

# THE EDUCATIONAL REVIEW.

FOR THE ATLANTIC PROVINCES OF CANADA.

VOL. XVI. No. 11.

ST. JOHN, N. B., APRIL, 1903

WHOLE NUMBER, 191.

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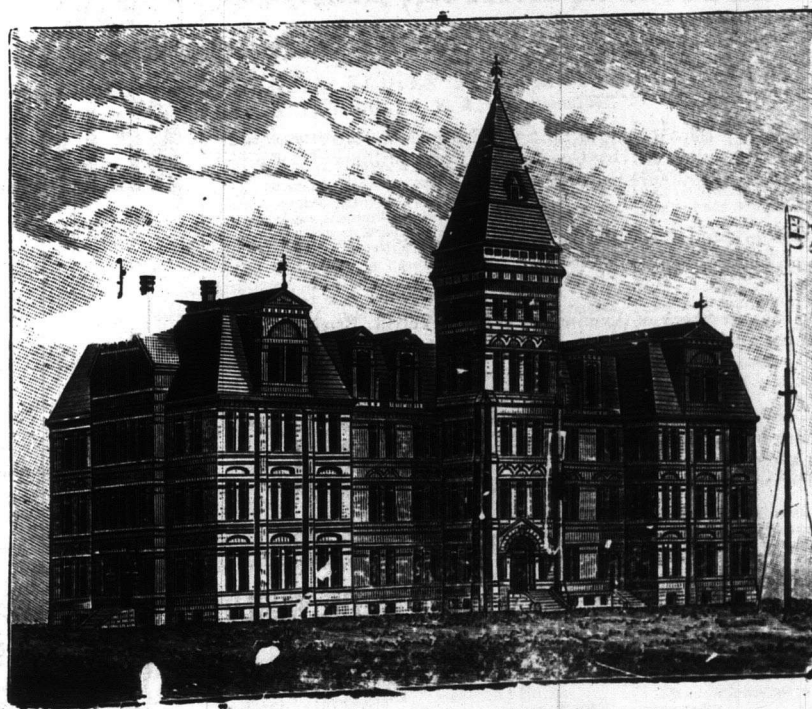
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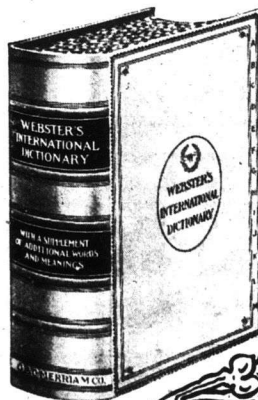
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G. U. HAY,  
Editor for New Brunswick.

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### Always Read this Notice.

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EDUCATIONAL REVIEW,  
St. John, N. B.

THE Digby and Annapolis Counties' Teachers' Institute will meet at Weymouth Bridge, N. S., on the 7th and 8th of May.

A CORRESPONDENT very wisely calls the attention of managing committees of teachers' institutes to the desirability of having fewer papers, thus allowing more time for discussion.

THE word "Secretary," by derivation and general consent, means a writer, but Dr. Inch in his report tells us that there are secretaries of school trustees in New Brunswick who cannot write their own names.

THE Dominion Educational Association meets at Winnipeg, July 8—11. Dr. D. J. Goggin, of Toronto, is the president, and there is an active local committee making preparations for the meeting. The details of the meeting and travelling rates should be announced as soon as possible.

THE earlier numbers of the REVIEW containing Mr. T. B. Kidner's articles on Cardboard Work have long since been exhausted and we cannot supply the frequent demands made for them. It may be stated that an illustrated booklet containing the articles has been suggested by one of our correspondents. The great merit of Mr. Kidner's articles is that they show teachers who have not attended manual training courses how to teach this subject.

IN AN article in this number on teaching botany Dr. Waddell has some good suggestions to offer to that large class of teachers who know little or nothing of the subject. The advice given by Dr. Waddell is excellent,—that the teacher go into the work as a co-student with his pupils. There is no better way, provided that the teacher means work, and goes at it with the determination, as the older and riper student, to overcome the obstacles that lie in the way. Facts gleaned from text books about plants are small matters; the terminology of botany is a small matter; to give the children an interest in this and other nature subjects is everything; and to guide them gradually to exact observation and reasoning—the teacher always first, with the scholars a good second—is inspiring work. Try it. It may solve problems of attendance, how to gain attention, discipline, even the much vexed question how to increase salaries. Are you one who has said "I hate botany"? And have you taught your pupils to hate it too? If so, read Dr. Waddell's paper. Call it plant-study or plant-quest if you like. Examine your whole method of presenting nature-study. You may have had none; if not, perhaps, so much the better. Make a fresh start.

## A TRIBUTE.

There are some lives, so rich in their influence and the legacy they leave us that we are thankful that they lived; and we go on our way strengthened to do and to endure because of the bright example which they gave. Such a one was that of I. Allen Jack, the late recorder of the city of St. John, who passed into rest on Palm Sunday, April 5th, after an illness of ten years, during nearly eight of which he had never left his room. Possessed of rare intellectual gifts, he had also that faculty of clear perception which enabled him to grasp intuitively the bearings of every question he considered. The meanings of Nature and literature were revealed to him as to few. For the one he had that loving and reverent admiration, that sympathy with and nearness to her so characteristic of Thoreau; for the other he had a keen appreciation, a fondness for the old masters of English and classic literatures and a rare insight into their meaning. Like Thoreau, too, he believed that Nature is the fountain of inspiration to literature. With such attributes of mind, aided by a scholarly training, broad sympathies, and a genial humour, he wrote with a charm and vividness that make many of his writings worthy of a place in our literature.

Descended from an old Scottish and Loyalist stock, he had an intense love for British institutions and for the city of St. John, which gave him birth, and whose best interests he had at heart. In the sterling truth of the man, in his large hearted desires to further the happiness of his fellow citizens and cause them to take pride in their city and its adornment, we seemed to see one of the best of those Loyalist lives being lived over again.

His bright mind retained its clearness and vigour almost to the last, amid such sufferings as rarely fall to the lot of man. Those who saw him suffer knew that a soul was being refined and was drawing nearer to God with every breath he drew.

A LADY in Ontario writes: I am very much pleased with the appearance and contents of your volume of Canadian History Readings which has just come to hand. It should be in the hands of every school boy and girl. I have recommended it to Mr. M——, head master of the high school here, and have sent him your address.

I AM happy to renew my subscription for another year. I enjoy the REVIEW, and it is helpful to me in my work.—J. J. G.

## EDUCATIONAL REPORTS.

The reports of the superintendents of education for Nova Scotia, New Brunswick and Prince Edward Island have been received. It is not possible to deal with these in the present number of the REVIEW with any degree of fulness, but a few of the more important points in each may be noted.

Dr. Inch holds that it is the spirit of the school law that the rich shall contribute of their abundance to help educate their poorer fellow-citizens, and urges, as he did in his report three years ago, that the county-fund be increased from thirty cents a head to forty or fifty cents. He strongly advocates parish instead of district school boards, claiming that a wider choice of more intelligent and efficient trustees would lead to better administration of the school law, better salaries to teachers, more equal distribution of school burdens, and less friction and bitterness in the management of school affairs.

Dr. Inch recommends the appointment of a manual training director for the Provincial Normal School, and would like to see a chair of Agricultural Chemistry founded, in the University, and a School of Forestry and Mining for the Atlantic provinces. These recommendations should appeal strongly to all who favour stimulating through our schools the industrial development of the province. But with Nova Scotia well advanced in its School of Mining, should not New Brunswick devote its energies to the establishment of a School of Forestry in the University?

The report of Dr. Mackay also deals with district school boards in Nova Scotia, intimating that they are merely a survival of a once useful organ in the educational economy, and have now by changed conditions become somewhat of a menace to the healthy working of the educational system.

Dr. Mackay congratulates the province on the fact that the number of trained teachers has increased in ten years from 17 to 42 per cent.; and intimates that before long one year at the Normal School will be compulsory for the lower grades of license and two years for the higher grades.

In manual training Nova Scotia takes the lead in Canada. There are now eight Mechanic Science schools and five Domestic Science schools. The government grant is generous—a maximum of \$600 to each section.

Dr. Anderson points out serious faults in regard to light and ventilation in the school rooms of Charlottetown and Summerside, and refers to conditions for primary schools in one or two buildings in

Charlottetown that should not be suffered to exist. Dr. Anderson refers with gratification to the improvement in school buildings and surroundings in several sections of Prince Edward Island, notably in Queens County; but he deplors the fact that over one-third of the children of school age in the island are either rarely at school or entirely absent.

In all the reports there is a note of regret over the meagre salaries paid to teachers, and the effect that this parsimony is already having in the deterioration of schools by the withdrawal of trained and competent teachers. In Nova Scotia last year there was a decrease in the number of male teachers of fifty-five, probably due to scanty remuneration; and there was a corresponding increase—now four-fifths of the total number—in female teachers, many of them untrained. In New Brunswick there were fewer schools in operation last year than for several years owing to the scarcity of teachers, many schools being closed on that account. In Prince Edward Island thirty-four men receive \$180, and 46 women \$130 as their yearly salary as teachers.

These facts which are gleaned from a hasty perusal of these reports are somewhat depressing. The outlook is certainly not encouraging in some directions; but if there is to be a thorough awakening of the public conscience leading to a better treatment of teachers and a more liberal administration of educational affairs it is well to speak out. This has been done, honestly and judiciously, in the several reports.

#### ARBOR DAY.

Arrange a programme for the day. Invite the friends of the school to be present. Spend the morning in clearing up the school grounds, planting trees, shrubbery, and in planting seeds in the flower-beds which have been laid out beforehand. Ask the parents to contribute a basket-dinner so that all may dine together on the school grounds. The interior of the schoolroom should be cleaned beforehand and decorated with pictures of trees, flowers, real flowers in pots and other available good material.

In the afternoon a programme of music, recitations, readings and speeches may be carried out.

Enlist the assistance of the children in all that is done. They may be formed into groups or committees to do special parts of the work. One group may bring flowers and pictures for decoration; another may arrange the music for the programme; another obtain trees, shrubs and seeds for planting.

Do not plant trees in a row. They are never so planted in the woods. Arrange them as you have seen on the edge of a grove where trees and small shrubbery may alternate, the latter forming a fringe on the border of the trees. Shrubby should be planted so as to surround and screen the outbuildings near the school. If there is a fence or wood-house on the school grounds vines should be planted to train over it.

If you formed a plan and laid out the school grounds as recommended in the REVIEW last autumn, you can proceed more directly and systematically with your work now. If this was not done, your first work in preparation for Arbor Day will be to make a plan of your grounds, and put on this plan the school house and garden plot, the spot where every tree and bit of shrubbery is to go, and note whatever else is to be done on the grounds. Let the children make the plan under your direction, and consult them on every detail that is to be carried out.

Do not plant many trees. One tree that will have a chance to grow and form a shade is better than a dozen half starved ones crowded too close together. An oak, white or red maple, or elm, will grow quickly on fairly good ground, not too dry. Let the chief planting be in shrubbery, and some of our wild shrubs, such as the Canadian holly, wild rose, elder, red ozier dogwood, sumach, high bush cranberry, with a few small pines and other evergreens will grow well and prove very ornamental.

Do not attempt too much at once, except to make a good plan, and try during this and succeeding seasons to fill it in. Remember that transplanting under proper conditions may be done at any time during the spring and early summer if plants be taken up with plenty of earth attached so that the roots will not be exposed, care being taken to keep them moist after planting.

#### Influence of Arbor Day.

So, trained by Arbor Day, as the children cease to be children they will feel the spiritual and refining influence, the symbolic beauty of the trees. Like men, they begin tenderly and grow larger and larger, in greater strength, more deeply rooted, more widely spreading, stretching leafy boughs for birds to build in, shading the cattle that chew the cud and graze in peace, decking themselves in blossoms and ever-changing foliage, and murmuring with rustling music by day and night. The thoughtful youth will see a noble image of the strong man struggling with obstacles that he overcomes, in a

great tree wrestling mightily with the wintry gales, and extorting a glorious music from the storms it triumphantly defies.

Arbor Day will make the country visibly more beautiful every year. Every little community, every school district, will contribute to the good work. The school-house will gradually become an ornament, as it is already the great benefit of the village, and the children will be put in the way of living upon more friendly and intelligent terms with the bountiful nature which is so friendly to us.—*George William Curtis.*

Wonderful gifts are given us in the forests! In every tree he has made, our Father has put something for use and for delight, and in most of them, many things. We have the pine for health, and fragrance, for lofty music and noble suggestion; the fir and the spruce and the oak tree and the pine yet again to frame and finish and furnish our homes, to build our ships, to give us pulp for the pages of our newspapers and our books, and to make innumerable articles for use and convenience; the elm and the maple for grace and shade and comeliness, the birch and the beech, the ash and the willow and the poplar for similar uses, even in our northern lands. They give us gums and balms and homely medicines, and bark and resin and fuel; and we find them all good, as God did at the beginning.—*Selected.*

### NATURE STUDY.

BY G. U. HAY.

Be kind to the birds. A friend tells me that he was once asked by an ornithologist in Boston to procure the nest of a myrtle-warbler, which is rarely found near that city. He went far into the woods, for this bird is shy when nesting time comes and seeks some quiet covert in the forest. At last he found a pretty little nest in a fir tree. He took out the eggs and packed them in cotton wool in a box. Next, he carefully separated the nest from the tree. While he was doing this, the little mother-bird was hovering over his hand, sometimes touching it with her wings, all the time uttering her pleading cries. His heart was touched. He put the nest back into its place, unpacked the eggs and put them carefully in it. Then he retired to some distance and watched. The bird came back to her nest and finding that all was right, quietly sat on her eggs again.

My friend also tells me that he once shot at a downy woodpecker. He wounded but did not kill the bird, and the poor little creature made frantic efforts to reach her nest which was found to be not

far off, in the hollow of a dead tree. But she was too badly hurt to get to it, and had to be killed to put her out of misery. The heart of the man was touched as he looked upon the devotion of the mother-bird, and he resolved to kill no more birds nor take any more nests for specimens while the birds were in possession.

My friend, who I hope will some day tell in his own words bird stories to readers of the REVIEW, says that he keeps a "roll-call" at the time of migration exactly as the teacher keeps a register. He puts down the names of his birds as he sees them, just as a teacher writes down the names of new pupils when they come to school. Then he has his "daily attendance" columns, in which a cross is placed if the bird is "present" while he is on his rambles for that day. Thus the "roll-call" shows at the end of the season the time of the first and last appearance of each bird as well as the "total days' attendance." Let your pupils try keeping a "roll-call" of birds, and another for the coming into bloom of the flowers and the time of their staying in bloom. The latter, if kept up from year to year, will show some interesting facts about each season and its flowers.

My friend also gives me an interesting point about his observation of birds, which those would do well to note who send descriptions to the REVIEW for identification. If he catches a glimpse of a bird flitting about, he notes down exactly everything about its head. Then when the bird appears again, or another of the same species, he notes the breast; next the back; then the wings — one at a time until the observation is complete. He does not move about, for fear of disturbing and alarming his "little friends," but having chosen his position he keeps it, and the birds soon show the same curiosity to find out about him as he does to study them. In the bird season they usually flock around in such numbers as to bewilder him, and confuse his notes, did he try to make a complete description of one bird at once. But for a certain time, no matter how many birds come into view, he sees nothing but "heads;" then "breasts;" and so on until the list is complete. Then he takes a leisurely and satisfactory view of the whole bird, noting other points not before included, as well as the habits and songs.

### HINTS FOR PLANT WORK.

Are twigs alive? How do we know anything is alive when it is quiet? What is breathing? What do we breathe through? Do twigs breathe, and how? Search for breathing mouths. What do we breathe? How do plants get the moisture they breathe out?



Discovery of leaf scars; the old and new leaves; new leaves present but hiding; where are they hiding? Their food and when and how obtained.

Which wild plant blossoms first with us? Is it the mayflower or hepatica? The latter is not very common in these provinces. But before they come, and many other beautiful spring flowers that it will be time enough to mention next month, will you take a glance at the trees and shrubs and see what they are doing? If we do not visit them early and watch them closely we shall fail to get a glimpse of their simple and often beautiful flowers which come before the leaves. Why *before* the leaves? Notice the catkins of the alder. How rigid and stiff they are in this cold weather. Soon they will unbend and hang down in tassels, and you will be shaking them so that you may send word to Dr. Mackay just what time the first pollen is shed. Do you see on the same branch of the common alder some other very small upright catkins? They are now very dull looking, but soon they will turn bright red. What are they? They are the fertile catkins, containing cases (pistils) in which the seeds are to ripen after the pollen falls on them. The catkins containing the pollen (staminate) and the little catkins (pistillate) containing the tiny bodies that are to grow into seeds are both on the same tree in the alder. Are they in the willow? the birch? the hazel? the elm? the poplar? the bayberry? the butternut? the oak? the horn-beam? the beech?

How about the flowers of the maples? How many species of maple have we? Are the flowers of each species of the same kind? Watch them unfolding. What do you know of the early flowers of the cone-bearing trees?—the spruce? the hemlock? the fir? the pine? the cedar? the larch? Have you noticed the rich crimson hue of the flowers of the latter?

Have I said enough to get you interested in early spring buds and flowers? If so, go out; and the leafless woods will have a joy for you that they never had before. You will discover a new remedy to banish that "tired feeling" which the quack medicine man tells about but cannot cure.

#### THE HEAVENS IN APRIL.

There is no other season at which so many bright stars can be seen in our latitudes as at present. At 9 p. m. on the 15th Orion is almost due west, though very low down. His brightest star Rigel has already set, though the ruddy Betelgeuse still flares above. Aldebaran and the Pleiades shine on the right, while Sirius is on the left. Procyon is above the latter, rather more to the southward, and Castor and Pollux are above Orion, higher still. Capella lies in the Milky Way in the northwest. Regulus, with the attendant stars of the Lion, is almost due south, with Hydra below him and Ursa

Major above. Spica lies well down in the southeast, but is less conspicuous than Arcturus, which is higher up and farther north. Mars, which is about half way between Regulus and Spica, surpasses them both in brightness. Northeast of Arcturus, beyond Corona Borealis and Hercules, Vega is once more visible, a few degrees above the horizon.

Among the planets, Mercury is well placed for observation at the end of the month, near the Pleiades, setting after 8 p. m., and should be easily seen. Venus is evening star in Aries and Taurus, and is very conspicuous, remaining in sight till after 9 o'clock. Mars is in Virgo, just past opposition, visible all night, and by reason of his color and brightness, the most notable object in the midnight sky. Jupiter is morning star in Aquarius, rising at 3.30 a. m. on the 15th. Saturn is morning star in Sagittarius, rising rather more than an hour before Jupiter.

#### BIRD STUDY.

BY F. A. GOOD, WOODSTOCK.

Concluded from March.

Of magazines you have your choice of three: *Bird Lore*, edited by Chapman; *American Ornithology*, and *Birds and Nature*. Any of these should be preserved and bound and added to the school library. None of these are essential if you have a good text book. A good opera glass is a very great help, but you can possibly get along without it, though sometimes you will miss something by not having it.

Take a note book and pencil and write your descriptions on the spot. A little practice and you will know what items are necessary and what may be omitted. If you don't write your descriptions but trust to your memory you will find on looking at your key that you have just forgotten certain little things necessary for absolute identification.

To describe a bird, even one just seen, from memory, is a more difficult task than nearly anyone would suppose. Of course birds of all black or brown plumage are not referred to, but those of mixed colors, with shades running into one another. Ladies can do this best, having the color sense better cultivated. Take your note book afield with you—your text book is heavy, so leave it at home. Chapman goes so far as to say that no one ever sees correctly until he has attempted to describe.

Stuffed specimens are often to be had, and they are as useful as any. Specimens dead and alive will come in when once a good healthy interest is evoked. I have had them sent in from quite a distance for the purposes of identification. If beautiful or rare the specimen should, after the lesson, be sent to a taxidermist to be mounted for the school cabinet. Let it be well understood that not a single one is to be killed for examination. A scientist might be

justified in so doing, but if all the schools were to do the same it would cause great and unnecessary slaughter.

Now with specimen or description before you, the text book is appealed to for identification. Usually you will not have to use a key to find the family. The grotesque facial disc will disclose the owl, the key will instantly point out the species. The strong sharp bill, short neck and peculiar claws will proclaim the woodpecker. The key will do the rest. Water birds are readily resolved into families. Small birds with large, short, but bills evidently adapted to seed-eating, are likely to be sparrows or finches. Smaller and more graceful ones, highly colored and armed with tiny sharp bills, are likely to be warblers. When the specimen is available the teacher will, of course, by discreet questioning, cause the pupils to discover all these points for themselves.

Care must often be taken to read up two descriptions under one heading as the sexes so often differ greatly in appearance. The greater beauty is given to the males. This is not uniformly so. There are some startling inversions of the regular rules of bird economy. Usually the female is the housebuilder, housekeeper, guardian and teacher of the young. The mate is a casual assistant and protector, but his chief role is to pour forth his sweet strains of music and be as ornamental as possible. But not infrequently among some species the males build the nest, incubate if not lay the eggs, and teach the fledgelings. In many instances, as among the hawks, the females are much larger than the males.

Some one might ask what is the best time to begin this study. Chapman recommends that it be taken up first in winter because then there are fewer birds and the work consequently less discouraging, but such advice applies better to the latitude of New York than New Brunswick. Not only is the temperature much lower here, but the number of birds that stay here during winter is small compared to that State. Still we would recommend teachers to begin their own private work in winter if possible; but I think the best time to interest a class is during the great spring migration. It would not be wise for the teacher to go out to the woods with a class before he had previously gone over the same ground. Get the pupils to go on little excursions by themselves or in small companies and report. Thirty pairs of eyes can see much more than one.

It is often not advisable to take your whole school with you en masse. Near towns where trespassing is a common offense, owners of farm lands may resent pupils trooping through their meadows; woods and wild land may be too far. The river bank may be too wet. There will be some way of overcoming these adverse conditions. The writer has found the plan of letting each pupil make his own arrangements about his trip. They are sure enough to go—the boys anyway. Let them go by twos or threes as they choose.

Require accurate descriptions of birds discovered written out on a slip of paper, signed and dated. These should be handed to the teacher as soon as possible. They can be looked over at the teacher's leisure. Many will never be identified owing to meagreness or inaccuracy of details or more commonly owing to ignorance of colors and shades. Some descriptions will be very apparent; there will be problems difficult of solution. It will be seen that these are at the same time *color, language and memory lessons*.

I would recommend that there be some uniformity in pupils' descriptions by requiring them to mention first the size—relative size—not size in inches, unless the specimen can be measured; then general appearance or color; probability of its being a sparrow, warbler or wader; then the more prominent markings, and lastly smaller details and habits of flight, feeding and song. Be watchful at this stage or the humorously inclined will bring you in a vague description of a barnyard rooster. Leaving out one or two important details will sometimes make a description wonderfully puzzling. When these descriptions are finally deciphered and you feel quite sure of your bird, they should be read to the school and their opinion taken. Some may know it already. In any case turn up the description in the handbook and show them how well it tallies with the boys' work.

There is nothing very original or striking about this method, but it obviates the necessity of going with the pupils in a body and the results are very satisfactory. It also does away with a problem in discipline, for if you take all pupils with you, there are likely to be a few untamed ones who will just be spoiling to show that discipline has necessarily relaxed and they know it.

Again it saves time, for no time from school hours is taken by this method. The boys hunt up the birds while driving the cows or performing other duties. Saturday rambles are then less aimless, or possibly an evil aim is changed to a profitable one. He soon finds, too, that he has more to learn from a living bird than from a dead one, and respects bird life accordingly. As the motto of the Audubon society has it, "A bird in the bush is worth two in the hand."

Once started, the interest is more likely to increase than to die out. It may require farming for a short time, but in the spring, when the great bird migration takes place, some other lessons are likely to suffer. But the spring calls every living thing out and lessons suffer anyway. Every teacher knows that even with the fateful examinations near at hand, the pupils are less disposed to study than ever. If you can get some good work done then it is wise to do it, even if it does not count much in the examination.

Do not teach much bird life then during the winter. Drill deeply in mathematics, and save nature study and its attendant enthusiasm for the spring. It might be well once in a while to whet their appe-

tites for this knowledge. The arrival of bird papers, exhibiting bird pictures, Friday readings from such books as have already been spoken of, will serve the purpose.

The number of birds you will record during the year will depend upon your industry. You can easily identify over sixty. Chamberlain says that over three hundred birds have been recorded in our province; that 200 or more may truly be called New Brunswick birds. Many of the others are occasional visitants or stragglers from their true latitude. One hundred is pretty near the limit of our locality.

Once started, specimens will come from unexpected quarters. We have had brought in the bodies of dozens of birds, many of the less known like the beautiful Parula Warbler, Red-eyed Vireo, Cedar Waxwing, Sharp-shinned Hawk, Pied-billed Grebe, Little Acadian Owl—full grown and only 6 inches long—Purple Finch, Ruby-crowned Kinglet, a Murre, which had probably been taking a short cut across the province on its way south, Herons, a Bittern and a Pileated Woodpecker, and lastly the American Hawk Owl. We have reached the century mark but our list is very incomplete yet.

In closing let me say that if you teach at all, teach something about birds, because it is so easily accomplished, so fraught with pleasure. It often gives the pupil the first drink from the fountain of knowledge that has an inviting taste. You can often acquire an influence over the rougher element—get nearer, get better acquainted with all of your pupils by this means than by any other.

If you enjoy walking, fishing, hunting, bicycling keep your eye on the birds. If you have a kodak give the birds your attention by all means. There are scores of periodicals, which make quite a specialty of reproducing photographs of birds and their nests taken from nature. If botany is your hobby add bird study. It goes so well with it. There is a danger, however, of it causing you to neglect your first love. If you have literary talent and aspirations let the birds inspire you. If you have a genius for drawing portray the birds. Your interest may never die out; though you never quite accomplish what you set out to do. Indeed the future discoveries you may make adds quite the greatest interest to your researches.

Ornithology is yet in its infancy. The experts of New York and Cambridge cannot do work that must be done here. The fact that so many birds migrate make it the more necessary for co-operation. The life history of many of our common birds is still to be written and its biography must be the result of more than one man's industry.

When April, one day, was asked whether,  
She could make reliable weather,  
She laughed till she cried,  
And said, "Bless you, I've tried,  
But the things will get mixed up together."  
—Jesse McDermott.

## FURTHER NOTES ON THE TEACHING OF BOTANY.

BY JOHN WADDELL, D.SC.

In the January number of the EDUCATIONAL REVIEW I wrote an article dealing with the teaching of botany in our schools. I return to the subject because I am extremely anxious that an improvement should be made. I cannot claim to be perfectly self-forgetful and to be influenced solely and entirely by interest in the teachers and the schools. As examiner I find it much more agreeable to read over well written papers than poor ones, and it is much more pleasant to have to decide whether a paper is worth a mark of seventy or seventy-five per cent. or eighty or eighty-five per cent., rather than to decide whether the proper valuation is twenty or twenty-five per cent. Still the pleasing of an examiner is a comparatively unimportant matter, and the benefit that will accrue to the fifteen hundred examinees in botany each year, if they are properly trained, and if they make a proper use of their instruction, is something worth working for, and I hope that I may be of some use in promoting the study of botany in our schools.

Matthew Arnold says that it is a mistake to consider it incorrect to use the same word over and over again in an essay. If you have a word that exactly expresses a certain idea then you gain by always using that word to express that idea. If in this article I should chance to repeat ideas and words of the former article, I trust the reader will bear with me because I shall only do so if I consider the ideas of great importance and if I think the words suitable for expressing the idea.

My chief object in writing two articles rather than one is the better to reach the constituency for which I write. Some may see this article who have not seen the previous one. I have two chances of catching the eye of the reader whom I wish to influence. I may say that any one who is interested in this article and has not read the former one is advised to look it up, because the present is not just a repetition, but is intended to deal with a somewhat different aspect of the subject; and repetition is, as it were, incidental.

I dare say that one difficulty in our schools is that in a good many cases the teachers have rather hazy ideas about the subject of botany and feel that it is very irksome to be obliged to teach it. It must not be considered that I mean to put a slight upon the teachers. Botany has but lately been put upon the syllabus of examination, and a good many of the teachers never had any training in it. Even those who have been examined upon the subject have for the most part labored under the disadvantage of poor teaching and they may not have realized that they must do more for their pupils than was done for them.

Let me assume then that a teacher with practically no knowledge of botany finds himself or herself con-

fronted with the task of preparing pupils for an examination similar to that of grade IX in Nova Scotia.

It will be advisable to get as books for the teacher's use Spotton's High School Botany and Gray's "How Plants Grow," the former which is recommended by the department being specially important.

Most of us know very few of the wild flowers, naturally, and I think most of us would find it a very dreary business to gather a number of plants and endeavor to find out what they are by looking up in a book. But every one knows a buttercup, at all events, and a dandelion, and a strawberry, and a mayflower. In a sense the buttercup is the easiest flower to examine, but it may chance that some other flower is taken. If the buttercup happens to be the flower first examined a very good description is given in the earliest pages of Spotton, and the student teacher is advised to go over the description very carefully several times with the plant in hand until he feels that he has a pretty thorough knowledge of it. Then he might be able to teach it to his pupils even if he knows nothing more. Now I should advise a teacher, such as I have been considering, to admit very frankly to the pupils that he is a novice in the subject and is really studying along with them. It will get over the unpleasantness of endeavoring (probably without success) to hide his ignorance. Moreover it will add an interest of its own, which will help to make up for other disadvantages, for the pupil to know that he and the teacher are making investigations in a field new to both.

Let us suppose, however, that the first flower gathered and examined is the mayflower. On turning to the index one is referred to the proper page for the mayflower and one finds four lines of description. Nearly one line is taken up with the statement of a fact previously known to most Nova Scotians, "Flowers very fragrant. Dry woods in early spring." In addition it is learned that the botanical name is *Epigæa repens*. The flowers are said to be in small axillary clusters from scaly bracts. Leaves evergreen, rounded and heart-shaped, alternate, on slender petioles. Now in this description there are several words whose significance will probably be unknown. Such words are "axillary," "bracts," "petioles," perhaps also "scaly" and "alternate." But by reference to the index and glossary at the end of Part I of the book, such references will be given as will enable the reader to gain some idea of what is meant. It will be noticed that at the top of the page is the word Ericaceæ, and on looking one will find that this word is at the top of several pages preceding, and it will soon be discovered that the *Epigæa* is one of a large family or group of plants. In the edition which I have in my hand the description I have given above is on page 141. In Spotton's book the large groups or orders are divided into smaller groups, or genera, each numbered. The genera are taken up in turn afterwards. On

page 141, the word *Epigæa* is preceded by the figure 5, and on turning back to page 138 it will be found that a description of *Epigæa* is given in which facts not mentioned on page 141 are dwelt upon. The beginner may wonder why the whole description is not given in one place, but on page 138 the general characters of the genus *Epigæa* are given, on page 141 the special characters of the species *Epigæa repens* are set forth. It so happens that in this particular genus there is only one species of importance, but it will be seen that eight different species of *Vaccinium* belonging to the same order are described. In the description of *Epigæa* on page 138, more new words are met and more reference must be made to the glossary. Finally there will be more words to turn up when one goes over the description of the order on page 137.

Possibly two or three hours may be used up in this study, but by the time it is done some real information will be gained, not only of *Epigæa repens*, but of flowers and leaves in general. If Gray's "How Plants Grow" is looked at probably additional information may be obtained, and probably before the examination of this plant is completed it will be noted that the blueberry and lamb-kill, also common plants, are allied to it.

After a few of the common plants are gone over in this way it will be found that a very material progress has been made. When the teacher has studied out the thing for himself he can help the pupil to travel the same road. I suppose it must be assumed that the pupil has not so much time to spare, and not having so mature a mind as the teacher will need assistance. Perhaps the best way for the pupil is to be guided by the teacher in his observations, the book not being used by him in the earlier stages of his work at all events. But the pupils can bring plants and if they know the names they may be examined under guidance of the book. If the plants are not known some general observations may be made, possibly the natural order may be discovered, but I hardly think it is advisable to worry over unknown plants while there are known ones to examine. On this point some ardent botanists may disagree with me, and perhaps some educationists who are not very ardent botanists; but I think the average teacher will find it dreary work to take up an unknown plant and endeavor to identify it. When one becomes familiar with a good many plants one gets a taste for trying to hunt out unknown ones, but at the first, I should say, see if you cannot find some one to tell you the name of the plant and then examine it. Many of the most common flowers are weeds, and the farmers may happen to know the names. I may say that the book on agriculture, prescribed for grade X, contains a list of common weeds from which hints may possibly be obtained.

In this connection, I may mention that many, perhaps I should say most, of the candidates, appear not to understand what is meant by a weed. In the examination of 1902 a list of *noxious weeds* was asked for and the name of the natural order to which

each belonged. One would expect that at least the thistle and burdock would be given under the heading, but if I mistake not the mayflower, the violet, and the twin-flower were quite as frequently in the list. Occasionally the lilac and the apple were mentioned, and once the potato. One candidate, presumably the daughter of a smoker, had prominently in the list opium and tobacco. I trust that candidates will soon come to realize that practically a weed is a plant that we wish to keep out of our fields and gardens, and that usually we have some difficulty in getting rid of. The fact that there is this difficulty means that the plants are common, and being common they should be observed.

I have suggested one method of starting to teach the subject. I do not say it is the best method. I do not say that I should recommend it to the teacher who starts out with a good knowledge of the subject. I shall not feel at all aggrieved if some teacher of botany who has had success in teaching the subject writes an article setting forth another method, claiming for it great superiority over the one I suggest. But I wish it to be noted that I write for the teacher who finds himself required to teach botany and feels that he is ignorant of the subject and at a loss how to begin to study and to teach. Any method is better than no method, and though I do not contend that the method I have suggested above is the best method, I think it a good one, and if this article should prove an incentive to others to write on the subject, I feel sure that the educational department will be pleased, and I shall be glad that I have been useful even if it should turn out that my only merit is that I have aroused some one else to help forward the teachers and students of botany.

### STUDIES IN ENGLISH LITERATURE.

BY ELEANOR ROBINSON.

SANTA FILOMENA, N. B. READER III. P. 114.

Florence Nightingale was born at Florence in 1820. She was well fitted for the great work she undertook for the soldiers during the Crimean war, as she had studied the workings of hospitals in England and abroad, and especially at the Institution for the Training of Deaconesses at Kaisersweith.

In the great hospital for the soldiers at Scutari, opposite Constantinople, she had the most dangerous cases placed in a room next her own, so that she might care for them herself. It is said that the story of the sick men kissing her shadow as she went the rounds of the wards at night is no poet's fancy, but literally true. The public recognized her services by a testimonial of £50,000, which she used to establish a training school for nurses.

Longfellow's poem was printed in the first number of the *Atlantic Monthly*. The poet writes in his diary not long afterwards, that he has received a

letter from Miss Nightingale's sister thanking him for his tribute and enclosing a photograph of her sister, and two drawings, one of "the lady with a lamp," and the other of the "symbolic lily." The last verse of the poem, which is not given in the reader, runs thus:—

"Nor ever shall be wanting here  
The palm, the lily and the spear,  
The symbols that of yore,  
Santa Filomena bore."

But who was Santa Filomena? And why does Longfellow connect her with Florence Nightingale? These questions are often asked, and very naturally, for very little is known of Santa Filomena. She seems never to have been heard of until the 19th century, and no story is told of her having anything to do with healing or helping the sick. But in a church at Pisa, in Italy, there is a chapel dedicated to her, and a picture which represents her floating down from heaven, attended by two angels who bear a palm, a lily and a spear. In the foreground of the picture are sick and maimed people who are healed by the saint's intercession. The palm and the spear are the symbols of martyrdom, and the lily always stands for purity. It seems probable that Longfellow was thinking chiefly of the name "Filomena," which is the Italian word for "Nightingale."

With the first three verses of the poem may be compared the following lines from Lowell:—

"As one lamp lights another, nor grows less,  
So nobleness enkindleth nobleness."

"Be noble, and the nobleness that lies  
In other men, sleeping, but never dead,  
Will rise in majesty to meet thine own."

The last two verses offer material for discussion of the different types of heroism that we find in England's annals. Especially they suggest a comparison with the other well known poem inspired by the Crimean war, "The Charge of the Light Brigade."

THE SOLITUDE OF ALEXANDER SELKIRK. P. 109.

The full title of the poem is "Verses supposed to be written by Alexander Selkirk during his solitary abode on the Island of Juan Fernandez." The island of Juan Fernandez lies in the South Pacific, west of the coast of Chili.

Alexander Selkirk was a Scottish sailor, who, on account of a quarrel with his captain, was put ashore on this desert island. A few useful articles, such as a gun, a hatchet and a knife were left with him, and he managed to exist alone on the island from

September, 1704, to February, 1709, when he was taken off by an English ship. Several accounts of his adventures were published and it is said that they suggested to Daniel Defoe the outline of his famous story "Robinson Crusoe." In 1874 a monument to Selkirk was placed on the island by the officers of H. M. S. Challenger.

In line 5, verse 1, there should be an exclamation point after "Solitude." Notice the rhymes "survey" and "sea," and compare:—

"Here, thou great Anna, whom  
Three realms *obey*,  
Did sometimes counsel take,  
And sometimes *tea*."

—*Pope*.

"Everything that heard him *play*,  
Even the billows of the *sea*."

—*Shakespeare*.

"Ah, canst thou doom me to the rocks and *sea*,  
O, far more faithless and more hard than *they*?"

—*Pope*.

"Soft yielding minds to water glide *away*,  
And sip, with nymphs, their elemental *tea*."

—*Pope*.

"The realms of rising and declining *day*,  
And all the extended space of earth and air and *sea*."

—*Pope*.

These rhymes denote that *ea* was pronounced as it is now in *yea*. The question

"O solitude, where are the charms  
That sages have seen in thy face?"

might be discussed. Who likes to be alone? And why? The philosopher Aristotle said, "Whosoever is delighted in solitude is either a beast or a god." Read the description of the life of Enoch Arden on the desolate shore, from Tennyson, and compare, especially:

"Nor save for pity was it hard to take  
The helpless life so wild that it was tame,"

with the last half of verse 2.

What different things are personified in the poem?  
What are apostrophized?

With verse 4, compare in "Enoch Arden,"—

"What he fain had seen  
He could not see, the kindly human face,  
Nor ever hear a kindly voice."

#### ANSWERS TO QUESTIONS. MACAULAY'S "ARMADA."

1. "Aurigny's Isle" is Alderney, one of the Channel Islands.

2. Do the yoemen, when clearing the space round the cross in the market, include the halberdiers? I should say they do not. Halberdiers were armed with halberds; yoemen with bows and arrows and

short spears. In the description of Marmion's entry into Norham Castle (Marmion, Canto I.), Scott distinguishes clearly between the men-at-arms, carrying halberds, and the yoemen who followed. He gives a detailed description of both.

3. The Royal Standard of England, from the reign of Henry V. to the end of the reign of Elizabeth, included only the three lions for England, and three fleurs-de-lys for France. James I. added the lion rampant for Scotland, and the harp for Ireland.

4. Why is the construction changed in lines 27 and 28? In line 15 the tense changes from past to present, for vividness in narration. In lines 27, 28 and 29 the narrator uses the imperative mood to convey a still stronger impression, as if he were actually looking on at the scene.

5. Yes. "List" in "Attend, all ye who list to hear," is from A. S. *Lystan*, meaning to *please, choose*, as in "The wind bloweth where it listeth."

6. "Battle of Lake Regillus;" St. 30.

"As on an Alpine watch-tower,  
From heaven comes down the flame."

The flame—lightning.

7. Prophecy of Capys. St. 29.

And yoke the steeds of Rosea  
With necks like a bended bow;  
And deck the bull, Mevania's bull,  
The bull as white as snow.

"White bulls, with gilded horns, and decorated with fillets and garlands, accompanied the triumphal procession. They were afterwards sacrificed at the temple of Jupiter in the capitol. Rosea (Le Roscie) was a very fertile district near Reate. Mevania (Bevagna) was an Umbrian town, situated in the midst of luxuriant pastures."—From Webb's Notes on the "Lays."

8. Essay on William Pitt. "The great seal was put into commission."

The great seal is held by the Lord Chancellor. An office is said to be "in commission" when it is placed by warrant in charge of a body of persons, instead of the regular constitutional administrator. In this case, the office of Lord Chancellor was not filled in the new ministry. Cf. "The great seal was for some time in commission from the difficulty of finding a chancellor." Martineau's "History of the Peace."

A CANADIAN teacher in South Africa writes: "Picking up the REVIEW is like meeting an old friend, and a glance over its pages suggests Charles Lamb's 'Old Familiar Faces.'"

**CARDBOARD WORK.**

T. B. KIDNER.

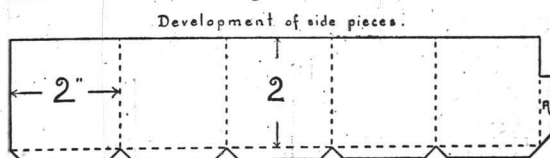
(All rights reserved)

**EXERCISE 18. A Twine Box.**

This model serves as an introduction to the pentagon and also introduces a common method suitable for constructing cardboard boxes with movable covers.

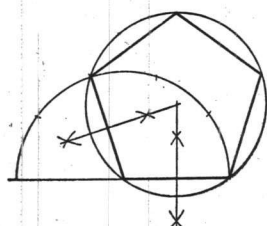
The method of drawing the pentagon, shewn in

Ex. 18. A Pentagonal Twine Box.



the diagram, was given in an earlier exercise on the hexagon. It depends upon the fact that the exterior angles of all polygons are equal to four right angles. At this stage of the work, with the pupils' experience of plane figures, and their knowledge of angles gained from earlier exercises, the teacher should be able to deduce this rule quite easily. Then by describing a semicircle on a given base and dividing it into the same number of equal parts that the polygon has sides, *two* of the divisions will always give the exterior angle.

This method depends upon the division of the semi-circle by trial, and is therefore only an approximate one. If ordinary care be taken, however, the result will be exact enough for almost any purpose.



Method of drawing pentagon

In addition to the pentagon for the top and bottom, a drawing should be made of the development of the sides. One drawing will suffice, as the upper and lower portions are exactly alike.

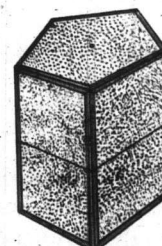
The practical work should be commenced by cutting out two pieces as shewn in the development and gluing them up on the edges A. The two pentagonal pieces for the top and bottom should then be cut out and glued into position. Nothing new is involved in this and no difficulty should be experienced if the measurements have been carefully made. Next cut out a strip  $1\frac{1}{2}$  inches wide and half cut it so that it will fit exactly inside the lower half of the box. This piece should then be glued into position so as to stand up  $\frac{3}{4}$  inch above the lower portion of the box, so as to fit into the upper portion and hold it in place.

For finishing the outside of this model, a new method is suggested. That is, to bind the corners first and afterwards to cover each face with a piece of fancy paper cut small enough to shew a very narrow margin of binding all round its edges. This gives an exceedingly neat finish and also allows of the use of quite common cardboard for the model.

In putting on the binding and fancy paper the box should have the cover on. After the binding and fancy paper are quite dry, a sharp knife should be used to cut through the paper and separate the two portions of the box.

Of course a hole will be required in the centre of the top for the twine to be drawn out through.

It may be well, also, to remind teachers that a ball of twine should be used from the *inside* of the ball, where a loose end may always be found. Neglect of this will cause loss of time, twine and temper from commencing to use a ball of twine from the outside.



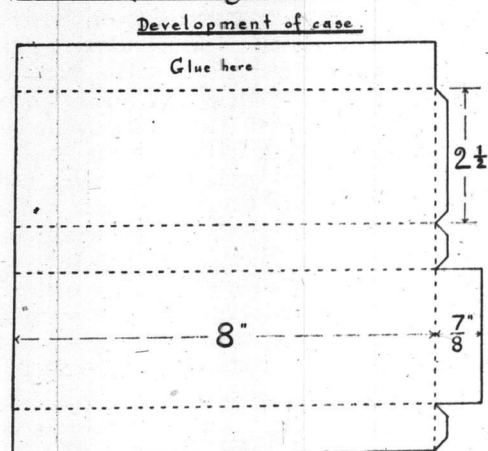
Perspective view

**EXERCISE 19. A Sliding Pencil Box.**

This model calls for very careful work, as the inner portion must slide easily, and yet fit neatly, within the outer case.

Two drawings are required, and it will be noted that the dimensions of the drawer piece are 1-16

Ex. 19. A Sliding Pencil Box.

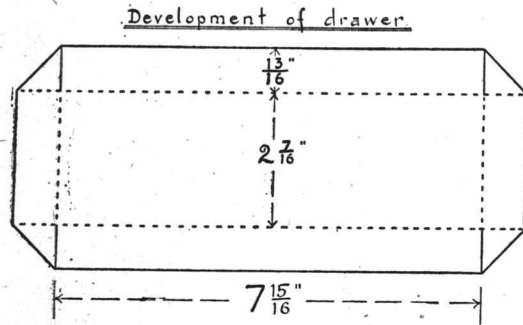


inch smaller each way. As the drawings are rather large, they may well be made to scale, say, half size. Note that the glue flap is the full width of the side pieces. In gluing up this flap it is not possible to reach into the inside of the box to press the surfaces

well together. This can be best managed by putting the ruler through and pressing the surfaces together on the desk with it.

The drawer will present no difficulty if the diagram be carefully followed.

The outside of the box may be finished in one of



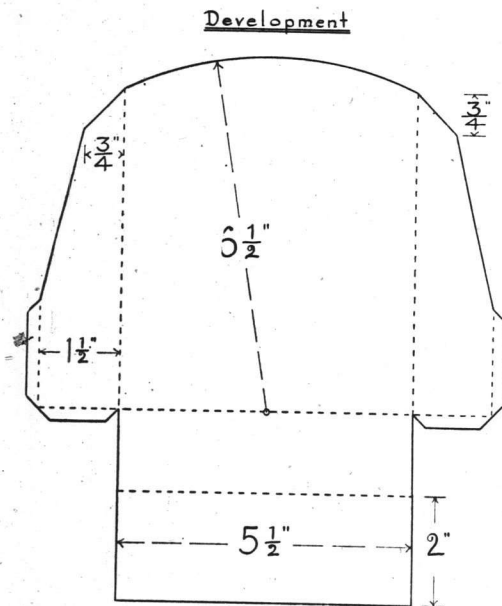
several ways. If fancy card be used, the model will look fairly well without any other finish. The method suggested for the pentagonal box is, however, by far the neatest method of finishing this and similar models. First bind the edges with some dark colored binding—paper will do—and then cut some fancy paper so as to shew a margin of colored binding  $\frac{1}{8}$  inch in width.

A small piece of tape glued on the under side of the drawer so as to stand out about  $\frac{1}{2}$  inch, will serve to pull the drawer out by.

EXERCISE 20. A Stationery Case.

This model is usually a favourite with children,

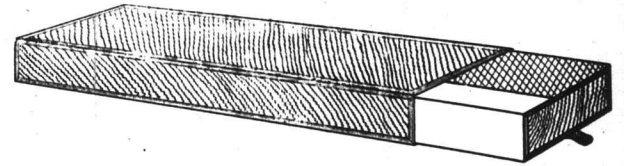
Ex. 20. A Stationery Case.



but takes a rather large piece of stout cardboard for its construction.

The development of the body of the model should

be drawn as in the diagram. A drawing must also be made of the division, a separate piece being glued in afterwards to form this. A separate piece is also

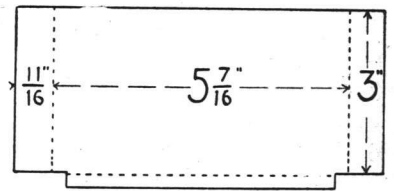


Perspective view.

required for the base, but a drawing of it is scarcely necessary.

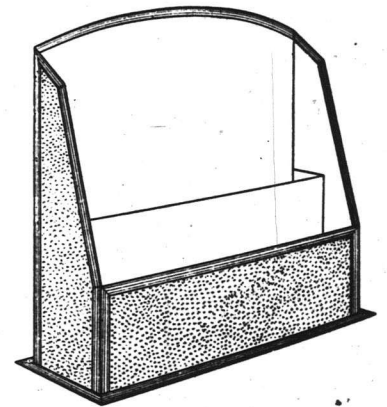
The cutting out and glueing up should present but little difficulty. It is well, though, before glueing up, to decide on the manner of finishing. This model looks very well if left white inside and covered with fancy paper outside. The fancy paper can be pasted on before the model is glued up, but the binding of the edges and angles must be done afterwards.

Ex. 20. Division piece.



The binding of the curved edge will require a little ingenuity. Moisten the binding thoroughly on the plain side as well as on the gummed, and stretch it round the curve between the fingers and thumbs. The same difficulty will occur in the curved back of the next model.

After binding, slip the division into position, taking care to have only a very little glue on the flaps.



Perspective view.

Next cut a rectangular piece  $\frac{1}{2}$  inch larger each way than the bottom of the body, bind its edges and glue into position to form the base.

EXERCISE 21. A Pen and Ink Tray.

This model is not very difficult but requires care in cutting out and fitting the divisions.

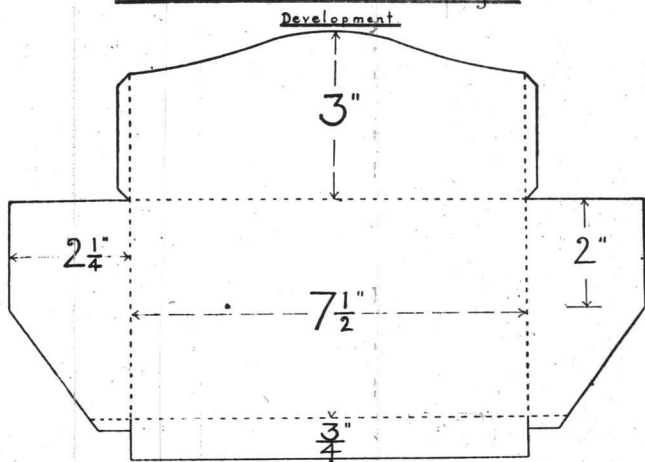
The drawings should be those given in the diagram.



The order of the practical work is the same as in the stationery case, and little difficulty should be experienced if the instructions are followed.

The development of a small box is shewn. This box should be made and glued into position as shewn

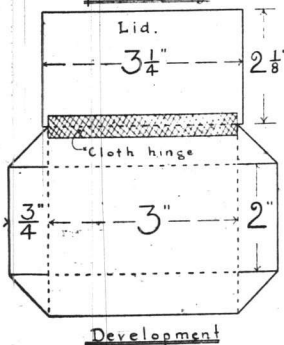
Ex. 21. Pen and Ink Tray.



in the perspective view. A strip should then be fitted against the front of it and glued into position. This strip is not shewn in the developments of this exercise, but its size is easily obtained. It will require a small glue flap at either end and must also be glued to the front of the stamp box. The small square corners enclosed by this strip are for ink bottles.

This model will conclude the present series and it is hoped that the course given will have proved

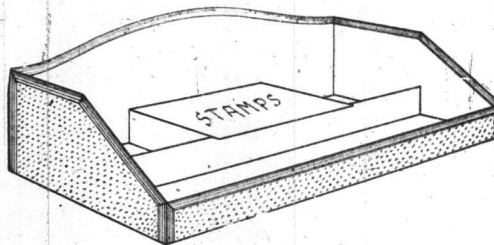
Ex. 21. Stamp Box to be fixed in tray.



helpful and suggestive to teachers desirous of doing something along the newer lines of educational development. Many exercises will suggest themselves and a hundred and one useful articles may be constructed with educational advantages to the pupils. The articles given in this series have been typical of several methods of construction and the thoughtful teacher will have little trouble in applying these methods to many other articles.

In the opening number of the first series, it was claimed for cardboard work that it was applicable throughout many grades of the schools. In response to several requests from teachers of high schools, the next series of articles will deal with the

application of cardboard work to the teaching of solid geometry. The construction of the regular



Perspective view.

solids and of solids to illustrate various problems of descriptive geometry will be given.

### GERMAN SCHOOLS AS SEEN BY A NEW BRUNSWICK TEACHER.

BY GEO. J. TRUEMAN.

Concluded from March.

In the school known here as a "Realgymnasium," less Latin is taught and no Greek, and in the "Oberreal" school, so called, neither of the classical languages is taught. Of the former there are in this city eight with an enrolment of 4,099, and of the latter only two. The schools in which Latin alone of the classics is taught, have not been regarded with much favor by many of the educational leaders, and a protracted struggle has been going on in connection with them. In 1890 the Emperor met the educational leaders in a conference, and in his opening address called on them to modernize the old classical high school, by introducing more science and mathematics, English, German and French. To carry this out would mean that Latin and Greek would no longer have the attention previously given to them. The leaders of these schools while little inclined to accept this necessary consequence, realized that if the change was not made in the Gymnasium proper, the no Latin, or no Latin and Greek schools would attract those students who wished a more practical education. Being unwilling to admit that these latter classes of schools are at all necessary, the leaders of the classical Gymnasium saw no other course open than to accept the lesser of the two evils, and maintain their position at the expense of the classical languages. Prof. Mommsen, a man of world-wide reputation as a historian, said at the 1890 conference:

"The Latin of the Realgymnasium is the worst feature of our educational system. Every hour given in these schools to the study of Latin is worse than thrown away. For when a young man busies himself with those studies that are not suited to his tastes or purposes, it is a form of intellect murder (Geistesmord). This he said not because he was opposed to the study of Latin, but because he believed that only two classes of high schools are necessary: the classical gymnasium for those who wish to enter the learned professions, and the no Latin and Greek

schools for those who wish to prepare to enter technical schools, agricultural colleges, etc."

As already indicated the new course of instruction adopted in 1892, as a result of this conference, took a middle course, and pleased no one. This could not so remain; and in 1901 a new course was adopted, which is really a return to that formerly in force. Latin and Greek are reinstated in their full strength in the classical Gymnasium. This is not as would appear at first sight, a "back down," for science and the modern languages. It is just the reverse. In 1890 the classical leaders believed that by giving only an hour or two a week to these subjects they could satisfy modern demands and still maintain the position of their schools, as the only secondary schools in Prussia. They now realize this to be impossible, and are forced to admit that for different professions, students require different preparatory training—for some, Latin and Greek, for some Latin only, and for others neither of these. The Germans are a logical people, and having once admitted this principle, they accepted at once the conditions that its acceptance involved, and opened the university to all students who have successfully completed the nine years' course in any of these forms of schools. The doors of the universities are open to them without Latin and without Greek. The university authorities, on the other hand, are preparing to give elementary courses in these subjects inside the university itself, as they claim that any student who has been unwise enough to enter without at least Latin, will immediately see his mistake and hasten to make up for lost time. My own experience here leads me to think that this latter view is the right one. In almost every lecture one hears more or less Latin, and it would be at least uncomfortable to know nothing of that language. Germany, however, is now a great manufacturing nation, and her technical schools are growing even faster than her universities. In one such school here there are 4,000 students, and the no Latin and no Greek schools will find their proper work in preparing young men to enter these institutions.

Prof. Paulsen, the leading professor of "Pädagogik," in the Berlin University, and a man well known in America, through his works on Philosophy, speaking of the new course of instruction said:

"The intercourse between the modern peoples of Europe is becoming ever wider and deeper, not only commercially, but also personally and intellectually. Berlin, Paris, London, Rome, have become neighbors. No one can prevent the free exchange of ideas between these. Four hundred years ago there was also a close connection between them. They then had one religion, one educational aim, one language, (Latin), and with this the same intellectual development, the united product of Christianity and of ancient culture. Each had little to say of and for itself, and the learning of a modern language was unnecessary. Now these same nations are widely different from each other; each has its peculiar national stamp, each has something to say that is peculiarly its own, and therefore the knowledge of modern languages is now indispensable. This is particularly

true in regard to our relation to the English-speaking world. Anyone who studies in any branch of knowledge can plainly not do without English. This is also true of those who enter business or public life; to these the English language is even now almost an absolute necessity, and it will ever become more necessary as Germany becomes a great sea and world power. English is the language which is spoken on all seas and all continents. The politician, the officers in the army and navy, the judge, the lawyer, the doctor, cannot do without the English language. The new course of instruction gives expression to this well-known fact in that it grants to the local authorities the power, to make this language, which has until now been optional, compulsory, in place of French."

I have had the pleasure of spending a considerable time in each of these different schools and hope at a later date to relate to the readers of the REVIEW some of my experiences. These may be more useful than the somewhat dry facts I have just thrown together.

#### AENEAS CAMERON—AN APPRECIATION.

BY AN OLD BOY—IN SYDNEY ACADEMY RECORD.

When the principalship of the Sydney Academy became vacant in the Autumn of 1873 the trustees put the position up to auction in the old orthodox way. The successful bidder was a man whom we shall call, for want of a better name, Swivel Sennicam. Whether he was wanting in governing ability or was trying to introduce a system of school management and teaching at variance with the laws of Calkin and Pestalozzi, will never be known. . . . . The lord of misrule sat enthroned. The principal bore the slings and arrows of outraged students with Christian resignation until one stormy day in January, 1874, they wearied of playing pranks, and of trying to provoke him, and there arose in the presence of the master a bright young lady who gravely moved that Mr. Sennicam be asked to resign. This was duly seconded, and upon being put to the school was carried unanimously. A motion to adjourn was also carried and the students filed out, leaving the principal alone in his principality. He took the hint and went west, leaving a demoralized school to his successor. After a few days the new principal came. He was a beardless young man of twenty. It was no pleasant task to bring order out of chaos. However, it did not take long for the students to take the measure of the man, and from the day that he entered upon his duties Aeneas Cameron was the master. He brought into use new methods of study along particular lines. He inspired his classes with his own buoyant enthusiasm. Old students came back to take courses in literature

and mathematics, astronomy and languages. The school was filled with those who were eager in the pursuit of knowledge. His methods of instruction and management were peculiar to himself. Like every other good teacher he was no mere imitator, but impressed upon all his individuality. He governed without apparent effort, and he taught by stirring up the spirit of investigation. He was fond of outside games. . . . . He was not an educationist nor an educationalist—he was an educator, a teacher, heaven-born if you wish, who hated all sham and hypocrisy, whether in the schools or in life as it is lived. With this hatred he endeavored to fill the minds of his pupils, while at the same time he sought to imbue them with the love of truth. There are many men and women in the world today who are better because Aeneas Cameron lived and taught. . . . . He was a man of the world without being frivolous, and a man of letters without being a pedant.

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### LONG AGO.

I once knew all the birds that came  
And nestled in our orchard trees:  
For every flower I had a name—  
My friends were wood clucks, toads and bees;  
I knew what thrived in yonder glen;  
What plants would soothe a stone-bruised toe;  
Oh I was very learned then—  
But that was very long ago.

I knew the spot upon the hill  
Where checkerberries could be found;  
I knew the rushes near the mill,  
Where pickerel lay that weighed a pound!  
I knew the wood—the very tree—  
Where lived the poaching, saucy crow;  
And all the woods and crows knew me—  
But that was very long ago.

And, pining for the joys of youth,  
I tread the old familiar spot,  
Only to learn the solemn truth—  
I have forgotten, am forgot.  
Yet here's this youngster at my knee  
Knows all the things I used to know;  
To think I once was wise as 'he—  
But that was very long ago.

I know it's folly to complain  
Of whatsoe'er the Fates decree;  
Yet, were not wishes all in vain,  
I tell you what my wish should be:  
I'd wish I was a boy again,  
Back with the friends I used to know;  
For I was, oh! so happy then—  
But that was very long ago.

—Eugene Field.

### TWIN FLOWERS ON THE PORTAGE.

They cover in a twinkling host  
The mosses, green and yellow;  
One flower would be Titania's boast,  
Without her lovely fellow.

But linked in fragile twos they droop  
Where'er the vines may wander;  
Above the hidden loop in loop  
They seem to drowse and ponder.

If form could wake in sound, these cones  
Would haunt the dewy hollow  
With tabors taut, and golden drones,  
And dancing flutes that follow.

If odors risen from Orient wells  
Might don a sea apparel,  
The blooms would beam as rosy shells  
Beneath a sea of beryl.

If flowers could form in thought, these lights  
Would be the gentle seeming  
That virgin fairies bend on knights  
When they are half a-dreaming.

Where on the portage now they droop  
In tint and odor mellow,  
One flower would grace Titania's troop  
Without her lovely fellow.

Duncan Campbell Scott.

Do you ask, what the birds say? The sparrow, the dove,  
The linnet, and thrush say, I love, I love,  
In the winter they are silent, the wind is so strong;  
What it says I don't know, but it sings a loud song.  
But green boughs, and blossoms, and sunny, warm weather,  
And singing and loving all come back together.

The Easter lilies, tall and slight,  
With golden anthers gleaming,  
Within their waxen bosoms white.  
Of holy things are dreaming,  
And stirring softly, say apart,—  
Blessed are the pure in heart.

—Selected

One sweet woman, who loves both children and flowers, is doing a beautiful work this spring. She is making the rounds of the schools of her county and presenting each child with a package of seeds. No; she doesn't buy them. They are all of her own growing. Her garden is a big, old-fashioned country garden, that is a sort of supply house for neighbors and friends of seeds and bulbs and plants and cuttings and blossoms.

In every community there are women who might follow the example of my generous friend, in giving seeds to the school children. Here is work for the clubs and village improvement societies, as well as the individual flower-lover.—*Southern Educational Journal*.

"I READ the REVIEW with great interest, as I have done for the past twelve years."—T.

## CURRENT EVENTS.

Loose diamonds found scattered in different places in North America are thought to have been transported by glaciers, and on following up the probable courses of their movement it is found that the lines converge in what is called the barren territory around the shores of Hudson Bay.

It has been suggested in the House of Lords that Canada and Australia should have representation on the new Council of Defence, over which the Prime Minister presides.

The number of Canadians who have seats in the Imperial Parliament has been increased by the election of Mr. Chas. R. Devlin, of Aylmer, Que., as the member for Galway. He is an adherent of the Irish Nationalist party, and takes the place of Col. Lynch, who was unseated by being sentenced to imprisonment for treason. There are now eight Canadians in the British House of Commons, while in the Upper House, in addition to Lord Strathcona and Lord Mount Stephen, there are several peers who are connected with this country by birth or residence.

The syndicate of British and Canadian capitalists who have bought the Magdalen Islands intend to establish there a fish industry of more than ordinary proportions. A large number of Norwegian and Scottish fishermen have been engaged.

The legislative assembly of Newfoundland has renewed the French shore *modus vivendi* for the current year, in the belief that the home government intends to redress the colony's grievances at the earliest possible moment.

The use of the French tricolor among our French-Canadian fellow subjects is open to many objections from their point of view, as well as from that of their English-speaking compatriots; and does not really represent any connection with the French Republic except that of language. A new flag, which has for its basis one of the earlier French flags, has been displayed in Montreal, and may be generally adopted as a distinctively French-Canadian emblem. It is of blue with a white cross extending throughout its length and breadth, and with a white fleur-de-lis in each corner.

It is definitely announced that the proposed Grand Trunk Pacific Railway is to have a Canadian Atlantic terminus.

The London *Times* has published its first Marconi wireless message from America. The station at Table Head, Glace Bay, will soon be formally opened for commercial service.

The King has left England for Lisbon, and the Queen for Copenhagen. King Edward before his return will visit Spain, France, Italy and Malta.

Affairs in Macedonia are said to be more threatening. The promised reforms in the Turkish administration, if they come at all, may come too late.

The unprecedented rush of immigrants to Canada has made it necessary to put extra steamers on the transatlantic route. Not only are people coming this year in larger numbers, but they are of a superior class. The government offers to actual settlers a free grant of 160 acres of land. These grants are only for British subjects. A foreigner, to obtain such a grant, must first reside in the country three years and then become naturalized. Most of the immigrants from the United States, however, obtain land by purchase, for which they do not need to be naturalized. It is estimated that Canada has room for ten times her present population.

A Canadian press association using the wireless telegraph is to be formed, with headquarters at Table Head. It will furnish and collect only such news as is of interest to Canadian readers.

Owing to the spread of the rebellion in Morocco, the government declines to be responsible for the safety of foreigners travelling in the interior.

Household slavery has been partly abolished in German West Africa, and will in time, under the new laws, be extinct. In German East Africa, also, a transfer of ownership is not permitted, and slaves are permitted to buy their freedom. Ultimately slavery will disappear.

A Canadian explorer in Egypt has discovered the tomb of the first king of the eighteenth dynasty, the Pharaoh under whom the oppression of the Israelites began. This tomb is one of the largest known, and the inscriptions on its walls are expected to throw light upon some important matters in sacred history.

Advices from the Antarctic exploration ship *Discovery* tell that she wintered four hundred miles further south than any previous expedition, and that her commander, Capt. Scott, had reached an extensive mountainous region hitherto unknown, proving conclusively that a vast continent occupies the greater part of the Antarctic region.

The volcanoes in Martinique and St. Vincent are again reported to be active.

Prosperity and contentment have taken the place of distress in the island of Trinidad, since the cultivation of cocoa has replaced the less profitable sugar industry.

The occupation of Kano, in Northern Nigeria, has been followed by the occupation of Sokoto, after a feeble resistance by its Mohammedan rulers. This brings under the authority of the British government a native population of twenty-five millions, and will put an end to inter-tribal wars, slave raidings and cannibalism, and open up the country to missionary effort.

Lord Alverstone, Chief Justice of England, Mr. Justice Armour, of the Supreme Court of Canada, and Sir Louis Jette, Lieutenant-Governor of Quebec, have been selected as the British members of the Alaska tribunal.

The United States Senate having ratified the Panama Canal treaty, it only waits the consent of the legislature of Colombia to make it binding. The United States agrees by this treaty to open the canal for traffic within fourteen years. The canal is to be about forty-six miles in length, and for nearly one-half of the distance will be at sea level. It is estimated that about two-fifths of the work of construction has already been done by the French companies, whose rights and properties will be purchased by the United States.

The revolution in Honduras has caused the United States to send its Caribbean squadron to the coasts of the little republic to protect American (by which is meant United States) interests. (It is, by the way, unfortunate that the United States, after having decided that the words United States are a proper noun in the singular number, has no attributive name by which it can distinguish itself from the rest of America.)

The Czar of Russia has issued a decree by which liberty of worship is granted to his subjects of every creed, forced labor abolished, and an extension of local self-government promised. There are wide-spread rejoicings. It must not be supposed, however, that religious freedom was unknown before in Russia; that the abolition of serfdom in 1861 was ineffective; or that local government is a new thing. All these reforms are but extensions of former liberties. The Czar's government, though autocratic, reflects the will of the people and commands their affection more than that of many nominal republics, in which dominant faction holds the majority of the inhabitants in terror. In his new manifesto, he refers the details of his measures to provincial government councils and district administrations, and invites the help of persons enjoying the confidence of the public in perfecting his plans. Indeed, one feature of the proposed reforms is to free individuals to some extent from the absolute control of the communes, or local representative assemblies.

#### 'ROUND TABLE TALKS.

S.—In keeping a set of farm books by double entry, what accounts would you think it desirable to open at first; and what others would you expect to open as occasion required?

It would, of course, be not only desirable, but necessary, to open an account for the farmer's investment in the business. This might be called Capital Account, or Capital Stock Account; or might bear the name of the proprietor. Against this must be opened such property accounts as may be thought desirable; and the number must be in each case largely a matter of judgment. If the farmer, the owner of the business, were also owner of the land and buildings, and of the live stock and farming implements, accounts might be opened for Real Estate, Live Stock,

Farming Implements, Cash, Bills (if any), and such other real or representative values as would make up the whole of the capital invested. Where it was necessary or advisable to keep a separate account for separate fields or for separate classes of live stock, Real Estate and Live Stock accounts must be divided accordingly. One would expect to open later a Wages Account, or its equivalent; an account for expenses in connection with each particular crop or product that it was desirable to keep separate for the information of the owner of the business, a General Expense Account, and finally a general Loss and Gain Account; as well as such bank accounts and personal accounts as the transactions would from time to time require. If the farmer were working upon leased land, Rent would be an account too important to omit; if with borrowed capital, he would need accounts for Bills Payable and for Interest. The evident purpose of the question is to test the student's skill in discerning the different branches of the business, and selecting suitable names for the several accounts involved in this division. J. V.

S. C.—1. (a) Mention two nitrogenous substances found in plants, and state by what tests you would distinguish them from each other, and from the carbohydrates.

(b) Show whether these two substances were formed within or without the plant, and point out some of the conditions necessary to their formation.

2. Show, basing your argument on experiment, what the pressure of the air on a square inch would be at any place when the mercury stands  $28\frac{1}{2}$  inches high, it being given that a cubic inch of mercury weighs half a pound.

1. (a) Albumin and gluten are two of the nitrogenous substances found in plants. The former is soluble in cold water, but is coagulated by heating the water in which it is dissolved, and by alcohol. Gluten is quite insoluble in water. The albuminoids are stained a deep yellow by nitric acid, and are more readily putrescible than carbohydrates, as can be shown by leaving them in a moist condition exposed to warm air.

(b) The plant obtains its food-materials from the soil and air. But neither albumin nor fibrin is a constituent of the soil or air. Evidently, then, both of them must be formed within the plant. The growing plant must be supplied with substances containing, collectively, the elements carbon, hydrogen, oxygen, nitrogen, and sulphur, of which these albuminoids are composed. Ordinary plants obtain the first three of these elements from carbon, dioxide and water; nitrogen mostly from the nitrates in the soil; and sulphur from the soil sulphates.

2. If a tube of mercury, say 36 inches long, closed at one end, be set vertically with the open end in a vessel of mercury, part of the mercury in the tube will run out into the vessel below, but the rest, to the height of  $28\frac{1}{2}$  inches in this case, will remain in the tube. It is evident that the only body in a

position to exert a force sufficient to counteract gravity and maintain the mercury in the tube, notwithstanding its tendency to descend the tube, is the air which is pressing upon the exposed surface of the mercury in the vessel. Suppose the area of a cross-section of the bore of the tube to be 1-15 of a square inch. Since mercury, like other liquids, transmits pressure equally to equal surfaces, and undiminished in all directions, the air pressure at the mouth of the tube must be exerted in an upward direction and be equal to the pressure on a surface of 1-15 of a square inch; and this pressure supports the mercury in the tube to a height of  $28\frac{1}{2}$  inches. Now if the air pressure on 1-15 of a square inch supports this column of mercury, the air pressure on 15-15 sq. in., i.e., a whole square inch, would support 15 such columns, which 15 columns, put together side by side into one column, would make a column 1 sq. in. in area at the base and  $28\frac{1}{2}$  in. high. But a column 1 sq. in. in area at the base and  $28\frac{1}{2}$  in. in height would contain just  $28\frac{1}{2}$  cubic inches of mercury; and since 1 cu. in. of mercury weighs  $\frac{1}{2}$  lb.,  $28\frac{1}{2}$  cu. in. of mercury would weigh  $28\frac{1}{2}$  times  $\frac{1}{2}$  lb. or  $14\frac{1}{4}$  lbs. Since the pressure of the air on 1 sq. in. then, at this time, would support a column of mercury weighing  $14\frac{1}{4}$  lbs., the air pressure upon a square inch must be equal to  $14\frac{1}{4}$  lbs.

J. B.

E. L. M.—Is there another kind of Crossbill besides the white winged Crossbill? If so, what is it called?

The American or red Crossbill is also found in this province. According to Chapman's description the body of the male is a dull red color, brighter on the rump, browner on the back, wings and tail fuscous (brown or grayish black). The body of the female is dull olive-green, yellower on the rump, indistinctly mottled with blackish on the head and back, mixed with whitish on the under parts.

S. B.—Would you kindly tell me what literature is required for the N. B. Normal School examinations for license in June?

You should read the REVIEW. See official notices in December, also in this number.

D. M. L.—Please publish a short account of Charles Kingsley as a literary man.

Charles Kingsley was born at Holne, Devonshire, June 12, 1819, and died Jan. 23, 1875. He graduated from Magdalene College, Cambridge, with honors, in 1842. After spending a few months in the study of law, he took up theology. In 1844 he became rector of the church at Eversley, Hampshire, where he resided for the rest of his life. He was for a time professor of modern history at Cambridge, afterwards Canon of Chester, subsequently of Westminster, and was a chaplain to the Queen. His best known works are *Alton Locke*, *Tailor and Poet*, a novel; *Westward Ho*; *Phaethon*; *Hypatia*; *The Heroes*, or *Greek Fairy Tales*; *Hereward*;

other stories and essays, and a collection of poems. He took great interest in the working classes, and in his preaching and writings devoted much thought and time to improving their condition.

W. W. H.—(a) Can you give me the name and address of the Superintendent of Education for British Columbia?

(b) What is the meaning of the term "limited" after the name of a firm or company.

(c) Why is a tall chimney better than a shorter one?

(a) Alex. Robinson, B.A., Victoria, B. C.

(b) The liability of each shareholder in a firm or company is "limited" by the number of shares he has taken, so that he cannot be called upon to contribute beyond the amount of his shares.

(c) On account of the greater draught, which helps to project smoke and dangerous gases further into the upper air.

A. M. H.—Kindly suggest through the REVIEW some mottoes suitable for school interior decoration or for other school use.

Mottoes and gems of literature to be memorized, contributed to the REVIEW by Miss M. E. Knowlton:

Success is nought—Endeavor's all.—*Robert Browning.*

Why stay we on this earth unless to grow?

Look one step forward and

Secure that step!

Aspire! break bounds, I say—

Endeavor to be good—and better still—and best.—*Ibid.*

He who stoops lowest, may find most. —*Ibid.*

Think that to-day shall never dawn again.—*Dante.*

Hear the truth, and bear the truth,

And bring the truth to bear on all you are;

And do, assured that only good comes thence.

Be true, at any price.—*Browning.*

The least flower, with a brimming cup, may stand

And share its dew-drops with another near.

Be the day weary, and never so long,

At last the bell ringeth the even-song.

—*A Sixteenth Century Saying.*

Forgiveness is the only cure of wrong.—*Geo. Macdonald.*

There is no service like his that serves because he loves.  
—*Sir Philip Sidney.*

The sky is very black,

'Tis true,—

But just behind it

Shines the blue!

Wearing the white flower of a blameless life.—*Tennyson.*

Grace is the result of forgotten toil.—*A. Macdonald.*

Wonder on,

'Till truth makes all things plain. —*Shakespeare.*

The blue of heaven is larger than its cloud.

May we

Go forward, face new times—

The better day.

—*Browning.*

God, you see, God plants us where we grow. —*Ibid.*  
 Hushed be every thought that springs  
 From out the bitterness of things.

—*Wordsworth.*

It should be remembered that it is contrary to our rule to answer questions if the name of the writer is not sent in confidence.

### SCHOOL AND COLLEGE.

The Superior school at Seal Cove, Grand Manan, Mr. Jas. A. Edmunds, teacher, has raised forty dollars by means of school entertainments towards a library. Sixty dollars is the whole amount to be raised and expended.

Mr. C. H. Acheson, formerly of the High School, Moncton, has been appointed acting principal of the Normal School at Johannesburg, S. A., in place of the late Dr. Mullin. Mr. Acheson left this province last fall to assume the assistant principalship of the Johannesburg school, and also to act as one of the inspectors of that district.

Mr. Geo. J. Trueman, whose interesting letter on German schools appears on another page, is now making a vacation tour, with his wife, from Berlin to Heidelberg, visiting the principal cities on the way. He expects to enter the university at the latter place for the summer term, which begins April 25th.

The sum of \$150,000 has been given to Cornell University to provide a pension fund for professors. It is designed to place that amount at compound interest until 1914, when it will amount to \$250,000. Professors will be retired on attaining the age of seventy years.

Acadia college has another forward movement in view. The millionaire, Mr. Rockefeller, has promised to give to the governors of Acadia one dollar for each dollar raised by them not later than January 1st, 1908. The limit is \$100,000; and if that sum be raised—and it will be if the energetic president, Dr. Trotter, has the time and strength to devote to the work—Mr. Rockefeller will give to the extent of that amount.

The principal of the schools at Smith's Cove, Digby Co., N. S., Miss J. Wallace Mortimer, finding her school not sufficiently equipped to enable her to teach the scientific subjects of the course of study in a proper manner, and finding it difficult to tap "the rural purse" sufficient to procure the necessary apparatus, has succeeded in raising \$40.00 for the purpose by taking the platform and delivering a course of readings or lectures. Miss Mortimer deserves the thanks of the section for making use of her talents gratuitously for such a noble purpose, and the section is to be congratulated in having a teacher so deeply interested in the advancement of her pupils.

The trustees of the South Tetagouche school, Gloucester County, during last summer's vacation improved their

schoolroom by lining its walls and ceiling, inside the plaster, with neatly dressed and kiln-dried wood, to which a light walnut oil varnish was applied. The room, which used to be cold, has been made very comfortable, and has an improved and cosy look. Trustees in country districts, by a little forethought, and at slight expense, can make improvements that will add materially to the comfort of teachers and scholars. The trustees of the district named above have engaged their teacher for a second term at an increase of salary.

The course at the "Netherwood" School for Girls, Rothesay, N. B., which has been conducted so efficiently for many years under the principalship of Mrs. J. Simeon Armstrong, is to be extended and improved. There will be associated with Mrs. Armstrong as co-principals Miss E. R. Pitcher and Miss S. B. Ganong, who have occupied for several years leading positions on the staff of the Halifax Ladies' College, and have established an excellent reputation as teachers. It is intended to offer two courses, one for preparing girls to enter college, and the other to afford a good education to girls not wishing to go to college. The beautiful situation and ample grounds at Netherwood, the excellent influence which the school has always had under Mrs. Armstrong, and the additional advantages which are offered for special training in science, English and modern languages, by accomplished teachers point to a period of increased prosperity and usefulness.

A sad story was recently told by the Hartland, N. B., *Advertiser* of the death from exposure of an aged teacher, Mr. John T. Tuthill, familiarly known as "Professor" Tuthill. After a varied life as soldier, lecturer, teacher, he became old and feeble, and was always homeless. He taught for nearly twenty years along the Tobique river and vicinity. Though always somewhat erratic, and of late years in his dotage, he was fond of teaching, and felt deeply when old age unfitted him to manage a school. On one of the coldest days of the past winter, while walking along the road that leads from Limestone, Me., to California Settlement, on the Grand Falls Portage, he perished by the way. The wind was blowing a gale, and the thermometer registered 20 below. He was thinly clad, a tottering feeble pilgrim on life's journey, who had lived longer than man's allotted span; and pitiful indeed was the fact that his shroud was of snow, his bier the frozen earth, and the watchers the twinkling stars. With a smattering of astronomical lore, he had loved the stars. It was his custom to go out each night before retiring, "to see," he said, "that my stars are all in their right places." The "mellow Pleiades" was his favorite constellation, and he had learned that Alcyone of that group was considered the "centre of the universe," and on this he evolved the fantasy that there was heaven. With dying eyes turned to this filmy constellation, his last thought may have been that soon his wearied soul would flee from its worn-out temple to that grand centre of his imagination.

This story is a sad comment on the fact that no fund or "retiring allowance" is available for aged and worn-out teachers.

The Douglastown, N. B., school library seems to be doing for that community what every school library should aim to do, viz., to create a taste for reading, and be an influence to improve the whole community. Mr. M. R. Benn, the principal of the school, lately stated that he hoped that the number of volumes would soon be increased to 1,000 from the generosity of former students of the school and from other sources. Since the library was established, in 1894, an average of nearly twelve hundred volumes have been read each year, and no books have been destroyed.

### RECENT BOOKS.

TOM BROWN'S SCHOOL DAYS. With illustrations. Cloth. Pages 360. Macmillan & Co., London.

A convenient pocket edition, prettily bound, of this celebrated story.

SELECT POEMS OF TENNYSON. Edited by H. B. George and W. H. Hadow. Cloth. Pages 154. Macmillan & Co., New York.

This is a very successful attempt to place before young readers those poems of Tennyson most suitable for them. In the introduction and notes will be found such information as teachers are likely to find useful.

MACMILLAN'S STORY READERS. By Evelyn Sharp. Cloth. Book I. Pages 123. Price 10d. Book II. Pages 151. Price 1s. Macmillan & Co., London.

These books are amply illustrated, and printed in large clear type.

WOLFE. By A. G. Bradley. Cloth. Pages 214. Price 2s. 6d. Macmillan & Co., London.

This book, tracing the military career of General Wolfe, is one of absorbing interest to the Canadian reader. The greater portion is taken up with the conquest of Louisbourg and Quebec, and the events are vividly portrayed by a master hand. The chapter on the condition of the American colonies and French Canada of that time is one well calculated to absorb the reader's attention, and show the power of the author in grasping the salient points of the situation. It is a book worth reading.

ALICE'S ADVENTURES IN WONDERLAND, with forty-two illustrations, and 126 pages. THROUGH THE LOOKING-GLASS, and What Alice Found There, with fifty illustrations and 122 pages. By Lewis Carroll. Cloth. Price 1s. each.

These low-priced editions of children's classics will be wonderfully tempting to the little ones.

PALGRAVE'S GOLDEN TREASURY OF SONGS AND LYRICS. Book Third (Eighteenth Century). Edited with notes by J. H. Fowler, M. A. Cloth. Pages 161. Price 2s. 6d. Macmillan & Co., London.

This well-known collection embraces in it all the best shorter songs and lyrics in our language, and hence claims

the attention of teachers. The editor in his notes to this, the third volume, wisely supplements the original text by giving brief analyses of poems, biographies of authors, explanations of historic and poetic allusions, rather than the signification of ordinary phrases that any good dictionary or the scholar's own vocabulary will supply.

TRIUMPHS OF SCIENCE. Edited by M. A. L. Lane. Cloth. Pages 154. Ginn & Co., Boston.

This is another of those interesting little volumes of the "Youth's Companion Series," valuable for supplementary reading in everyday subjects. It is made up of explanations and descriptions of many of the wonders of workmanship and ingenuity which have attended the advancement of scientific thought.

CARNET DE NOTES D'UN VOYAGEUR EN FRANCE. Par A. C. Poiré. Cloth. Pages 169. Price 1s. 6d. Macmillan & Co., London.

This memorandum book of a Traveller in France is a geographical reader giving the population, climate, resources, industries and other facts about the places visited.

A SHORT INTRODUCTION TO GRAPHICAL ALGEBRA. By M. S. Hall. Cloth. Pages 49. Price 1s. Macmillan & Co., London.

The special student of algebra will find interesting material here for laboratory practice.

COLOMBA. By Prosper Mérimée. Edited with introduction, notes and vocabulary by Albert Schinz, Associate in French Literature in Bryn Mawr College. Cloth. xviii+226 pages. Ginn & Co., Boston.

This gem of French literature, combining the three most important elements of a school book, art, life, and interest, has been for a long time more widely read in American institutions than any other French story. Two years ago the committee of twelve confirmed this judgment by declaring Mérimée's masterpiece one of the most suitable texts for both high schools and colleges. In this edition the author of the introduction, notes and vocabulary has spared no trouble to meet all the requirements of modern scholarship.

### APRIL MAGAZINES.

The April *Atlantic Monthly* is an excellent number in the variety and brightness of its contents which embrace poetry, fiction, essays, and thoughtful articles on current questions. The Honorable Points of Ignorance is a characteristic paper by S. M. Crothers, treated in the delightful vein of mingled wit and humor, which the reader of the *Atlantic* knows so well. . . . The *Chautauquan* is a "book number," and has a special cover design. The Nature Study for the month deals with Early Birds and Plant Colonies, and Practical Studies in English illustrate some of the qualities of style with much clearness. . . . Carlotta and I is the fanciful title of a series of cookery papers, by Miles Bradford, beginning in the April *Delineator*, and



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the first paper, An International Dinner, is decidedly novel in character. The real nature of the article is veiled by the delightful story form in which it appears. A number of friends meet occasionally at each other's homes for the purpose of enjoying the pleasures of the table, as well as each other's society, and "Carlotta and I," who entertain in this instance, impart the secrets of the dishes served, to their guests, much jollity and breezy conversation accompanying the telling. Grace Cook supplies the illustrations, which are a pleasing addition. . . . The tinted pictures and colored cover of the *Easter Canadian Magazine* are attractive, and indicate the rapid development of color printing. To issue a good magazine in this country was not long ago considered an impossibility, on account of the limited extent of our population. The *Canadian Magazine* has proved the incorrectness of this impression, and is now showing that Canadian engravers and printers are keeping pace with the world's progress. The remarkable article by Alfred R. Wallace, on Man's Place in the Universe, which has attracted so much attention both in England and this country since its appearance in the *March Fortnightly*, is re-printed entire in the *Living Age* for April 4.

## EDUCATIONAL DEPARTMENT, N. B.

### Official Notices.

#### I. SCHOOL YEAR, 1902-3 — NUMBER OF TEACHING DAYS

The number of teaching days for school year ending June 30th, 1903, is as follows: Ordinary Districts, 215; Districts having eight weeks' summer vacation, 205; the City of St. John, 204.

For the Term ending June 30th, 1903, the number of teaching days is 123 in all districts except in the City of St. John, where the number is 122.

#### II. DEPARTMENTAL EXAMINATIONS.

*a. Closing Examinations for License.*—The closing Examinations for License, and for Advance of Class, will be held at the Normal School, Fredericton, and at the Grammar School buildings, in St. John and Chatham, beginning on Tuesday, the 9th day of June, 1903.

The English Literature required for First-Class candidates is Shakespeare's "Merchant of Venice," and selections from Keats, Shelley, and Byron as found in Select Poems, used in High Schools.

*b. Normal School Entrance Examinations and Preliminary Examinations for Advance of Class.*—These examinations will be held at the usual stations throughout the Province, beginning on Tuesday, July 7th, at 9 o'clock a.m.

The requirements for the several classes will be found on pages 115 and 116 of the School Manual.

Bright, fresh and spring-like is the April number of the *Housekeeper Magazine*, published at Minneapolis, Minn. Jessis Ackermann, the famous traveller, contributes the second of her series of illustrated articles describing her adventures in various parts of the world. The parallel traits of men and dogs are described in the April instalment of *A Society Woman's Letters to Her Daughter*, edited by Martha McCulloch-Williams. *A Violet Wedding*, the second in the series of *Twelve Pretty Weddings*, is the story of an uniquely artistic idea, cleverly carried out.

Candidates are required to give notice to the Inspector within whose inspectional district they wish to be examined not later than the 24th day of May. A fee of one dollar must be sent to the Inspector with the application.

*c. Leaving Examinations.*—Held at the same time and stations as the Entrance Examinations.

These examinations are based on the requirements of the Course of Study for Grammar and High Schools as given in the Syllabus for Grades IX, X and XI.

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

*d. Matriculation Examinations.*—Held at the same time and stations as the Entrance Examinations. The Matriculation Examinations are also based on the requirements of the Course of Study for Grammar and High Schools as given in the Syllabus for Grades IX, X, XI.

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

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

The English Literature Subjects for the Matriculation and Leaving Examinations will be the same as for the First-Class Candidates at the Closing Examinations.

Examinations for Superior School License will be held both at the June and July examinations.

The First Book of Caesar's Gallic War will be required in both cases. The Mathematical Paper will be based on Wentworth's Trigonometry and F. H. Stevens' Mensuration for Beginners.

*e. High School Entrance Examinations.*—These examinations will be held at the several Grammar and other High Schools, beginning on Monday, June 22nd, at 9 o'clock, a.m. Under the provisions of Regulation 46, question papers will be provided by the Department. The principals of the Grammar and High Schools are requested to notify the Chief Superintendent not later than June 1st as to the probable number of candidates.

For further details in regard to the Departmental Examinations see School Manual, Regulations 31, 32, 45 and 46.

#### III. EMPIRE DAY.

The attention of School Trustees and Teachers is especially directed to Regulation 47, School Manual, in reference to the observance of Empire Day, on the 22nd of May. In harmony with the spirit of Regulation 47, I strongly recommend that a part of the exercises of the day shall be devoted to the inculcation of the duties of citizenship, the sacredness of the ballot, and the obligations resting upon all citizens to guard and promote purity in public affairs.

#### IV. LICENSES ISSUED PRIOR TO 1872.

The Board of Education has ordered as follows:

That regulation 30 be annulled; and that all Teachers' Licenses issued by the authority of the Board of Education prior to January 15th, 1872, shall cease to be valid on and after the first day of July, 1903; provided, however, that the Chief Superintendent shall have authority to renew from year to year thereafter, in his discretion, any such license the holder of which is shown to be a person capable of rendering effective service as a teacher.

J. R. INCH,

Chief Supt. of Education.

Education Office,

March 25th, 1903.

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