for which careful preparation should be made during the preceding weeks.

A subscriber asks us to publish a map of the new provinces of Alberta and Saskatchewan. To do this adequately with portions of the surrounding provinces and territories would take more space than can be spared in this number. Why not consult our advertising columns and get a new map of Canada? If the trustees cannot afford to help, a small concert on Arbor Day will realize more than enough.

A friend sent us in February a twig of willow collected the first week of that month with the white catkins half unfolded. But here it is the first week in April and no more progress has been made in bud unfolding. It is useless to look for spring in February or March in this country.

A gentleman who is deeply concerned about the greater possibilities of education writes as follows to the REVIEW: "There is still a missing link in our educational system, considering as we must the thousands who have left school too soon, or are about to leave school. The scholars from good homes are cared for; the whole system is articulated from primary school to university for the minority; but can we not have evening rural schools, industrial or otherwise? Can nothing more be done for thousands of illiterate youth in these provinces? Denmark has one hundred* high schools for adults!"

Church Work is now published in a new form and under a new editor and management. It is issued fortnightly at North Sydney, C. B., by Rev. C. W. Vernon and is an eight-page journal neatly printed on smooth white paper, with numerous clear illustrations, and carefully written editorial and other matter. We heartily agree with the announcement made by the former editor in the first number, that if such a paper does not succeed "the Church people of the Maritime Provinces should be heartily ashamed of themselves."

Talking with a commercial traveller not long ago he said he attributed his success in selling goods not so much to his industry and push as to his entire abstinence from intoxicating drinks. He said it was well understood in these times of fierce competition in trade, that it was not business-like for any man to drink. Surely this is a good temperance lesson for young people. Success in business or in any profession must not be trifled with by yielding to the temptation to drink.

There is a dearth in too many of our schools of reproductions of work of art—those that are truly beautiful and at the same time suitable. More of music, art, poetry is required to round out the natures of young people. There is no real study of music except in a few favored schools; art is entirely ignored, or confined to the placing of a few pictures on the walls; poetry is robbed of all pleasure-giving because pupils are required to analyze it too persistently. The subjects of our school course are addressed to the intellect and to the memory rather than to the cultivation of taste, or the awakening of a desire for real culture. Are our teachers preparing themselves to be the leaders of the reform that must come, or will the leaders spring up from outside their ranks?

Recent School Legislation.

Several changes and additions to the school law have been made both in the Nova Scotia and New Brunswick legislatures during the recent sessions. Many of these are important.

In New Brunswick the attendance of children at the public schools may be enforced by those districts which vote to adopt compulsion. This is the mildest form of a compulsory act; but it is on a par with some school legislation of the past. Before free schools were sanctioned by law in the province, the ratepayers of a district had the option to assess themselves for the support of schools.

Some of the amendments to the New Brunswick school law, it is gratifying to record, are progressive, and coupled with what has been done in recent years for the introduction of consolidated schools, manual training, nature study and agricultural education may be looked upon as decided steps toward improved educational facilities. The amendments provide that districts may assess themselves for free text books; that consolidated schools may have five acres of land instead of one; that teachers and boards of health shall hereafter look after vaccination certificates; that grammar school grants may be transferred from one section of a county to another after a lapse of ten years; that teachers shall have additional powers to preserve order and protect pupils from interference by outsiders; that school districts, failing to maintain a school in operation for two successive terms or failing to have the children conveyed to a school in a neighboring district, shall be annexed to a contiguous district. It is to be hoped that the latter especially will be vigorously enforced.

The government also has the authority to compel districts to unite and form a consolidated school if it is thought that such a union shall advance the educational interests of the community.

It is to be regretted that the New Brunswick government could not see its way clear to improve the salaries of teachers, in accordance with the petition presented by the Teachers' Association. It is held by some that an increase by the government would be met by a corresponding lowering of the local salaries paid to teachers. It is not too much to ask that districts take the initiative in increasing teachers' salaries and many are now doing so.

The fact should not be lost sight of, however, that in New Brunswick special grants are now made to over fifty schools which include manual training and related subjects in their course of study under

teachers who have fitted themselves to teach these branches. Grants of fifty dollars a year are given to teachers, without regard to sex or class, who have classes in manual training. Thirty dollars additional is given to those teachers who conduct a course of nature-study with a school garden. The superior schools which have been fostered largely under Dr. Inch's regime, are scattered all over the province, and the teacher, whether male or female, receives an annual grant from the government of \$250. These, with the increase in the number of grammar school teachers, who each get \$350 from government, show that there are rewards for industrious and ambitious teachers.

The Nova Scotia government has decided to increase the grants paid to teachers from the provincial treasury. Hereafter teachers shall receive the following amounts annually: Class D, \$60; Class C, \$90; Class B, \$120; superior school, \$150; Class A, \$180; Class A in a high school of at least three departments, \$210. As we understand it, these grants are made equal to both sexes.

It will be interesting to compare them with those made to New Brunswick teachers. In every case the average grant to the latter is higher. In New Brunswick the teacher of a grammar school receives \$350 and the teacher of a superior school \$250 yearly, whether male or female. First class licensed teachers corresponding to Class B in N. S. receive,—male, \$135; female, \$100. Second class, corresponding to C in N. S.,—male, \$108; female, \$81. Third class, corresponding to D in N. S.,—male, \$81; female, \$63. It may be said that the proportion of teachers who have received normal school training is less in Nova Scotia than in New Brunswick.

The teachers' pension law which provides for retiring allowances for teachers of long standing and for those who have become incapacitated from any cause is an encouraging and progressive sign. We shall deal with this more fully in a future number.

In Nova Scotia it is proposed to appoint an advisory board to assist the Council of Public Instruction, in what way or to what extent has not yet been made clear.

The Influence of School Gardens.

Mr. Geo D. Fuller, director of the Macdonald Rural schools for the province of Quebec writes an interesting article on The School Garden and the Country School in the March number of the *Ottawa Naturalist*. We have only space for the concluding

paragraph of a paper that we should like to see in the hands of every country teacher.

As the school environment has been improved, there has been a marked change in the moral tone of the school. The pupils' attention has been turned to a consideration of the beautiful to the exclusion of many baser thoughts, and the resulting moral culture has found expression in more orderly behavior. A smooth bit of lawn and a lawn mower have proved themselves aids to good discipline, for the play hours are more rationally enjoyed on well kept grounds than on the old rubbish-littered premises, where the chief joy was often found in working greater destruction. In some schools there has been a very noticeable change in the attitude of the pupils towards the school room and grounds, and they now take pride in beautiful surroundings and care for them where formerly they sought but to make desolation more hideous. Some of the pupils have been led to attempt flower and vegetable plots at their own homes, and it seems hard to over-estimate the better training for good citizenship which pupils receive in such schools where school gardens have broadened the educational horizon and improved the school environment so greatly.

An organization called the Canadian Alpine or Mountain Club has been formed at Winnipeg, the object of which is to explore the virgin valleys, glaciers and higher ranges of the Rocky mountains, in order that their wonders and beauties may be better appreciated. The Club will have climbers and non-climbers among its members, the first to do active work in ascending the loftiest of the Rockies, the second merely to have an interest in the less strenuous objects of the organization. Success to it. The boys and girls in every section of Canada should have such clubs, the object of which would be the investigation of the valleys, hills and mountains of their neighborhood.

It is found that trees play a very important part in making the world healthful. We must not think trees are here solely to cut down for fuel or timber. Vegetation is the means by which the atmosphere benefits the earth; it is the earth's good friend. It is seen that where the trees have been cut off the winters are colder and the summers hotter. The beautiful brooks and creeks disappear in the summer; the springs that caused them were sheltered by trees; these removed and the spring is dried up. Diseases of treeless countries are unknown among forest dwellers. These things have caused people to plant trees whenever possible.—*Ex.*

Your REVIEW helps me very much with my work and I look forward to its coming with pleasure.
—G. G. C.

Our Native Trees.—IX.

By G. U. HAY.

Evergreens.—The Hemlock.

The hemlock (*Tsuga canadensis*) is one of the most graceful of our evergreen trees. When growing where there is plenty of space its lower branches are often long and straggling, but when found in the forests where its roots penetrate into rich mould, the formation of centuries of decayed leaves, it is of a majestic appearance, often from eighty to one hundred feet in height and with a trunk diameter of three or four feet. The young hemlock trees surpass all other evergreens in the grace and feathery lightness of their dense foliage which bends to the slightest breeze. Their narrow, short-petioled leaves, dark green above and pale beneath, are disposed in level sprays on the horizontal or drooping branches. The small pendulous cones, very numerous and scarcely longer than the spreading leaves, add another element of beauty to the tree in the early years of its growth.

The term "faithful" that Longfellow applies to the hemlock refers to the unchanging green of its leaves in summer and winter. But in late spring and early summer the tips of the twigs and branches are clothed with feathery masses of the new, yellowish-green leaves which form a beautiful contrast with the dark green leaves of the previous year, and produce an effect perhaps unequalled by any other forest tree. As the hemlock comes to maturity its foliage becomes less attractive, although it increases in sturdiness and majesty. Growing in the forest, the trunk usually tapers suddenly near the top spreading out its newer foliage over the tops of the surrounding trees. The lower part of the trunk is beset with stiff, broken or dead branches, or it is quite bare. The smooth close fitting bark of the young trees gradually passes into the rough, deeply furrowed bark of the mature trees which bear a resemblance to the red or black spruce.

The hemlock belongs to the group of plants which bear two kinds of flowers on the same plant, hence called monœcious, that is, growing in one household; the staminate flowers or those which produce pollen, are in loose catkins, growing from the axils of last year's leaves; the pistillate catkins, destined to become the cones, are at the ends of last year's branchlets. At the base of the green fleshy scales which clothe the pistillate catkins are the ovules which ripen into seeds after being fertilized by the pollen. In their early growth the cones are of a crimson colour, gradually changing to a brown.

The seeds mature the first year, but many of the dry cones often cling to the trees for several years.

The wood of the hemlock is soft, weak, crooked in the grain, brittle and very liable to splinter. It is of a light brown or nearly white colour. A cubic foot weighs 26 lbs. It is largely sawed into boards of an inferior quality, used for cheaper building purposes, such as flooring, shingles, material for wharves, mines, etc. It is one of the most durable timbers under water. It gives a tight hold for nails, and its boards are in common use for the first covering of frame houses. Other uses are found for it, as pines and other more expensive timbers are becoming rare.

Hemlock bark is used for tanning leather, and the manufacture of the extract for tanning is quite an industry in Quebec and to a less extent in New Brunswick. Indeed, the bark has for years been regarded as the only valuable part of the tree. A section of the bill recently introduced by Premier Tweedie into the New Brunswick Legislature for the preservation of forests makes it compulsory for those who have cut down hemlock trees for their bark to remove the trunks in order to lessen the danger from forest fires. That such a law is necessary shows that there is still wanton waste of what may be considered as fairly good timber. This wholesale destruction of hemlock trees for the manufacture of extract threatens to lessen seriously the further supply of hemlock, a wood that will become more and more useful as pine disappears.

Hemlock oil, distilled from the young leaves and shoots, and hemlock gum or "Canada pitch," as it is called, a resinous exudation from old trees, are both used in medicine. The wood is of little value as fuel, burning up very quickly, and with a loud crackling noise like that of poplar wood.

The ground hemlock (*Taxus canadensis*) is a low straggling evergreen shrub with leaves bright green on both sides and with a red berry-like fruit enclosing a bony seed.

The juniper (*Juniperus communis*) is usually found as a low straggling shrub in these provinces, with rigid, prickly leaves. Its blue berry-like fruit encloses from one to three bony seeds.

Teachers will find it useful as a preparation for Arbor day to review the lessons on our native trees which began in the March, 1905, number of the REVIEW.

Many of the parts of evergreen and deciduous trees are good subjects for free-hand drawing: Beginners may draw the leaf-clusters of the differ-

ent pines; small twigs of hemlock, cedar, spruce or fir; cones of the different evergreens and the seeds, if any can be found; twigs of alder, birch, willow, and the arrangement of buds and catkins upon them. These and many other forms are easily drawn, and if done as true to nature as possible will familiarize pupils with the characters and differences in our trees.

Why the Horse-Chestnut is so Called.

This is only a fairy-story; but whoever looks on the branches and twigs of a horse-chestnut tree will see there the prints of a horse's hoofs, nails and all. Examine and see for yourselves. Then try if you can tell what really caused these marks, and others that you will discover on the twigs. If you can find out, then you will enjoy the fairy story which is a pretty piece of fiction.

For fairies love no tree so well
As chestnut broad in which to dwell.

Long, long ago, we are told, the fairies found their homes in the flowers on the ground, but the flowers were picked and then mowed down the grass, so that the fairies lost their bright colours and were without shelter. Then Oberon, daylight king of fairies, and Queen Mab, moonlight queen of elves, took counsel together.

Under a grove with fronded plumes,
Whose trees were white with spikes of blooms.

The decision was to live in trees and Queen Mab on her palfrey white,

Her moonbeam bridle firm in grip,
She plied the silken milkweed whip,
And rode straight up the waiting tree,
And out each branch its blooms to see.
Waving her saffron brand she said:
"Fairies! your future home and bed!"
And pointed up the flower-lit tree,—
Thither they swarmed as swarms the bee!
In turn each bole and fronded roof
Was trod by Elf-queen palfrey's hoof,
Till fays' who bore the flame-wood lamp,
Swung in the peaceful airy camp.

That was a chestnut grove they found!
And as the sunny spring comes round,
Queen Mab, when shines the silver moon,
And elfin bugles blow in tune,
Still rides high up each chestnut tree,
That fays may know where safe they'll be;
For palfrey prints his tiny shoe
On every branch that's wet with dew,
And that's the reason now you see
Why it is called Horse-Chestnut tree.
—Th. H. Rand.—May's Fairy Tale. (Adapted).

A Few Early Flowers.

Nearly all our trees put out their flowers in April or early May before the leaves unfold. Why? Many of these flowers are in catkins as the willow and alder; other trees have small crimson blossoms such as the red maple and hackmatack; others like shadbush and cherry, appearing later, bear white blossoms in striking contrast with the delicate green of the opening leaves about them.

The mayflower or trailing arbutus is one of the first plants to blossom, and is an ever welcome token that spring is here. Mayflower blossoms were said to have been picked in some parts of New Brunswick in February, but more likely the buds were brought into the house and opened in some sunny window.

The hepatica or liverwort also sends out its blue and white blossoms early. Are these blossoms sepals or petals? The hepatica is much rarer with us than the mayflower, being found on the borders of rich woodlands. It too is said to have been found in blossom in parts of New England during the first days of our mild February.

The adder's-tongue or dog-tooth violet is also an early plant to blossom. It is not a violet but a lily, and John Burroughs has suggested the pretty name of fawn lily from its spotted leaves—more appropriate and better even than "adder's-tongue" which name was given because of its tongue-shaped leaves which are mottled after the fashion of the adder's back.

The spring-beauty, like the adder's-tongue, springs from an underground bulb or tuber. The pink or rose-colored lines of its petals are said to point the early bees to its nectar hidden away at the base of each petal. The Indians are said to have prized the nut-like flavor of its tuberous stem. The following legend will show that they prized its beauty also: Mighty Peboan (the winter) scatters around with lavish hand many snowy crystal stars. When, melted by the breath of spring, he is forced to retreat, he leaves some of these behind; they are the spring-beauties, blushing that they have been forgotten.

The white and blue and yellow violets, those favorites of children because they are found everywhere and are so beautiful, bloom in the order given above, the small sweetly-scented white violets first. Children love to gather them, and rightly, for what is more beautiful than a nosegay of violets; and picking does no harm if the roots are not disturbed,

and the leaves are left growing; for the leaves are the food-makers of the plant.

But a word to our little friends: Do not pick *all* the violets and other early spring flowers. Leave some on the road sides or on the borders of some pretty woodland path to cheer the passers-by. And flowers produce seeds. If we pull all the flowers no seeds will be ripened. But the children's friend—the violet—looks out for this. Later in the season little flowers, so small that they can scarcely be seen, grow from the underground stems and bear pods with plenty of seeds in them. Look for these during the summer but do not pick them.

And can the children tell me why the violets, the spring beauty, the mayflowers, the fawn lily and other spring plants can better stand the loss of flowers (but not of leaves) than other spring plants?

To be continued in May.

Beautiful Canada.

The President of the American Civic Association invites his followers to subscribe to certain good resolutions in connection with the Beautiful America movement. The change of a word will adapt them for use by our Canadian readers:

1. We will have no dirty back or front yards about our own houses, and we will, by example and help, endeavor to have our neighbors also clean up.

2. We will plant Canadian hardy trees, shrubs and vines and grow clean grass wherever we can, and will help our neighbors to do likewise.

3. We will join cheerfully, as far as our resources permit, in organized effort for clean and beautiful streets and highways, and will help any movement for parks and playgrounds with which we may come in contact.

4. We will endeavor to protect trees from the unthinking attacks of electric polemen, and will not permit the setting of electric poles on our own premises except in extreme cases, and then under rigid safeguarding of trees and of landscape beauty.

5. We will oppose the erection or the continuance of objectionable advertising signs of any kind, and will assist in their removal by kindly argument and by openly refraining from purchasing articles so advertised.

6. We will fight the mosquito relentlessly by cleaning up or oiling wet places where it may breed, urging others to do the same.

7. Finally, we will consider outdoor beauty as worth while and as economically justified, and will try to have the children of Canada grow up in a greater love for the natural beauties of their country.

Mr. J. Vroom writes from St. Stephen: The horned lark seems unusually plentiful this season.

Our Coasts. II.—Their Lessons.

Continued.

The Agents at Work.

PROFESSOR L. W. BAILEY.

"I with my hammer pounding evermore
The rocky coast, smite cinder into dust,
Strewing my bed." —Emerson.

In the last chapter of this series of sketches it was shown that the coasts are a theatre of constant warfare, a scene of strife between land and sea, the former presenting a more or less bold front of crag and precipice, battlement or wall, against which the forces of the latter rush and rage incessantly, and not in vain. It may be interesting now to consider somewhat further the marshalling of these forces, the methods of their attack, and their limitations.

Force and motion are, as is well known, correlative terms. Hence water is powerful only when in movement, and in proportion to the rapidity of its movement. Thus it will strike the hardest when moved by heavy winds; it will hold up and carry when in rapid motion what it would be wholly incompetent to move when the motion is slow. Let us compare some of these kinds of motion, and their effects.

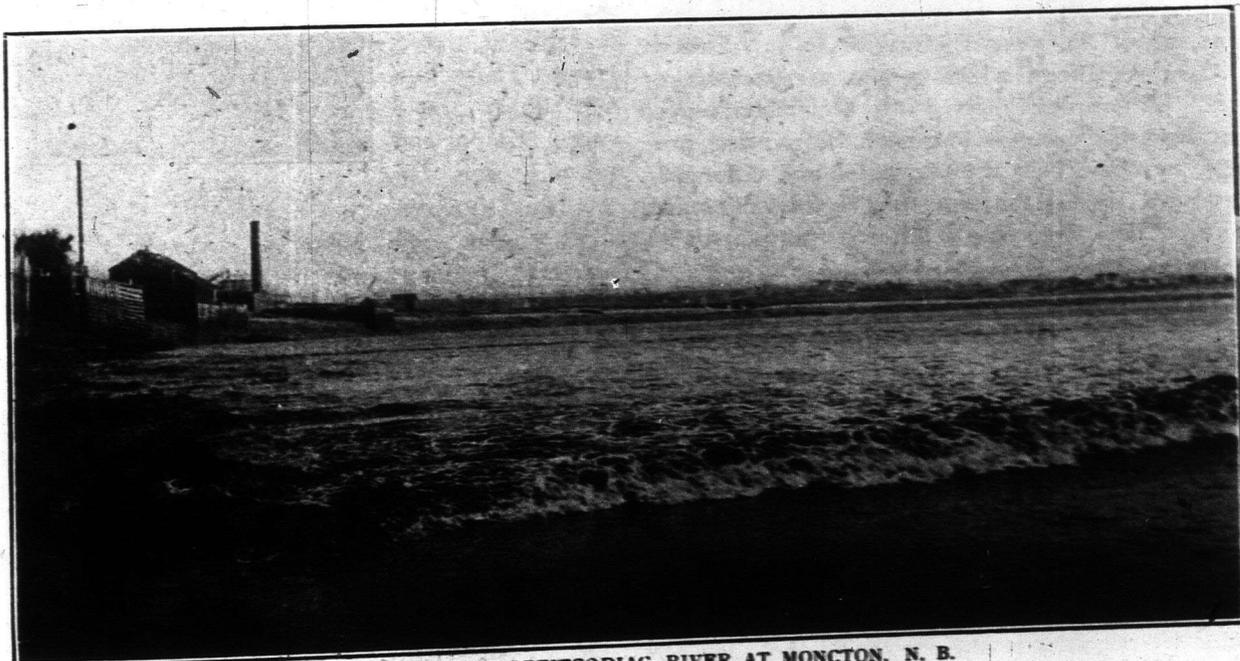
The first cause of movement in the sea is the existence of different temperatures determining *currents*, such as those of the Gulf Stream or the great Arctic current from Baffin's Bay. We are but little affected by the former, owing to its remoteness from our coasts; its most important indirect influence being the imparting of abundant moisture to the atmosphere above it, and thus causing fogs as this moisture is condensed by passing over colder areas nearer the shore. So the Arctic current, though nearer the coast, moves but slowly and mostly in deep water, and hence has little influence as a mechanical agent; but in addition to helping to determine fogs it brings large quantities of ice into the waters of the Gulf and keeps all our coastal waters, even in midsummer, excessively cold. It also, through its low temperature, markedly affects the nature and distribution of the fishes and other forms of life which frequent our shores.

A second cause of movement, due mainly to the gravitational attraction of the moon, is to be found in the tides. These in the open ocean are of little significance, being merely an alternate rise and fall, of a few feet; but where for any reason the general tidal movement is interfered with, it may, in addition to greatly augmented height, acquire all the velocity and therefore all the power of a river

current. Nowhere, probably, are such currents better exemplified than in and about the Bay of Fundy. Opening broadly as the latter does, towards the advancing tidal wave of the Atlantic, the waters of the latter are not only crowded together by the diminishing width and lessening depth of the Bay until at its head, as in the estuaries of the Petitcodiac and the Avon, it may reach at times the extraordinary height of sixty feet or more, but being driven through narrow straits it may acquire a rapidity of flow which is almost irresistible. The Bore upon the Petitcodiac at Moncton is well known to most provincialists, and a representation of its advancing front, sometimes four or

incessant and in the aggregate vastly exceeds in its effects both of the other agencies combined. Reaching the land, waves also receive directly the waste of the latter, and thus armed are able to do what mere water, however powerful its movements, would be incompetent to effect. Waves are the chief instruments or agents of wear; tides and currents are mainly of interest as the means of transportation and redistribution. Having in the last chapter sufficiently considered the first of these results, let us now turn our attention more particularly to those last mentioned.

Of what are beach-deposits composed? Let any one collect as many different varieties as he can of



THE BORE IN THE PETITCODIAC RIVER AT MONCTON, N. B.

five feet high, is here given. The Digby Gut and the entrance into Minas Basin, like the Petite passage between Digby Neck and Long Island, though without bores, also well exhibit the force and turbulence of the inflowing and outflowing waters, while at the western end of Deer Island in New Brunswick the conflict of opposing currents in the Bay of Fundy with others from the Passamaquoddy basin determine a whirlpool or veritable maelstrom, capable, with a high run of tides, of dragging down boats even of pretty large size.

The third kind of motion is that of Wind-waves. These affect individually only a small body of water, but being essentially surface effects and needing but little depth, they reach quite to the shore, and as wave succeeds to wave the action is

“pebbles on the beach” and probably considerably more than half of them will be found to consist of some variety of quartz—the hardest of commonly occurring minerals—either simple white quartz, or jasper or agate or chalcedony; or, if not of quartz only, of some silicious and almost equally hard mineral, such as feldspar or hornblende, or combinations of these. Why is this? Simply because these very hard minerals are more durable than others and have been left where all others have been ground to powder. If the beach is a sandy one, examination will show that the grains of sand are also nothing more than grains of quartz, and there is little else. It is only where the shore is composed of mud that soft materials are to be found, and these are evidently the rock-floor result-

ing from the grinding process to which all have been subjected. In the case of the coarser beds the fact of grinding is indicated by the rounded or nearly spherical form which the pebbles usually exhibit, and the roar attending the movements of breakers on the beach is not that of the breakers only but of the rock fragments which they are continually moving and grinding one against another. The coarser beds, known as "sea walls" and in which the separate pieces may be several feet in diameter, are, moreover, only to be found in exposed situations, where the waves and storms strike with the greatest power; sand beaches usually skirt the shores of open bays or indentations, somewhat better protected; muddy deposits are found in harbors, about the mouths of rivers or in off-shore shallow soundings, where gentler movements prevail. All have been derived from a common source, but represent different stages of the grinding process, and have been thus separated and differently deposited just as the depositing agents, tides and currents have been able to lift and transport them.

To be continued in May.

[A coast view in Dr. Bailey's article for February erroneously represents a cliff near Alma, N. B. It should be Tiverton, N. S.—EDITOR.]

Correction of Compositions.

It is wise to have one member of a class write on the board, that all may get the benefit of the public criticism of it. As the class writes, the teacher should move from seat to seat, making suggestions, and correcting and preventing errors. If all the rules for punctuation and for capitals belonging to the grade are taught early in September, the pupil can apply them during the year, and save the teacher much of the work of correction. All misspelled words should be corrected and used for special drills. All grammatical errors should be collected in a book for that purpose, and then made the basis of a lesson in grammar before the next composition is written. It is wise to place the initials of the pupil in this book, opposite the errors he has made, that you may bring these errors directly to his notice in the class. After the compositions have been corrected individually by the teacher, the child should rewrite them in a book for that purpose.—Sel.

I find the REVIEW very helpful and it seems to be getting better every month.—M. C. M.

Millet.

By MISS A. MACLEAN.

Sensier, the faithful friend of Millet (mee-ya), tells us that it was difficult to get a just photograph of him. This is a copy of the one usually given of him. But Sensier (san-see-ā) says of a photograph taken of him at Barbizon: It was late afternoon; he was standing full length in *sabots* (sab-o), his back to a wall, his head raised straight and proud, one leg a little forward like a man who balances himself exactly; his hat in his hand, his chest out, his hair thrown back, and his eyes as if fixed on some threatening object. This picture is to me Millet's whole life. He was pleased when I said, 'you look like a leader of peasants who is about to be shot.'



MILLET.

Jean François (frang-zwä) Millet was born on the 4th of October, 1814, at Grouchy, (groo-shee) in a long, low house built of unhewn, gray stone and half hidden by the foliage of a gnarled old grape-vine. The little village of Grouchy, peopled by about twenty-five families, stood on the granite cliffs of La Hague, in full view of Cherbourg Roads. But though the village stood on granite cliffs, the country back of it was fertile, and the peasants who labored there were prouder and wilder looking than those nearer Paris, at Barbizon. They were, however, simple-minded, quiet people from whose doors no one was ever turned away hungry. All the men and women who were able to do so worked in the fields in summer.

Millet's father was like the other peasants, but he was passionately fond of music and trained the village choir. He was equally fond of nature and was always pointing out natural beauty to his children. Millet remembered that he used to carve wood and model in clay. Millet's mother was descended from a family that had once been gentry in the country. She was sweet and gentle, dearly loving her children whom her never-ending toil

in the fields in summer and spinning and weaving in the house in winter prevented her from bringing up, for the women among the tillers of the earth have both their own curse and men's curse to bear. The grandmothers, who were too old for hard work, brought up the peasant children. Millet's grandmother was a good woman of strong character and well beloved.

Millet's education was better than that of his fellow peasants. He studied earnestly, and the parish priest took an interest in him and taught him Latin. Before he was old enough to work all the time in the fields he could read Latin authors. His grandmother had the germ of the art life in her; his father was an artist unable to express what he felt. When Francois worked in the fields with him and used to sketch at noon while the other laborers slept, he used to say to himself, "I have the longing without the power; perhaps the *bon Dieu* has given both to Francois." Later, when his younger sons were grown, he took Francois and two of his drawings to a painter at Cherbourg. The painter at first refused to believe that Francois had drawn them, but when he was convinced he blamed the father for keeping one so gifted toiling on the farm, and asked that Francois remain with him. Francois remained with him, but learned less from him than from studying and copying some old paintings in the museum at Cherbourg. He read much in the library there; Victor Hugo and Chateaubriand (*shaw-toe-bree-ang*) especially impressed him. Later Theocritus and Burns were his great favorites.

Presently the gentle-hearted father died and Francois returned for a time to the farm. But the citizens of Cherbourg had become interested in the young man and voted money to send him to Paris to study art. With sore hearts his mother and grandmother gave him their blessing, and the young man with the heart of a boy in his big body went to Paris. He was proud, shy, sensitive and awkward, and for a time he wandered about Paris, speaking to no one, for fear of being laughed at. Finally he discovered the Louvre, the great art gallery of Paris. For a month he spent nearly every day there. He was very homesick but the pictures held him. The works of Michael Angelo (*me-kel-an-jā-low*) impressed him most. "I loved," he said, "everything that was powerful, and I would have given all of Boucher (*boo-shū*) for a single nude of Rubens." As life advanced he cared

less for Rubens, but Michael Angelo and Poussins remained his life long favorites. There is much in his works that suggests both—Poussins' sober coloring and absence of sensuous quality and Michael Angelo's ruggedness and strength of line.

Soon Millet became a pupil of Delaroche. In Delaroche's (*del-ä-rosh*) studio he was very quiet and made no advances to his fellow pupils. They teased and joked him, but when they went too far the young Hercules threatened to answer with his fists and they let him alone, nicknaming him "l'homme des bois." They did not understand his way of drawing and did not believe that this "man of the woods" would ever "arrive." "Eh," said they, "are you going to make men and women on your own plan? The master will not be pleased with your work." He replied, "I did not come here to please anybody. I came here because there are casts and models here to study from. Do I find fault with your drawings, made of honey and butter?"

Here I may say that the return to the study of nature, which had been the glory of the Renaissance, practically died with Michael Angelo, and after that falseness and artificiality crept into art, and at the time Millet went to Paris there was an artificial academic way of painting that was an abomination to Millet who had been Nature's own pupil in the fields at Grouchy.

Millet soon left Delaroche's studio, accompanied by a fellow pupil, and they took a little third storey room and went to work for themselves. The money given by the citizens of Cherbourg was now spent and he tried to sell his pictures, but nobody would buy. He was driven to paint signs or anything that would bring him the needed coin. If it had not been for his fellow student, Marolle, who stood between this shy child of Nature and Paris, Millet would probably have succumbed to the trials which burdened him then. Later, Diaz, (*dee-as*) Rousseau (*roo so*) and Sensier became his friends and did all they could for him, but want was ever hovering near.

During the ten years subsequent to his leaving Delaroche's studio, Millet married twice; first to a beautiful, delicate girl who was inclined, like himself, to look on the dark side of life and who succumbed to her burdens about three years after their marriage. He married again a strong cheerful woman who courageously stood by him till his death. The world never fails to hear of its great

men, but how often the women, to whom the world so often owes its great men, are never heard of. But when God awards the laurels, these women will take no second place.

Millet found that he dared not paint as he wished while his children needed bread; he must paint what people would buy. Necessity and his facility in painting flesh and the nude drove him for a time to the limits of propriety. Reports of an exhibition of some of his pictures reached Grouchy and his grandmother wrote, "Follow the example of the man of your profession who said, 'I paint for eternity;' for no cause whatever permit yourself to do evil works or lose sight of the presence of God." Later he said to his wife: "If you wish I shall never paint any more nude pictures. But life will be harder; you will suffer from it, but I shall be free to accomplish that which I long to do." She replied simply, "I am ready; do as you wish." He left unfinished a picture of Hagar and Ishmael and began "The Haymakers." His family increased and life drove him hard, "But I could have forgotten it all," he said, "if I could once in a while have seen my native place."

The salon (sal-ong) at Paris systematically snubbed any artist who dared to imitate nature, and Millet's pictures were rejected. He however managed to sell "The Haymakers." Cholera had attacked Paris and hearing of Barbizon he went thither. We are told that when he arrived at Chailly he and his family set out across the fields to Barbizon in a rainstorm, he carrying his little girls on his shoulders, his wife following with an infant in her arms which she sheltered from the storm by turning up her skirt over it. A maid brought up the rear with a basket of provisions. A peasant woman who beheld the procession took them for strolling actors. They found an unoccupied, one storey, three roomed peasant house, rose and vineclad, with a garden behind; this they rented, and it became their permanent home. Millet never owned a home of his own, though he longed for one. The two-floored rooms of the house he rented were occupied by the family, the third, having only a mud floor, was his studio.

Sensier tells us that Barbizon filled Millet with enthusiasm, and for a time he was in such a state of excitement that he could not paint. He felt his feet again on God's fresh earth; he became again a peasant.

After quieting down he proceeded to paint the scenes about him,—sawyers at work on gigantic

trees, wood gatherers, charcoal burners, quarrymen worn with toil, poachers on the scent, stone breakers, ploughmen, etc., and each scene he sketched in a day—sometimes in a few hours—using them later in his compositions. Here he was at home with the school of artists growing up at Barbizon, the artists who introduced into modern landscape painting the poetry of a new ideal, and whose works are still the honor of modern landscape painting. And Millet was one of them—Millet with his pure ideals, clear brain and powerful hand. He celebrated his own daily life and work as a peasant, and was no revolutionist as some suspected. The peasant represented to him the clearest type of the human family atoning for primal sin. And if before a painting of Millet's we are shocked by its roughness and unusualness, if we try to forget our littlenesses and traditions and look backward over the languages of human toil and endeavor, we will surely come back to Millet and say, "He understood."

"The cry of the earth," he said, "is not of my invention. 'Thou shalt earn thy bread by the sweat of thy brow' was uttered centuries ago; who may change it?"

When accused of not seeing the beautiful side of country life, he said, "I know that there are handsome men and maidens in our villages. I see and love the trees and the flowers of which Christ said, 'Solomon in all his glory was not arrayed like one of these,' but look at the laboring horses steaming on the plain, look at the broken backed man who is trying to straighten himself upright for a moment in order to breathe and wipe the sweat from his brow on the back of his hand. Look at that poor woman all bent, who is dragging herself painfully along under a bundle of fagots—are these the gay and merry laborers in which people would have me believe? It is the human side that presents itself to me. I have never known the joyous side."

And yet he was happy in his own home. When weary or baffled in his poor little studio, he would open the door, and the tired artist would become a child among his children, weaving fantastic stories for them.

But he began to suffer from violent headaches—sometimes for days, sometimes for weeks—supposed to have been brought on by working in his ill-lighted studio. When he found the headaches coming on he could sometimes ward them off by rushing away to the fields and forest. The fresh air revived him and he would climb rocks and

amuse himself with childish joy, clad in an old red jacket, with *sabots* on his feet and a weatherbeaten straw hat on his head. "I do not know anything more delightful," he said, "than to lie on the heather and look up at the sky."

To be concluded in May.

NOTES—The name of Delacroix was not intended to be among the names of Barbizon artists mentioned in the February issue of the REVIEW. In the art world of Paris, about 1830, there was a revolt against the classicism of the schools. The revolters were all alike in that they wished to study from nature, but they generally arranged themselves into the realists who strove to be absolutely faithful to nature, like the Barbizon school, and the romancists, of whom Delacroix was leader, who thought that it was better to idealize more or less.

A. M.

Picture Study Queries.

M. Mc.; Albert Co.—Best thanks for your composition. Certainly the lark does not care very much for trees, but I was not aware its claws were too straight for perching on branches. You may be right however. Perhaps you can tell who wrote the lines quoted:

"O shame to let a little bird
Thus get the start and first be heard;
Come, then, and let us tune our throats
And join its song with grateful notes."

JEANNIE.—There is a valuable article on Bird music in Harper's Magazine, August, 1902, by H. W. Oldys. After giving an illustration of the duet of meadow-larks, he states, "both began singing slightly out of tune, and in a short time, by gradual degrees, they had exchanged parts, so that No. 1 sang the phrase originally sung by No. 2 while No. 2 sang that originally uttered by No. 1"—a remarkable incident.

S. M. R.—Remember it is not possible to estimate the full effect of a great colorist's work, when one knows only reproductions in black and white. The district was not so barren as you suppose. Millet declared the country—"so beautiful, that he never thought of describing it."

A. P.—Thank you for your notes. I believe the bird is indifferently called, "common lark, field lark, or sky lark. It is not found in Canada in the wild state. The bird in France is probably like the British. They all come originally from Asia.

A. S. McF.—It would take too much space to enter into the philosophy of art. Dr. J. C. Van Dyke says "The highest art of all, then, is that which consists in the expression of one grand idea with such force that every other thing is forgotten

in its contemplation." Breton's picture would be good even if there was no lark, or if the picture received other titles. (See Psalm 104, 23.) That girl is competent and determined and cheerful. Pity would be more appropriate for a poorly-clad, ill-nourished 'hand' in a factory.

MUSICAL.—'Music and Youth' is now defunct, I believe. There were supplements in Sept. and Oct. 1900, giving illustrations of voices of nature. Request a musical friend to give you a portion of Beethoven's Pastoral symphony. Look up references in your Bible to the "joy of harvest."

ARCADY.—Hogg, I believe, has a poem on the skylark. The words you refer to are by Shelley. I cannot say where you can find them.

"The pale purple even
Melts around thy flight;
Like a star of heaven
In the broad daylight
Thou art unseen, but yet I hear thy shrill delight."

W. M. M.—Jules Breton also wrote poetry. Sir Lewis Morris wrote a brief poem, Morning Song. If you think our picture represents Sunrise the words by Morris are more suitable than Shelley's.

"Aloft on circling wings
The mounting skylark sings,
A denizen of air, scorning terrestrial things."

MABEL.—A picture must deal with *one* moment only. There is no progression as in poetry.

T. L.—She behaves as an innocent healthy girl should who loves work, and is in harmony with nature. Not the sight of the lark, but its song controlled her.

H. B.

Waweig, N. B.

How One Teacher Used the Picture "Saved."

The primary school taught by Miss Maud A. Williams, Harvey, York County, N. B., was successful in winning the prize offered by Rev. Hunter Boyd for the best set of questions on the picture "Saved" that appeared in the February REVIEW. In the hope that such questions may be suggestive to other teachers a few of them are given here:

1. Each one name something you see in the picture.
2. What do you like best of all in the picture? (In nearly all cases the dog).
3. What has the dog done?
4. How does the dog feel? (Tired but contented).
5. What do you suppose he is thinking of?
6. Do you think that the child and the dog were strangers or friends? Why?

7. What is on the dogs paws?
8. How did the child get there?
9. (For imagination) What name shall we give the child?
10. And how old may she be?
11. How old may the dog be?
12. And what name shall we give him?
13. Why is the dog's mouth open?
14. Where are the child and the dog?
15. How many birds are there?
16. What kind of birds are they?
17. Is the water a river, a lake or the sea? Why?
18. Who painted the picture?
19. Mention another picture of his?
20. Tell something about him?

The teacher adds: "I used the picture in composition work, allowing the children to write its story. Two little girls thought the dog had saved the child from a burning building, the others thought it had been saved from the water. I also allowed the children to write some questions about the picture, and these brought up other points. I have used it as a means of training their memory, by turning its face to the wall and getting them to write all in the picture they could remember. I used the picture to improve their language, both oral and written, their imagination and memory.

"It pleases me to have the children take so much interest in their pictures. All children love pictures and it is just as easy—and so much better—to have them acquainted with good ones rather than poor ones."

Art Notes.—No. V.

REV. HUNTER BOYD.

This month the choice of subject does not call for minute analysis such as we have followed with other pictures, but it affords very great pleasure to examine reproductions of the work of a Canadian artist.

One of the busiest men in the Dominion is Sir William Van Horne, who, in addition to the laborious results he has achieved in railroad construction in Canada and Cuba, is also director of a score of great concerns, and yet has found time to collect some of the choicest art treasures to be found on this continent. Not only so, Sir William is an artist himself. Sir Martin Conway says of his collection; "In all of these there is merit; the collector has a definite taste of his own, and buys to satisfy it. But more than that he paints pictures himself, and pictures of no indifferent merit. He paints with an enthusiasm as great and an energy as persistent as those which carried the iron rails across the continental breadth of Canada. His trees are not inventions, but old friends. He knows a whole army of them between Montreal and Vancouver, and can draw the likeness of any one you ask for. It is in

their Autumn livery that he loves them best, or rising naked out of the snowy mantle of Winter. These pictures of his are no niggled amateur productions done on a tiny scale but large canvases boldly handled. The composition is sometimes sketched apparently in ink, rapidly laid in with a large brush on the canvas itself. Few people understand the individual character and life-habit of trees better than Sir William; yet there is nothing of the scientific diagram about his pictures of them, whilst in their grouping, their lighting, and their colour, there is much art."

The two points specially insisted upon by Sir Martin Conway are admirably illustrated in the copies kindly furnished for the REVIEW—the Autumn livery, and the snowy mantle of Winter.

It is one function of a poet or artist to enable us to discern beauty where we have failed to recognize it, and we are specially prone to overlook the beauty of beeches and birches in the period between October and April. We are glad to see the new leaves, and rejoice in the mature foliage with its possibilities of light and shade, but the delicate tracery of tree anatomy is for most a late acquisition, the pleasure of a quiet eye.

On the treatment of forest trees, and foliage by artists it may be well to consult Ruskin; *Modern Painters*, part II. of truth; section VI., chapter I., of truth of vegetation. Encourage the scholars to observe beeches and birches at this season, and sketch or draw from memory specimens near the school-house or any trees for which they have special fondness. Endeavor to procure a series of poetic allusions, or particulars of characters, historical or otherwise, who had these trees for their favorites.

The botanical characteristics are not called for by this study, but endeavor to evoke discussion on the symbolism of the trees; also enquire concerning the music of these trees, and compare the pine and elm. What do they say to us?

When I bought my farm I did not know what a bargain I had in the bluebirds, bobolinks, and thrushes, which were not charged in the bill. As little did I guess what sublime mornings and sunsets I was buying, what reaches of landscape, and what fields and lanes for a tramp. Neither did I fully consider what an indescribable luxury is our Indian river, which runs parallel with the village street, and to which every house on that long street has a back door which leads down through the garden to the river bank.—*Emerson*.

April Birthdays.

William Shakespeare, the world's great literary and dramatic poet, was born at Stratford-on-Avon, Warwickshire, England, April 1564—on the 23rd of that month, it is supposed. His father, John Shakespeare, was of the yeoman class; his mother, Mary Arden, was of a family of the minor gentry. Little of certainty is known of Shakespeare's early life. He was doubtless educated at the Stratford grammar school. He soon left his native place to seek his fortune in London where most of his plays and sonnets were written. The following extracts may serve to show what other literary men thought of him:

If I say that Shakespeare is the greatest of intellects, I have said all concerning him. But there is more in Shakespeare's intellect than we have yet seen. It is what I call an unconscious intellect; there is more virtue in it than he himself is aware of.

—Carlyle.—Essays.

He was not of an age, but for all time!

—Ben Jonson.

When Shakespeare is charged with debts to his authors, Landor replies, "Yet he was more original than his originals. He breathed upon dead bodies and brought them into life."

—Emerson.

Now you who rhyme, and I who rhyme,
Have not we sworn it, many a time,
That we no more our verse would scrawl,
For Shakespeare he had said it all!

—R. W. Gilder.

But Shakespeare's magic could not copied be;
Within that circle none durst walk but he.

—Dryden.—The Tempest.

April 23, 1799.—Sir William Edmond Logan, born at Montreal, graduated at the University of Edinburgh in 1817; was director of the geological survey of Canada 1842-69; published valuable reports and scientific papers and accomplished results of signal importance in the geology of Canada.

April 25, 1599.—Oliver Cromwell, born in Huntingdon, England. Had a limited education; in the Short Parliament of 1628 he made but one speech (a pattern for modern legislators), and during the eleven years' prorogation devoted his time to the cultivation of his farms. He was the chief leader of the Parliamentarians against the King; became Lord-protector of England, 1653.

April 30, 1834.—Sir John Lubbock, born in London; educated at Eton, became interested in ethnology and natural science to which he devoted the remainder of his life. His researches on British wild flowers in relation to insects, and on ants, bees and wasps, are among the most popular of his works.

The Course of Study—A Criticism.

EDITOR EDUCATIONAL REVIEW:

Dear Sir:—I want to express the pleasure with which I read the suggestive discussion and intelligent criticism of our school work by S. D. Scott in the March number of the REVIEW. In common, I believe, with the great majority of teachers I endorse all that Mr. Scott says, and my only regret is that circumstances make it impossible, in some instances, to carry out his very reasonable suggestions. For example he says, "It would seem possible to arrange a system which would grade a child in some subjects and to leave him to take the others over again with his old class. The grading might be to some extent by subjects, and not by a level standard covering the whole range. That is exactly what would happen in an ungraded country school where a pupil is carried along in each subject as fast as he can get ahead in it." Mr. Scott is quite right with regard to the ungraded school, for in this particular such a school is aided by its very limitations. As there is only one teacher a pupil may study while the teacher is engaged with that pupil's class—but in a subject which the pupil does not desire—and join another class of a higher or lower grade when the same subject is being dealt with in that higher or lower grade. But in a large, well-graded, well-manned school this is different. While neither teacher nor school authorities object to a pupil from one grade taking a class or classes with any other grade the pupil finds it impossible to do so without losing some other class which he wishes to take. For example, suppose a lad registered in grade *eleven* is backward in Latin and geometry. He may wish to take Latin with grade *ten* and geometry with grade *nine*, and no one objects to his doing so. But as different teachers take the different subjects, at the time when his own grade *eleven* class comes to the classical master he cannot leave it and slip into the grade *ten* Latin class for at that moment no such Latin class, is in progress and the grade *ten* class is in the mathematical or some other room. Neither can he slip into the grade *nine* geometry class for the grade *nine* class is probably at science, geography or drawing. But when the Latin master is doing the work of grade *ten* or the teacher of mathematics the geometry of grade *nine* can the lad not leave his own class then and join one of these? He undoubtedly may, but in doing so he will lose the English, the history, physics, or some other subject which will go on in

grade eleven at the very hour and which he does not wish to lose.

If all or a large number of pupils required to take the same subjects in a higher or lower grade than their own then the teaching staff could do much to arrange the time-table to accommodate them. But as the special cases are exceedingly varied it is impossible, without greatly lengthening school hours or multiplying the number of teachers, to do much to solve the problem. Thus it will be seen that the difficulty is not with the course of study nor with the teaching staff but rather with the conditions under which the best work is being done.

W. T. KENNEDY.

County Academy, Halifax, March 16th, '06

Criticism of P. E Island Schools.

Mr. Theodore Ross, director of the Macdonald Rural Schools in Prince Edward Island, writes as follows: "Perhaps the severest arraignment of our educational system that it has yet met with from the public platform, was that made by the Hon. S. E. Reid, Commissioner of Agriculture, in an address delivered before the Annual Convention of Farmers' Institutes. This is only the beginning of an educational campaign undertaken by the farmers of this province on behalf of a system of education that shall articulate more closely with our industrial needs." The following is a portion of Hon. Mr. Reid's address:

Our people provide generously for a training in languages that induces the boys to enter the professions leaving parents in their old age to look after the old farm. We give more attention to Latin in our only high school than we do to agriculture, botany and physical geography combined. We spend yearly on this school that devotes more than one-third of its energies to the teaching of languages alone, a large sum. We spend annually half of our revenue on our public schools which are so conducted that the tendency is away from the farm, rather than towards it...

You support a system of public schools at a cost of \$166,000. There your children shall toil or be supposed to toil, but there they shall learn little or nothing of that you will most want them to know, directly they leave school and enter upon the practical business of life. They will in all probability be dairymen but they will not know the difference between a dairy cow and a beef cow, or whether milk is soured by witches or by bacteria. They will have the feeding of cattle but will not know what is a proteid or what is a carbohydrate or whether a cow should be fed all she will eat or just what will keep her alive. They will have the sowing of seeds but will have no means of knowing whether they are sowing timothy seed or sowthistles, they will have the reaping of harvests but no means of finding out why they get twenty bushels instead of forty. Some of them will represent you in parliament and have a share

in making laws that may prove a blessing or a curse. But they do not hear one word about the political organization of our country, or the meaning of free trade or protection, or know there is such a thing as economic laws....

Can a system that neglects all these things be the best suited to a country that depends entirely on agriculture?

A Suggestion

A subscriber, once a teacher, now pursuing a different line of work writes: "The idea of sending prints of celebrated paintings is one of the grandest I think you have ever adopted. Were I teaching again I could make a dozen different uses of them. Would it not be a good idea to propose some subject and ask, particularly the teachers of miscellaneous schools, to give an outline of their method of teaching it to their particular schools and the manner in which it was accepted? Then if you could publish two or three of these in a clear concise form don't you think it would benefit those teachers who find little time—and money too—to attend the Normal Schools? In my experience with country schools when first teaching I would have welcomed such an idea. Wishing you still greater success with your paper and your work,"

E. S. C.

[The series of questions on another page on the picture "Saved" anticipates our subscriber's suggestion to some extent, but there are greater possibilities in it to which attention may be given as the work goes on.—EDITOR.]

A Persevering Student

There's a merry little student, in a suit of brown and gray,
Who says his single lesson o'er a thousand times a day;
He studies well the alphabet from early dawn till night;—
He knows one letter only, but he always says it right.
He cannot take his lunch to school as children often do,
But when he's feeling hungry, he will eat a bug on two;
And then without a single word about A, B, or C,—
Recites the same old lesson, "Chick-a-d-d-d-d D."

—Hannah G. Fernald, in *Ginn's New Second Music Reader*.

A Picture of a Tree

The other never once has ceased to gaze
On the great elm-tree in the open, posed
Placidly full in front, smooth bole, broad branch,
And leafage, one green plenitude of May.
The gathered thought runs into speech at last.
"O you exceeding beauty, bosomful
Of lights and shades, murmurs and silences,
Sun-warmth, dew-coolness,—squirrel, bee and bird,
High, higher, highest, till the blue proclaims
'Leave earth, there's nothing better till next step
Heavenward!'— So, off flies what has wings to help!"

FROM THE INN ALBUM.—Robert Browning.

Nature-Study Calendars.

A letter from Principal D. W. Hamilton of the Macdonald Consolidated School, Kingston, N. B., gives an interesting account of the Nature-Study work attempted by the pupils in addition to that done in the garden. He writes: "Nearly all our pupils keep bird and flower calendars, and quite a number have weather records. The weather record I am sending is a copy of one kept by Wilbur Crawford, a grade 8 boy. He has it complete since January 1, 1905. In each school room there is a bird calendar and a flower calendar. The bird calendar I am sending is a copy from the advanced department calendar. The flower calendar is from Miss Darling's room, grades 3, 4 and 5. It was made by Lulu Crawford, a grade 3 pupil."

Extracts are given below from these calendars in the hope that they may suggest to other teachers the usefulness of this work and the effect it may have on boys and girls in teaching them to observe and in giving them a greater interest in their surroundings. There is only space for a few lines of each calendar, but this is sufficient to show how the work is done.

WEATHER REPORT.

Day	Date	Time	Tem. Fahr.	Winds	Snow	Rain	Fog or Mist	Clouds	Hrs. of Sun Shine	Sun Rises	Sun Sets	Moon	Remarks
Sat.	1905. April 1	9.30 A. M.	36+ Warm	South Med.	None	None	None	Heavy	0	5.58	6.43		
Sun.	2	"	25+ Cool	N. W. Med.	"	"	"	"	1/2	5.56	6.44		
Mon.	3	"	30+ Cool	N. W. Med.	"	"	"	Med.	5	5.54	6.46		
Tues.	4	"	40+ Warm	South very light	"	"	"	"	1 1/2	5.52	6.47	New Moon	
Wed.	5	"	37+ Warm	S. E. light	"	Light	"	Heavy	0	5.50	6.48		
Thurs.	6	"	45+ Warm	S. E. Strong	"	"	Light Mist	"	0	5.48	6.49		
Fri.	7	"	35+ Warm	South very light	"	None	None	Med.	8 1/2	5.47	6.51		

BIRD CALENDAR.

Date	Bird	Plumage	Habits, Etc.	Reported by
1905 Mar. 3	Old Tom Peabody	White patch on throat, striped head, dark back	Says "Old Tom Peabody"	Lulu Kelly
" 10	Junco	Slate colour, light breast, two outer tail feathers white	Tame	Louis Gard
" 23	Tree Sparrow	Brown head, dark spot on white breast	Sweet, musical song	Millie Northrup
" 27	Blue Heron	Bluish color	Long legs and neck. In water...	Louis Gard
" 30	Northern Shrike	Blue and brown	Large with strong curved bill...	Allan Flewelling
Apr. 1	Fox Sparrow	Reddish color	Quite large, stays only a short time	Allan Flewelling
" 2	Chipping Sparrow	Brown head and light breast	Small, has no song	Walker Belyea
" 4	Vesper Sparrow	Brownish and shows white tail feathers when flying	Good singer	Ethel Thomson

WILD FLOWER CALENDAR.

Common Name	Date	Family	Description	Pupil
Spring Beauty	28 April	Purslane	Flowers pink or white.	Williston Carmichael
Adder's Tongue or Dog's Tooth	29 "	Lily	Yellow flowers, lily shaped	Hazel Wetmore
Violet	29 "	Lily	Flower purple, 3 leaves, whorled	Williston Carmichael
Trillium (purple)	1 May	Soapberry	Red flowers in cluster	Grace Shamber
Maple (red)	2 "	Fumitory	White, two spurs on flower	Jessie Hunt
Dutchman's Breeches	3 "	Violet	Flowers blue, one spur	Jessie Hunt
Violets (blue)	3 "	Composite	Flowers yellow, in heads	Jessie Hunt
Dandelion	4 "	Madder	Flowers blue and white, small	Ethel Cochrane
Bluets	4 "	Crowfoot	Flowers white	Jessie Waddell
Anemone (wood)	9 "	Crowfoot	Flowers white, stems yellow under ground	Jessie Waddell
Goldthread	12 "	Crowfoot	Flowers white, stems yellow under ground	Elsie Sterritt

The Adventures of Ulysses

(Continued)

Charles Lamb (1775-1834.)

NOTES BY G. K. BUTLER, M. A.

He was educated at Christ's Hospital where he remained until 1789. Among his school-fellows was S. T. Coleridge. In 1792 he entered the East India Company's service where he remained for 33 years and often used to say that the books he kept there were his real works. His sister, Mary, became insane and he was obliged to care for her for the rest of her life, though she often recovered her reason. In 1807 she joined him in the "Tales from Shakespeare," and in 1808 he published "Ulysses." His "Essays of Elia" was published in book form in 1823. In 1825 he was given a pension of £450 a year by the East India Company.

His style is said to be much affected by his constant study of the Elizabethan writers. His one weakness was an indulgence in tobacco and liquor to a considerable extent.

Page 113. l. 4: "Raise your mast," in ancient, i. e., in very ancient, times the part played by sails in the navigating of a ship was very small. The mast, on arriving in port, was unstepped and laid on a rest at the stern. Even in the time of the Romans the war ships depended on rowers. (See "Ben Hur.") l. 8: We have here the names of four of the rivers of Hades. Styx was the river which surrounded the lower world. Even down to the present time death is often spoken of as the crossing of a river, though Christianized people speak of it as the Jordan. l. 38: Neptune was the Latin name of what Greek deity? (See notes for March.)

P. 114. l. 17: What figure of speech in the expression "Ulysses' soul melted"? What is the meaning? l. 20: Those who have read the sixth book of Virgil's Aeneid will remember a similar situation in it. l. 29: On the subject of Oedipus, Sophocles, the great Greek tragedian, wrote three plays. One, the Oedipus Tyrannus, was the greatest ever written, if we may believe Aristotle. And so it was probably till Shakespeare's time. l. 34: Castor and Pollux figure in Macaulay's "Lay of Lake Regillus." Helen it was who caused the Trojan War as she was stolen, perhaps willingly, by Paris, son of Priam, King of Troy.

P. 115. l. 6: "Orion" as the story goes, was taken up and placed among the stars. At any rate our most brilliant constellation bears his name. l. 13: For more information concerning Ariadne read Kingsley's "Heroes," especially Theseus. l. 16: Parse "that late." What word do we use in place of late? l. 21: Meaning of the word "im-

mediately?" On Agamemnon, his death and its consequences, we have the great Greek trilogy written by Æschylus.

P. 117. l. 14: "The wooden horse" is among the most famous things of ancient times. Its story at greater length may be found in the second book of the Æneid. l. 24: What is the meaning of the word "machine" as found here? Look up the derivation of the word. Also if possible the meaning of the phrase "deus ex machina," which is so often found in literature. l. 31: Meaning of the word "shade" as here found? What other words have we with same meaning? Some of them are English, some Latin, some Greek in their derivation. l. 39: Give a synonym of "emulation."

P. 118. l. 20, 21: Here is a chance to show the difference between Christian theology and the theology of the Greeks as to a future life; for they too, believed in the immortality of the soul. Compare the Valhalla of the Saxons.

P. 120. l. 10: Parse "needs." l. 12: Usual word for "invitements?" l. 31: A full account of the "Argo" and its voyage will be found in Kingsley's "Argonauts." l. 38: The Octopus when its horrors have been enlarged by story and fable may have been the foundation of the tales concerning Scylla. Compare the many stories we read and hear in modern times about the sea serpent.

P. 121. There is also a famous whirlpool on the coast of Norway. In both cases caused by the ebb and flow of the tide. l. 27: What would you call "fore wind?" l. 29: How far, in miles had they sailed?

P. 122: In the sentence "the more be adjured them, etc.," parse the word "the." (It is an adverb of degree.)

P. 123. l. 24: Meaning of "like neen." Give an adverb with the same meaning. l. 30: What does "idle death" mean? l. 36: What is modern name of "foredeck"?

P. 125. l. 14: Parse "this." l. 18: Parse "night." l. 23: What figure of speech in "attempt the blood?" l. 25: Very often in Greek poetry do we meet, with the sun addressed as the all-seeing God. l. 27: The ancients were much more afraid of head winds than the navigators of more modern times. If any one has a copy of Kinglake's "Eothen," he will find a fine satire on the slowness of navigation in the Mediterranean. l. 34: Meaning of the word "stay" as found here?

P. 126. l. 38: Find meaning of "prodigy."

P. 127. l. 3: Look up meaning and derivation of

the word "omen;" another word with much the same meaning is "portent." 1. 15: Parse "days." 1. 16: What sort of a phrase is, "the wind changing?" 1. 20: What is the meaning of "devoted" in this line? Look up its derivation. 1. 24: "Bark" is here used as we use "vessel." 1. 25: Meaning of the word "wanting?" 1. 29: I have the misprint "sea-news." What is correct and what are they?

P. 128. 1. 29: What part of speech is "scarce?"

P. 129. 1. 20: In the story of Perseus it will be remembered that Mercury lent him the winged sandals. 1. 23: The "Lessons on English" tell us that "stay" has a certain meaning and "stop" another. Does this use of the word justify that? Consult a good dictionary. 1. 36: Homer's adjective applied to "morning" is "rosy-fingered." Diana was known to the Greeks as Artemis.

P. 130. 1. 8: Parse "killing." 1. 17: What figure of speech is "drowned in discontent?"

P. 131. 1. 57: This book spells "Augur;" is it right or wrong? What is an "augur?" 1. 8: Is there a reasonable time allowed for the building of the bark? 1. 21: "Goodly"; find this word used elsewhere in the reader. 1. 28: I think it was Gladstone who said of the "Bear," "nigh to boot the Wain." Why does the "Dipper," as we call it never set?

P. 132. 1. 6: Parse "son." What case is it? Why does it not have the apostrophe? 1. 7: What figure? 1. 8 et. seq: A storm something similar to this befell Æneas and is described in the first book of the Æneid.

—There are twelve good rules which every girl and boy should master before they reach the age of fifteen:

Be courteous to everyone, whatever his or her station in life.

Shut the door and shut it softly.

Keep your own room in good order.

Have an hour for rising and rise.

Never let a button stay off twenty-four hours.

Always know where your things are.

Never let a day pass without doing something to make somebody comfortable

Never come to breakfast without a collar.

Never go about with your shoes unbuttoned.

Speak clearly enough for everyone to understand.

Never fidget or hum so as to disturb others.

Never fuss or fret.—*Sel.*

Problems in Arithmetic—Grade VIII.

G. K. BUTLER, M. A.

1. Oil which sells at the rate of 5 liters for 25 cents makes a gain of 25 per cent; find cost price per gallon.

2. A druggist buys 60 kilograms of drugs @ \$1.20 per kilogram and sells @ 10c. an oz. apothecary; find gain.

3. An article which cost \$80 was marked 30 per cent above cost and was sold at its marked price for how much?

4. The selling price was \$60, the gain was 20 per cent; find the cost price.

5. A house which cost \$3,000 was insured so as to cover the value of the house and the cost of insurance if burned. At how much was it insured, the premium being two per cent.

6. A commission merchant receives 600 barrels of apples which he sells @ \$4.25 per barrel on three per cent commission. He invests proceeds at two and a half per cent. How much commission does he receive in all?

7. A note of \$600 dated May 3rd at 90 days and bearing four per cent interest was discounted May 23rd at seven per cent; find proceeds.

8. A room is 20 feet long, 15 feet wide and 12 feet high; find cost of plastering walls and ceilings at 25 cents a square yard.

9. Find cost of paper for the same room at 25 cents a roll when the paper is 18 inches wide and the roll contains 7 yards (walls only to be papered.)

10. Find in ac., sq. rds., sq. yds., sq. ft., sq. in., the area of a trapezoid whose parallel sides are respectively 300 yards and 200 yards and whose altitude is 400 feet.

11. How many gallons in a cylinder whose basal diameter is 10 decimeters and whose height is 20 decimeters.

12. The amount of a sum of money for four and a half years at five per cent simple interest is \$306.25; find the sum.

Answers.—(1) 18 cents; (2) \$120.90; (3) \$104; (4) \$50; (5) \$3061.22; (6) \$76.50 + 60.34 = \$136.84; (7) Amt. = \$606.12; proceeds \$597.63; (8) \$31 2-3; (9) \$6 2-3; (10) 6 ac. 141 rds. 28 yds. 108 inches; (11) 345,733; (12) \$250;

The REVIEW is a great help to me in my work in this country school, and is full of encouragement. I think that is what many of our teachers need.
—*Subscriber.*

The Forests of Canada

In the elementary course of the Natural History Society of New Brunswick last evening, George U. Hay gave an extremely interesting and instructive talk on Forest Conditions of Canada from the Atlantic to the Pacific. The lecturer having made the complete trip, and in his usual careful manner investigated the various forms of plant life, spoke entirely from his own experiences.

In the course of his remarks Dr. Hay referred to the mixed growths of evergreens and deciduous trees that clothe the ridges and plains in the eastern section of Canada, and stated that from the western end of Lake Superior through the almost treeless prairies to the shores of the Pacific a great change was noticed in the flora, none of our fine species of maple being observed. This led him to say that our maple was not really a suitable emblem for all Canada.

In the prairie districts, along the streams and rivers, were observed poplar, or cottonwood, willows and box-elder, or Manitoba maple, and a few birches. It was stated that on account of their presence in all parts of the country, the canoe birch, Jack pine or white spruce would be more suitable as an emblem of all Canada.

Reference was made to the importing and planting of Siberian and other exotic species of trees in the "treeless west," among them being the flowering pear and Siberian pea.

A highly interesting description of the flora of the Rockies, Selkirks, Gold Range, Cascade and Coast Range mountains was given. The giant Douglas fir, white spruce and red cedar (the first sometimes attaining a height of three hundred feet) of British Columbia, were described, and the statement made that one acre of British Columbia forest had produced as high as 500,000 feet of lumber. The timber cut from one enormous Douglas fir or red cedar would yield about as much as an acre of our timber lands.

Dr. Hay described the fine natural park at Vancouver—Stanley Park—where these giant trees may be seen for ages to come, long after their fellows have been destroyed,—for fire and the lumbermen are fast depleting the forests of the west, as they have done the east. The experimental farms at Ottawa, Brandon and Agassiz were referred to, and much valuable information given regarding their practical utility in the agricultural development of Canada.—*Newspaper Report, March, 21.*

The Coming of Spring

An exercise for a number of children. The Hours are the Goddesses of the Seasons. —Selected and Adapted.

Hours.—

Come, gentle spring; ethereal mildness, come!

—*Thomson.*—Seasons.

First Voice.—

Hark! the hours are softly calling
Bidding Spring arise,
To listen to the rain-drops falling
From the cloudy skies.
To listen to Earth's weary voices,
Louder every day,
Bidding her no longer linger
On her charm'd way;
But hasten to her task of beauty
Scarcely yet begun.

—*Adelaide A. Procter.*—Spring

Second Voice.—

I wonder if the sap is stirring yet,
If wintry birds are dreaming of a mate,
If frozen snowdrops feel as yet the sun,
And crocus fires are kindling one by one.

—*Christina Rossetti.*—The first Spring Day.

Third Voice.—

O tender time that love thinks long to see,
Sweet foot of Spring that with her foot-fall sows
Late snow-like flowery leavings of the snows,
Be not too long irresolute to be;
O mother-month, where have they hidden thee?
—*Swinburne.*—A vision of Spring in Winter.

Fourth Voice.—

The Spring's already at the gate
With looks my care beguiling;
The country round appeareth straight
A flower-garden smiling.

—*Heine.*—Book of Songs.

Fifth Voice.—

Softly came the fair young queen
O'er mountain, dale, and dell;
And where her golden light was seen
An emerald shadow fell.
The good-wife oped the window wide,
The good-man spanned the plough;
'Tis time to run, 'tis time to ride,
For Spring is with us now.

—*Leland.*—Spring.

Enter Spring with train of flowers.

Spring.—

I come, I come! ye have called me long,
I come o'er the mountain with light and song;
Ye may trace my step o'er the waking earth,
By the winds which tell of the violets birth,
By the primrose stars in the shadowy grass,
By the green leaves opening as I pass.

—*Mrs. Hemans.*—Voice of Spring.

All.—

Welcome Spring!—in sunshine clad
Well dost thou thy power display!
For Winter maketh the light heart sad,
And thou,—thou makest the sad heart gay.
—Longfellow.—Translation from the French.

Snow-Drop.—

I am a little snow-drop
"The morning star of flowers."
—Montgomery.—The Snow-drop.

Spring.—

Nor will I then thy modest grace forget,
Chaste Snow-Drop, venturous harbinger of Spring.
—Wordsworth.—To a Snow-Drop.

Violets.—

We are violets blue,
For our sweetness found
Careless in the mossy shades,
Looking on the ground.
Love's dropp'd eyelids and a kiss,—
Such our breath and blueness is.
—Leigh Hunt.—Violets.

Spring.—

Welcome, maids of honor,
You doe bring
In the spring
And wait upon her.
—Herrick.—To Violets.

Dandelions.—

Upon a showery night and still,
Without a sound of warning,
A trooper band surprised the hill,
And held it in the morning.
You were not waked by bugle notes,
No cheer your dreams invaded,
And yet at dawn, our yellow coats
On the green slopes paraded.
—Helen Gray Cone.—The Dandelions.

Spring.—

Dear common flowers, that growest beside the way,
Fringing the dusty road with harmless gold
First pledge of blithesome May
Which children pluck, and, full of pride, uphold.
—Lowell.—To the Dandelion.

Primrose.—

Ring-ting! I am a little primrose,
A pale-yellow primrose blooming in the spring!
The stooping boughs above me,
The wandering bee to love me,
The fern and moss to creep across,
And the elm-tree for my ring!
—Wm. Allingham.

Spring.—

Welcome, pale primrose! starting up between
Dead matted leaves of ash and oak that strew
The every lawn; the wood, and spinney through.
'Mid creeping moss and ivy's darker green;
How much thy presence beautifies the ground!

How sweet thy modest unaffected pride
Glow on the sunny bank and wood's warm side.

—John Clare.—The Primrose.

Hours.—

It is the season now to go
About the country high and low,
Among the lilacs hand in hand,
And two by two in fairy land.

—Robt. Louis Stevenson.—Underwoods.

Hiawatha's Canoe

For five boys; Hiawatha dressed in Indian costume, the
others carrying branches of the trees they represent, and
which they cause to move as indicated.

Hiawatha.—

"Give me of your bark, O Birch-Tree!
Of your yellow bark, O Birch-Tree
Growing by the rushing river,
Tall and stately in the valley!
I a light-canoe will build me,
Build a swift Cheemaun for sailing,
That shall float upon the river,
Like a yellow leaf in Autumn,
Like a yellow water-lily!
Lay aside your cloak, O Birch-Tree!
Lay aside your white-skin wrapper,
For the summer time is coming,
And the sun is warm in heaven,
And you need no white-skin wrapper!"
(And the tree with all its branches
Rustled in the breeze of morning,
Saying with a sigh of patience,)

Birch-Tree.—

"Take my cloak, O Hiawatha."

Hiawatha.—

"Give me of your boughs, O Cedar!
Of your strong and pliant-branches,
My canoe to make more steady,
Make more strong and firm beneath me!"
(Through the summit of the Cedar
Went a sound, a cry of horror,
Went a murmur of resistance;
But it whispered, bending downward)

Cedar Tree.—

"Take my boughs, O Hiawatha!"

Hiawatha.—

"Give me of your roots, O Tamarack!
Of your fibrous roots, O Larch-Tree!
My canoe to bind together,
So to bind the ends together
That the water may not enter,
That the river may not wet me!"
(And the Larch, with all its fibres,
Shivered in the air of morning,
Touched his forehead with its tassels,
Said with one long sigh of sorrow)

Tamarack.—

"Take them all, O Hiawatha!"

Hiawatha.—

"Give me of your balm, O Fir-Tree!
Of your balsam and your resin,
So to close the seams together
That the water may not enter,
That the river may not wet me!"
(And the Fir-Tree, tall and sombre,
Sobbed through all its robes of darkness,
Rattled like a shore with pebbles
Answered wailing, answered weeping.)

Fir-Tree.—

"Take my balm, O Hiawatha!"

—Adapted from Longfellow.

The Call of Spring

Far down below, in the dark, damp ground,
A little seed slept sound, so sound;
Far up above, in the open sky,
Grey clouds floated gracefully by.

Down from the grey clouds up in the blue,
A raindrop fell, and trickled through
The hard brown earth, until it found
The little seed, that slept so sound.

Then over its face the raindrops sped,
And the seed awoke, and stirred in its bed,
"Come little seed, 'tis time to sprout,
For summer is coming, without any doubt."

"And spring has sent me," the raindrop said,
"To call you forth from your little bed,"
Then the tiny sprout began to grow,
And a song in its heart to overflow.

To the beautiful world that was waiting above,
Filled with sunshine, beauty and love;
Hour, by hour, by night and day,
The little plant fought its upward way.

Eagerly stretching towards the light,
Forgot the rough way and darksome night;
At last it peeped the brown earth through,
Oh! the wonder that in it grew.

The sweet, soft air, and the song of the bird,
The voices of merry children heard,
With joy the little plant did bring,
His tribute of love to the beautiful spring.

—Selected.

Four quilts are ready to fold and spread
On Mother Earth's old trundle bed.
The first, a brown and white old thing,
She spreads on in the early spring.
The summer one is green and bright
With daisies nodding in the light.
And then when winds begin to blow,
She spreads a red quilt on, you know,
And sews it through with yellow thread.
And by and by, all in a night,
She spreads her quilt of snowy white.—Sel.

Guess the Names of the Islands

Guess the name of the islands where yellow birds sing,
The islands where ponies abound,
The islands where people are graciously and kind,
The islands where robbers are found.

The island of fur that is highly esteemed,
The island not known long ago,
The island from which we get heat, light and smoke.
The island of frost and of snow.

The island that's famed for its lake of hot pitch,
The island that likes to lap cream,
The island that's noted for exports of rum,
The island that dams a small stream.

The island where Bonaparte drew his last breath,
The island of soft, swampy ground,
The island that comes freshly coined from the mint,
The island that's south of its sound.

Guess the Names of the Fish

Guess the name of the fish with two heads but no tail,
The fish that is lacking in strength,
The fish that is useful to point out the way,
The fish that is one rod in length.

The fish that is something that happens by chance,
The fish that is pulverized chalk,
The fish that tastes best when 'tis cooked on a plank,
The fish that finds fault in its talk.

The fish that looks sullen and thrusts out its lips,
The fish by canary birds pecked,
The fish that in winter glides over the ice,
The fish by which warships are wrecked.

The fish that is travelled by those who pay toll,
The fish that is part of a shoe,
The fish of low spirits and greatly depressed,
The fish that's unable to chew.

Sir Henry Campbell-Bannerman is, at the age of seventy, virtually the chief executive of the British Empire. But if Sir Henry, when he was fifty-five, had applied to some boards of education we have heard about, for a position as superintendent or principal of schools, he would have been rejected as being too old. Yet at that age every man who has a sound constitution and is living the right kind of life should be in the prime and vigor of his manhood. Behind him are the varied and valuable experiences of a long life. He is not daunted by difficulties, for he has met and vanquished battalions of them. He is not unduly elated by victories nor depressed by defeats. He is fully equipped for the work before him, and is in every way qualified to be to the children and youth under his charge a guide, philosopher, and friend.—*The Western School Journal.*

Lines in Season

Two eyes and only one mouth have we.
The reason I think must be—
That we are not to talk about
Everything we see.

Two ears and only one mouth have we.
The reason is very clear—
That we are not to talk about
Everything we hear.—*Sel.*

"There is so much bad in the best of us,
And so much good in the worst of us,
That it scarcely behooves the most of us
To talk about the rest of us."—*Sel.*

Patience, oh Soul! from a little field
There cometh often a gracious yield.
—*Carlotta Perry.*

Hope is like a slender hare-bell,
All a-tremble from its birth;
Love is like a fragrant rose,
Cheering, blessing all the earth;
Faith is like a lily white,
High uplifted into light.
—*Christina Rosseti.* (Adapted).

Hurried results are worse than none. We must force
nothing but be partakers of the divine patience. If there
is one thing evident in the world's history, it is that God
hasteth not. All haste implies weakness. Time is as cheap
as space and matter.—*George MacDonald.*

Let us be content to work
To do the thing we can, and not presume
To fret because it's little.
—*Elizabeth Barrett Browning.*

Square thyself for use. A stone that may
Fit in the wall is not left by the way.
—*Persian Proverb.*

He that is good at making excuses is seldom good for
anything else.

Pussy Willow

In her dress of silver gray,
Comes the Pussy Willow gay,
Like a little Eskimo,
Clad in fur from tip to toe.

Only Mother Willow knows
How to make such suits as those,
How to fashion them with skill,
How to guard against a chill.

Did she live once long ago,
In the land of ice and snow?
Was it first by polar seas
That she made such coats as these?

Who can tell? We only know
Where our Pussy Willows grow
Fuzzy little friends that bring
Promise of the coming spring.
—*Elizabeth Foulke, in Ginn's Music Course.*

Tree Quotations From the Bible

I will plant in the wilderness the cedar tree, and the
myrtle, and the oil tree; I will set in the desert the fir tree,
and the pine and the box tree together.

They shall spring up as among the grass, as willows by
the water courses.

He heweth him down cedars, and taketh the cypress and
the oak, which he strengtheneth for himself among the
trees of the forest; he planteth an ash and the rain doth
nourish it.

All the trees of the field shall clap their hands. Instead
of the thorn shall come up the fir tree, and instead of the
brier shall come up the myrtle tree, and it shall be to the
Lord for a name!

Waste of Time.

To save time there is need of the utmost order.
I visited a school, not long since, where fully half of
the time was wasted, so it seemed to me. (1) The
classes had begun when a pupil entered late. The
teacher entered into a conversation as to why, and
it took fully five minutes, meanwhile a class of
eighteen were standing waiting—ninety minutes
were thus lost, besides the rest of the school stopped
studying to hear the upshot. (2) The class in
arithmetic was called and the teacher asked one to
clean off the board; the eraser was so full of dust
that he was directed to go out and clean it; this took
five minutes, at least. (3) The whole school was
stopped for writing; then the teacher distributed
the books. Some of these had been misplaced and
fully five of the twenty-five minutes were used up in
getting going; as there were thirty-eight in the
school there were 190 minutes wasted. Now this
was called a good teacher; he had taught seven
years; he was not conscious of the waste of time; he
made a business of doing it; he did it day by day.
Of course, there could not but results be accomplish-
ed, only a part of what might have been done.—
Exchange.

[It is hoped teachers who read the REVIEW do
better than that; but there may be cases where the
school time is wasted, in some instances like the
above, or in other ways. Have a little quiet exam-
ination of ways and means—EDITOR].

Andrew Lang includes "month" in his list of 60
English words that have no rhyme. He apparently
never has heard the old verse of the mathematical
student:

The Nth term and the [N+1] th
Have troubled my mind for many a month.
—*New York Tribune.*

The Efficient Teacher

The most efficient teacher is she who acquires the skill to reach the entire class as though they were one, making each pupil feel as though he were receiving the full measure of her instruction. The orator who wins has this ability. A man of platform genius will hold everyone of his audience more intently than as though he were facing him alone, for the hold he has of him will be enhanced by the magnetism of hundreds of electrified minds. Each keen listener multiplies the power of the orator, and the teacher should keep the highest standards before her. She must be to the class what the orator is to his audience, holding the influence of each pupil with more direct interest than she could if she had him before her alone. Her influence should be multiplied by the electrifying force of the entire class. Forgetting this, many teachers miss their golden opportunity by being too individual in their instruction, losing forty pupils, and leaving them free for mischief while dealing with the one. This may be needful at times, but the occasion is rare. Reach the one through the many is the highest principle for the schoolroom to adopt. It does not come as the attainment of a day, but it is sure to come to whoever will pay the price in brains and patience.—*American Primary Teacher.*

Some Language Methods

One of the best devices for teaching language to young children is a system of questions and answers. The questions may be written on the board and the answers given orally or written. Or the questions may be written on cards and the cards distributed to the children, who write the answers.

The questions should be simple, but require a complete statement in reply and correct use of tenses. Questions like the following are good:

How many windows are there in this room?

How many doors are there in this room?

In what part of the room is the teacher's desk?

How many children in your class?

What is your teacher's name?

Who was your last teacher?

What do you do at recess?

Where do you live?

What is your father's name?

How many brothers and sisters have you?

When was your last birthday?

How old were you then?

How many times were you absent this week?

What day is it?

What month is it?

What season is it?

What was the weather yesterday?

What do you think it will be tomorrow?

Did you see any birds on your way to school?

Can you tell their names?

What flowers did you see?

What flowers blossom at this season?

What trees bear fruit at this season?

What trees bear acorns?

What animals eat acorns?

What trees bear nuts?

Did you ever pick any nuts?

What kind of nuts do you like the best?

Where do they grow? etc., etc.

Popular Educator.

Writing of exercise for children in the February *Delineator*, Dr. Grace Peckham Murray says: "When children are old enough there is no better exercise than brisk walking. To be of benefit it should be brisk enough to bring the blood to the surface, and to expand the lungs. Running increases the endurance. Systematic running should enter more largely into the exercise for children. Running strengthens the heart, increases the breathing capacity and develops the muscles of the whole body. Like all violent exercise in which children indulge, it should be taken under the supervision of a teacher to avoid overdoing.

"An ideal way for children to pass the summer is in camps under the judicious care of a teacher and guide who can enter into the games and feelings of the boys and girls. I believe in the same education in these matters for girls as for boys. They can then become acquainted with woodcraft, botany and geology and increase their health by tramps and explorations. The primitive which exists in all, whether of younger or older growth, has a chance to show itself, and it improves the health, for it does not do for children any more than for adults to be too civilized."

ANY subscriber having extra copies of the February and March numbers of the REVIEW will confer a favor by sending them to us.

I find each succeeding number of the REVIEW more helpful than the last.

B. G. O.

Review's Question Box

A. B.—Please solve the following, and what is the value of the dot in the first question?

Todhunter & Loney Algebra Page 124, Examples XLVII. Question 36; also

(3) Please give what you would consider (a) a correct definition of participles, gerund and verbal noun, and (b) how you would distinguish them in a sentence, (c) how would you parse each named above.

(4) What is the reaction when water is put on lime, and what gas is given off.

(1). Find the value of

$$\frac{1}{(x-1) \cdot x \cdot (x-1)} - \frac{1}{(x-1) \cdot x} + \frac{2}{(x-1)(x+1)} =$$

$$\frac{1 - (x+1) + 2x}{(x-1)(x+1)x} = \frac{1-x-1+2x}{x(x^2-1)} =$$

$$\frac{x}{(x^2-1)x} = \frac{1}{x^2-1} \text{ Ans.}$$

The dot is used to express multiplication by many mathematicians. It is not needful in this question, but is especially useful for the sake of brevity between numbers. (See page 345, paragraph 444).

(2). Find the value of

$$\frac{a x^m - b x^m + 1}{a^2 b x - b^2 x^3} = \frac{x^m(a-bx)}{bx(a^2 - b^2 x^2)} = \frac{x^m(a-bx)}{bx(a-bx)(a+bx)} =$$

$$\frac{x^m}{bx(a+bx)}$$

Divide by x in both numerator and denominator, since x^1 is less than x^m if m is an integer.

therefore $\frac{x^m}{bx(a+bx)} = \frac{x^{m-1}}{b(a+bx)}$ Ans.

(3). Any good grammar will answer your question much more fully than our space will permit. We can send you one if you desire.

(4). $\text{Ca O} + \text{H}_2 \text{O} = \text{Ca H}_2 \text{O}_2$. That is, when water is poured on quicklime (Ca O) the product is slaked lime. No gas is given off. The heat is so great when the reaction takes place that a portion of the water is converted into steam with which the fumes of the slaked lime mingle.

X. Y. Z.—“Will” used with the first person denotes determination and “shall” denotes futurity. There is a lesson in the new Nova Scotia Reader which seems to contradict that. On page 44 of the No. 6 reader Sir Guyon says to Mammon after he is determined not to take the latter's treasures, “I shall not.” Should it not be “I will not?”

I have not the Nova Scotia Reader, but as I cannot find the words quoted in the poem referred to (Spenser's “Faerie Queene,” Bk. II. Canto VII), I conclude that the reader gives a summary or a paraphrase of the passage. The words “I shall not” may perhaps mean “I do not intend to.”

H. C. C.

L. S.—A subscriber would like to know where the quotations: “the long gray fields at night,” and “the dawn comes up like thunder,” which are given on page 216 of the February REVIEW, may be found.

The second quotation is found in Kipling's poem “Mandalay.” The first perhaps refers to rice fields. It may be from Kipling. Can any reader tell where it is found?

W. M.—Draw an outline showing the (a) grouping of the land masses of the earth (b) the *zone of fracture* and explain the latter fully.

It is not necessary to print the map, if it is described so that I can understand it.

(a.) That is very well shown in a map of the eastern and western hemispheres, divided by the twentieth meridian.

(b.) The term “zone of fracture” is sometimes used to mean the outside layer of the earth's crust, extending from the surface to a depth of about a mile, in which the rocks are of such a character that the pressure from within has simply fractured them. But in the question quoted the term is doubtless applied to the continuous chains of mountains extending from Patagonia to Alaska, and from the North of Spain to the Malay Peninsula, which ranges were formed largely if not mainly by the upthrust of igneous matter through the lines of fracture.

H. C. C.

Our school is a country one and we are fortunate in having large grounds but unfortunate in the fact that the school board does not pay for the care of them. After many years of neglect we made a start in beautifying our surroundings. One-half the grounds were given to the girls, the other half to the boys. Then prizes for the best looking side were offered. Should the girls win, a chair swing was to be placed on their side; if the boys were successful, baseball bat, and catcher's glove became theirs. Hours of patient toil and numerous gifts of plants, shrubs, trees, and grass seeds have worked wonders.—Sel.

The examiner in drawing calmly and without suspicion wrote the following question: Which do you consider of greater practical importance to your pupils in their drawing, rapidity or delicacy? and gasped in amazement when he read the answer:

“I think for practical purposes rapidity is the better, provided of course that the drawing is not too indelicate.”

Three Little Trees.

[Recitation for a tiny girl. Three other children stand near—as the trees—laughing, whispering, telling secrets, clapping hands, etc., in pretty pantomime].

SENT BY MISS SADIE FOSTER, UPPER REXTON, N. B.

Way out in the orchard, in sunshine and breeze,
A-laughing and whispering, grew three little trees.
And one was a plum tree, and one was a pear,
And one was a rosy-cheeked apple tree rare.
A dear little secret, as sweet as could be,
The breeze told one day to the glad apple tree.
She rustled her little green leaves all about,
And smiled at the plum, and the secret was out.
The plum told, in whispers, the pear by the gate,
And she told it to me, so you see it came straight.
The breeze told the apple, the apple the plum,
The plum told the pear, "Robin Redbreast, has come!"
And out in the orchard, they danced in the breeze,
And clapped their hands softly, these three little trees.

Current Events.

Forty years growth of the British Empire has shown an increase of area from eight and a half million to nearly twelve million square miles, and an increase of population from two hundred and fifty millions to four hundred millions.

The Prince and Princess of Wales have completed a five months tour of India, and are returning by way of Egypt.

The British troops that now occupy the fortress at Esquimaux, the last British garrison in Canada, will be withdrawn in May. A Canadian force will take possession when the British troops vacate.

In February, a company of native troops was massacred by native insurgents in Northern Nigeria. A British force, with the help of loyal chiefs, has crushed the revolt, the insurgent leader and some of his followers having been killed in battle.

In Russia there are extensive farms on which nothing else is grown but sunflowers. The seeds are used for food, and the oil obtained from the crushed seeds is used in cooking.

The bad feeling that arose between Austria and Serbia over a proposed commercial union of the latter country with Bulgaria has been allayed, and friendly relations are restored.

Hon. Duncan Cameron Fraser, judge of the Supreme Court of Canada, has been appointed Governor of Nova Scotia, the office having become vacant by the sudden death of Governor Jones.

The foreign trade of Canada is now three times as great as that of the United States in proportion to population.

The new Russian parliament will consist of two chambers, the upper house, known as the Council of the Empire, to consist of an equal number of elected members and members nominated by the Emperor, and the lower house, or National Assembly, to be wholly elective. The two houses will have equal legislative powers, and only bills passed by both may be presented for the Emperor's

sanction. The representative members of the Council of the Empire are to be chosen by the local representative assemblies called zemstvos, by the nobility and clergy, and by the universities and chambers of commerce; and there will be also members elected by the landed proprietors of Poland. All members must be forty years of age, and must be graduates of some college. Its sessions and those of the National Assembly are to be public. There is to be a ministry responsible only to the Emperor, but the ministers are eligible as members of the lower house. Russian statesmen, in devising this scheme, have had the advantage of a knowledge of representative governments in all parts of the world; but Russian peasants and artisans have yet to prove that they are fit to govern themselves, and the members of the old governing classes are very naturally afraid to trust them.

It is expected that the railway across the Sahara, which is to unite Oran in Algeria with Timbucto, will be completed before the end of the year. A part of it is already in operation, and the Sahara Desert has now become a favorite winter resort, where good hotels can be found along the line of the railway.

Within a very short time steam is to be abolished as the motive power on all railroads in Switzerland. Waterfalls will supply the necessary power to run both freight and passenger cars by electricity.

It is proposed to build a new Canadian railway from the eastern shore of Lake Huron to Montreal, on which electric motor engines will be the motive power. The object of the line, which will be some six hundred and sixty miles in length, is to keep within Canadian territory as much as possible of the grain carrying trade which now goes to the United States because Canadian lines are unable to handle it.

A severe press censorship has prevented details of the insurrection in Uruguay from reaching the general public, but it is now reported that quiet has been restored.

The Queen of the Netherlands is paying for concerts given in the slums of the Hague, at which only the poorest people are allowed to be present.

A recent French traveller has found that the Sahara, viewed as a desert, is much less extensive than has been generally supposed. He found a great steppe region lying south of the desert, and finally merging into the Sudan, which, though now uninhabited, has at one time supported a very large population. Centuries must have passed since increasing drought drove its inhabitants southward to the Sudan region; but a rain belt is again creeping up from the south, extending farther and farther into the desert, and within this belt grasses have appeared and animal life is abundant. In Algeria and in Upper Egypt, increasing drought has followed the cutting away of forests within the last hundred years, while, it appears, increasing rainfall has been restoring to fertility this great Saharian table-land but a few hundred miles distant.

The famine in Japan continues, and must continue until this year's crop is harvested. The people of Japan who gave so willingly to the support of the war have little left to give to their starving compatriots, and there is need

of all the help that has been sent or will be sent from Canada and other lands.

Two great turbine ships for the Cunard Line, one now building in Scotland and one in England, will soon be launched, and will be the largest and fastest passenger ships in the world. One hundred and ninety-two furnaces will consume the fuel to drive one of these ships at a speed of thirty miles an hour, and the ocean voyage will be shortened to four days from New York to Queenstown, if present expectations can be realized.

The Moroccan conference is still in session, with hopes of an ultimate agreement that will provide for the control of Moroccan affairs without endangering the peace of Europe.

Ras Makonnen is dead. He was the strongest and best known of the subordinate rulers of Abyssinia, and the probable successor of King Menelek.

Chinese unrest is still a source of anxiety to all the western world. The feeling against foreigners extends to hatred of the ruling dynasty, for the Manchu rulers have always been regarded as foreigners by the Chinese proper since they first came as conquerors in 1644. Only their good government, according to Chinese standards, has enabled them to keep the throne.

The King's nephew, Prince Arthur of Connaught, passing through Canada on his return from Japan, has now begun a six weeks' tour of the Dominion. He will be in the Atlantic Provinces at the end of this month.

There is still fierce fighting in the Philippines. Like the Dutch war against the natives of Sumatra, the war of the United States forces against their unwilling Malay subjects seems to be endless. Complete subjugation by force is impossible, owing to the nature of the country, and peace without it is very improbable.

School and College.

Dr. Trotter, the energetic president of Acadia University, has secured from Andrew Carnegie the promise of a gift of \$30,000, for the erection of a new science building. Whenever the one hundred thousand dollars contributed by the people towards the second forward movement is in hand, in the form of "cash or realizable securities," Mr. Carnegie will make good his promise. This with the \$100,000 to be paid by Rockefeller, as a supplement to the people's contribution, should place Acadia in a good financial position. Dr. Trotter visited New York in May last and preferred his request, with the consent of the Rockefellers, to the secretary of Mr. Carnegie. That this was not granted until ten months after may give some idea of the number of similar requests that had to be passed upon in the intervening time.

Miss Muriel Carr, daughter of Mrs. John deSoyres, of St. John, N. B., has recently won a scholarship at Radcliffe Ladies' College, Cambridge, Mass., which entitles her to a course of study at an English, German or French university. Miss Carr's choice will probably be Oxford, where she will have an opportunity to complete a course of study that has been unusually brilliant.

Mr. N. H. Gardner, of the Halifax mechanic science school, has tendered his resignation to take effect on May 1st. Mr. Chas. W. Parker, who for two years has been principal of the Granville Ferry schools, N. S., where he

carried on a class of card-board construction work, has been appointed by the board in Mr. Gardner's place.

Miss Margaret Kerr of Bocabec, Charlotte County, has been appointed to a scholarship at Guelph, on the ansomination of Inspector Carter.

Book Reviews

MECHANICAL DRAWING. By S. A. Morton M. A. Teacher of Mathematics in Halifax Academy. Cloth. Pages 110. T. C. Allen & Company, Halifax, N. S.

This excellent little manual is divided into two parts—part one being intended for grades seven and eight, and parts two for grades nine and ten, while a chapter is added for the use of manual training students only. The constructions are of an elementary nature and are derived chiefly from the first book of Euclid. The aim of the book is thoroughly practical, being designed to serve as an introduction to the study of geometry and manual training exercises.

THE NEW PUBLIC SCHOOL DRAWING COURSE for Canadian Schools. Books 1 and 2. Price 10c. each postpaid. The Canada Publishing Company, Toronto.

The models in these books are such as any pupil in the intermediate grades should be able to study and then form outlines of similar objects that have come under his own observation. This is the object of the books,—not for the pupil to copy the model drawings, but to use them intelligently so as to be able to outline correctly the things that he sees like them. If used in this way the books cannot fail with a judicious teacher to lay a good foundation in drawing.

HOW WE ARE SHELTERED: A Geographical Reader. By J. F. Chamberlain, Ed. B., S. B., State Normal School, Los Angeles, Cal. Cloth. Pages 184. Price 40 cents. The Macmillan Company, New York. G. N. Morang & Co., Toronto.

The author very properly takes his starting point in the study of geography from the home surroundings and relations. He shows in a series of lessons the homes of different peoples and how they are constructed, how food and clothing are obtained, with the incidental features of communication and transportation. Thus the child is taught how his own welfare and happiness depend on the labour and thought of others, and he realizes that he in turn should contribute to the benefit of those about him,—thus making the study of geography an aid to the formation of character. The book is attractively illustrated.

PRACTICAL AND THEORETICAL GEOMETRY. Part II. By A. H. McDougall, B. A., Principal of the Ottawa Collegiate Institute. Cloth. Pages 154. Price 50 cents. The Copp Clark Company, Toronto.

This is an excellent supplement to the introductory course in geometry given in part I. It is intended for high schools and academies. The same accuracy and thoroughness characterizes its demonstrations and experimental work as in Part I. The author appears to have a genius for clearness and directness of expression; and the discrimination he has shown in the selection and working up of his material cannot fail to be appreciated by teachers and students.

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BRYANT'S POEMS. Edited with introduction and notes by J. H. Castlemain, A. M. Cloth. Pages 238. Price 25 cents. The Macmillan Company, New York. G. N. Morang & Co., Toronto.

This is one of the volumes of the neat pocket series of English classics that these firms are publishing. The introduction contains a life sketch of Bryant and an estimate of his works. The notes are full but many of them deal in explanations that need not be explained.

Blackie's *Model Arithmetics*, book 5, price 3d. and the *Teacher's Blackboard Arithmetic*, price 1s. 6d., have the currency in pounds, shillings and pence. A good feature in each is the placing of figures in large clear type. Blackie and Son, London.

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THE EDUCATIONAL INSTITUTE OF NEW BRUNSWICK.

The Executive Committee of the Educational Institute met at Fredericton during the Christmas vacation and arranged an interesting programme for the next meeting of the Institute. A number of the leading teachers of the Province will read papers or deliver addresses upon live educational questions. Prof. Jas. W. Robertson, who has taken so much interest in public education in this Province, has promised to speak before the Institute or to send a representative from Macdonald College, St. Anne de Bellevue, of which institution he is manager.

The Institute will meet at Chatham on June 27th.

Dr. Cox, who is chairman of the local committee, will see that all necessary arrangements are made for the entertainment of the members of the Institute.

A committee has been appointed to arrange with the authorities of the Intercolonial Railway for the transportation of teachers at the most favorable rates.

JOHN BRITTAIN, Secretary Institute.

America; Sir Thomas More's Utopia; Macaulay's Third Chapter of his History of England. These are convenient editions in cloth of English classics sold for the low price of sixpence each, and are useful to pick up and read during occasional spare moments. Blackie & Son, London.

Blackie's *Latin Texts* have been designed especially for schools. They are without vocabularies, but each has a very useful introduction dealing with the subject of the book and the author and giving select critical notes on the early MSS., quantity, versification, favorite language devices of the author, etc. The plan is as excellent as in that of the other "Little Classics" published by Blackie—low price, convenience, and excellence of text being the chief features. The following among others previously noted in the REVIEW have been issued: Virgil's Aeneid, books 1, 2, 3, 4; Iliad Latina (a metrical summary of Homer's Iliad); Cæsar's Gallic War, books 5 and 6; Livy, book 6. The price of the above is 6d. each, except the last which is 8d. Blackie & Son, London.

Sir Walter Scott's *The Abbot* and Charles Dickens's *Barnaby Rudge*, edited for schools with introduction and notes. Cloth. Pages 471 and 654. Price 2s. and 2s. 6d. Adam and Charles Black, London. The introduction in

each case is scholarly and presents a sketch of the author and a discriminating review of his works. The notes, and the glossary added to *The Abbot*, will prove very serviceable to the student.

Recent Magazines.

"The Canadian Voice," by Jean Graham in the March *Canadian Magazine*, reminds one that some Canadians at least need to reform their vocal expression; but "the women of the Maritime Provinces, have the most pleasing voices heard in our broad Dominion. The voice of the Ontario woman is usually heavy and squeaky, and the voice of Manitoba is—well, it had better not be described....in British Columbia one hears softer accents again."

In Littell's *Living Age* for March 24, there is a timely article on A Great Moral Upheaval in America, quoted from the *Nineteenth Century and After*. The writer referring to the relations between the English and American nations say that the duty of the latter is, "to know our kinsmen better, to study their ways closely, and form an accurate conception of that which they have done and are still doing."

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OMISSION

In the Journal of Education of Nova Scotia,
October, 1905, page 187, Prescription,
for Grade XI.

By the printer's mistake there has been omitted from the prescriptions for Grade XI in the October JOURNAL OF EDUCATION for 1905, on page 187, the following prescription which is correct as published in the April edition preceding

"PHYSICS.--11: As in Gage's Introduction to Physical Science."

Practical Mathematics should be numbered respectively 12 and 13.

Education Office, Halifax, N. S., Jan. 27, '06. A. H. MacKAY, Supt. of Education.

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