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The Educational Review.

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THE EDUCATIONAL REVIEW

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MESSRS. J. & A. McMILLAN have just published in pamphlet form, price fifteen cents, the full text of the judgment of his Honor Mr. Justice Barker, in the Bathurst school case, recently delivered in St. John. The summing up and decision in this *cause célèbre* is of great interest to educationists and to the public generally.

Arbor Day.

We devote a considerable portion of our space this number to Arbor Day, with the hope that the material may prove of value. Do not put off the preparation until a few days before the time appointed for Arbor Day. There should be "talks" on trees and plants, and especially a careful survey of the school grounds, so that the trees when planted will give the impression that nature has been consulted and imitated. If the ground is poor within the school limits, see that the poor soil is dug out where the tree is to be planted, and replaced by a generous supply of richer earth if the tree requires it, and this can only be found out by studying the trees and their environment beforehand. Do not expect that a tall spindly sapling taken from the midst of the woods will flourish in an open place. You will have your labor for nothing. Select your tree from an

open space or on the borders of a woodland. See that it is symmetrical, that its buds give promise of health and activity, and that it is not too large. As a rule the largest size should not exceed two or three inches in diameter at the base, and ten to fifteen feet in height. Disturb the roots as little as possible in digging. You can be reasonably certain of your tree growing if you make a circle round it and transfer the tree, roots and earth, to the school grounds. There may be some hard work connected with this kind of tree planting, but the exercise is healthful and exhilarating. The writer has dug up small saplings and shrubs in the middle of summer, and after wrapping up the root system *immediately* in canvas and damp moss has transported them for miles before transplanting, and has had the satisfaction of seeing them grow, with proper attention in planting and proper mulching and judicious moistening of the soil for a few weeks by occasional sprayings.

If your tree has an abundance of compact fibrous roots; if these have been kept embedded in their native earth and are uninjured, you have a reasonable prospect that your tree will grow and flourish. If these fibrous roots have been exposed and allowed to become dry during the journey to the school yard, throw the tree on the wood-pile and start out cheerfully in quest of another, with the resolution to take better care of it.

Prune roots as little as possible, and then only the tap roots. Prune branches with care and after mature deliberation; larger trees will bear more pruning than smaller ones. Do not prune conifers at all. What looks more unnatural and more unsymmetrical than a lot of cedars and firs shorn of their lower branches?

Prince Edward Island School Report.

The Superintendent of Education has issued his annual report "on the condition and progress of the public schools of the province." According to the report the attendance of pupils was larger and more regular than in preceding years. More schools were in operation. The number of higher class teachers employed was more than formerly. An increased attendance at the Prince of Wales College and Normal School is reported.

The amount expended by the government for educational purposes was \$121,781.17, being a decrease of \$296.23, while the amount expended by School Boards was \$20,241.73 being an increase of \$1,551.70. Total expenditure by government and school boards \$161,207.60, an increase over last year of \$1,276.02. Cost per pupil enrolled \$7.24, increase 5 cts. Cost of pupil in daily attendance \$12.16, a decrease of 28 cts.

In view of the fact that so few candidates during the past few years have taken the Junior Entrance examination to the Normal School, the special class for such pupils has been discontinued. The junior candidates join the senior class in such subjects as they take. The Superintendent recommends the discontinuance of the junior examination.

Touching reference is made to the death of the late Inspector Balderston, also to the retirement of Prof. Robertson from the Prince of Wales College staff on account of ill-health.

The report concludes with the expression of the opinion that "Nowhere are the benefits of education more fully appreciated than in this Province," and that, "no effort will be spared to give every citizen the advantages of at least a good elementary education."

Teachers' Salaries.

From British Columbia to New Brunswick a decrease in teachers' salaries is noted. This is a matter that lies very closely at the root of the country's welfare, as no one can doubt that this tendency is a sure forerunner of a falling off in the character of the work done in the schools.

We may seek to infuse a better professional spirit among teachers and endeavor to educate them in non-interference and underbidding; but the liberty of the subject remains, and will remain, both as regards teachers and trustees. Unprincipled teachers and irresponsible trustees will always exist, and their example will always be potent for evil. All boards of education and those interested in education must deplore this state of affairs.

Is there any way by which this downward tendency in salaries and consequent deterioration in school work may be prevented?

One legitimate method would be—raise the standard of qualification for license. This has been done to a certain extent, but it is possible under the present conditions for a clever pupil to obtain scholarship sufficient for any class of license at an early age. Another method, then, would be to increase the age of admission to normal school—as has been done in British Columbia, where, in 1896, males will require to be twenty years of age and females eighteen before receiving licenses to

teach. Many think that a teacher should be at least twenty one, and certainly the schools would, in many cases, be the better for more mature teachers. A girl of sixteen is but a child herself.

Another legitimate method would be to fix a minimum salary for teachers by law. The REVIEW has referred to this side of the question before. Interest and intelligence in school matters should emanate from the choice of the representatives of the people or the government. It should lead public sentiment, not follow it. It has determined the amount to be paid by the province to teachers of certain qualifications. It has also fixed a minimum in certain cases—grammar and superior schools. It would be quite as much within its rights to go further and fix a minimum salary for all classes of teachers.

In Nova Scotia it has been proposed to establish county boards of trustees instead of district. This certainly would have a tendency to produce more uniformity and less narrow mindedness. A whole county can be trusted to be more judicious and liberal than a single district.

School Reports.

The report of the Ontario Minister of Education for the year of 1895 has been received.

Progress is indicated in every department of work, especially that of the high schools. Male teachers do not fall off in numbers, though they do not keep pace with females in the increase. It seems odd to us in the Maritime Provinces to notice fees in connection with the high schools. It is very gratifying to note the existence of a superannuation fund in Ontario, which seems to have reached very respectable proportions. In 1895 there were 435 teachers on the list. The expenditure for the year was \$63,800, and the gross contributions to the fund was \$1,321.50.

The salaries of teachers in Ontario have very slightly decreased. There were 8,110 teachers employed during the year, of whom 3,168 have attended a normal school. It seems that all the teachers in Ontario are not yet trained. The average salary for male teachers was \$421, females \$300. There are 129 high schools and 554 high school teachers.

The Inspectors' reports seem rather meagre, but it seems probable that they are confined to certain topics. Some of their inquiries are interesting—Number of pupils who wear glasses, number with defective hearing, number who take luncheon in school, number indifferent to play, condition of school sites, fences, growing shade trees, wells, screened closets, etc. Health of teachers, number of schools with porch, number not whitewashed, not scrubbed 1895, not swept daily, number without

blinds, number without weighted windows. Some of these inquiries might be with profit made regarding schools down this way.

The Annual Report of the Superintendent of Education of British Columbia has been received. It is a bulky volume, containing a very exhaustive report of the schools in the extreme west. There are 202 schools in the province and the expenditure for education about \$190,000. There are no normal schools and the other Provinces have been drawn upon for trained teachers. Hard times and decreased cost of living have been taken advantage of to reduce the teachers' salaries. One teacher in noting that the efficiency had not also decreased, takes occasion to remark that with the exception of the clergy he doubted if under similar circumstances the same would have been true of any other body in the world. A record of all corporal punishment is kept in this province. At the examinations for license 197 candidates were successful. As there are but 300 teachers employed, there does not seem to be any likelihood of a scarcity of teachers for some time in the west.

The "Log School-house," or Beginning Days of Education in P. E. Island.

Chief Superintendent of Education McLeod lectured in the Zion church basement, Charlottetown, on March 31st, on the above subject. The audience was large and responsive, and the lecture was replete with information so arranged and presented as to give the hearer a comprehensive idea of the subject. From the scenes so vividly portrayed by the lecturer, the hearers gained a good idea of what educational conditions were in P. E. Island eighty years ago. He pictured the old log school-house rudely and hastily erected by the early settlers, lighted by one small window, and fitted with a small door having wooden hinges and latch. The furniture and appliances were of the most primitive kind. The pupils had "keel" for pencils and goose-quills for pens.

The teacher of eighty years ago had not much professional training. Oftener than anything else they were mechanics or sea-captains, who had laid aside the chisel or bow-line, for part of the year, and had given their services to teach "the young idea to shoot."

Referring to the schools of Charlottetown, he said that Mr. Peter Cranmer was the father of education in the province. His successor was Mr. Robertson. In 1821 the national school was erected and Mr. Breading appointed the master thereof. In 1836 the central academy, since changed to Prince of Wales' College, was opened with Rev. Charles Lloyd as principal.

The lecture being of the early days of education, did not deal with the present, nor was any contrast drawn, but the attentive listener continually drew the contrast, and was the better able to appreciate the advantages of to-day.

At the conclusion complimentary remarks were made by several gentlemen, and the hope expressed that the superintendent would continue his researches so well begun, and give not only the babyhood of P. E. Island schools, but also their childhood and manhood, which he intimated that he possibly might do.

TALKS WITH TEACHERS.

It has occurred to me when reading of the new photography by which such dense bodies as wood and the human body have been penetrated and exposed to the view, that the whole subject of examinations for promotion can now be relegated to the past. In fact many of us have only been waiting for something better for a long time. Just imagine with what ease and simplicity the whole thing may be accomplished. The child's head is photographed by the new process, and the development of the brain carefully noted. One year after the same thing is repeated and, behold, the teacher stands acquitted or condemned. How easy it will be then to issue licenses and confer degrees. No amount of cramming or dishonesty will avail. Quacks will cease to thrive, and men and women will be known and appreciated by actual brain measurement and development. Who knows but what teachers will be summoned each year before a committee of the school board to have their heads examined for the purpose of noting whether they have progressed or retrograded during the year in intellectuality. If the former, to have their salaries increased; and if the latter, to be degraded in rank, or dismissed. In fact such will be the avidity with which brain development will be sought, that in a few generations men and women will appear with abnormally developed domes of thought and very attenuated bodies.

I have referred before to the subject of Arbor Day, and I desire again to say a few words. I want to say first, that if Arbor Day is to be observed this year in many districts, as it has been in the past, it had better be dispensed with altogether. I know districts where the day has been observed ever since authorized, and there is nothing to show for it, inside or out, save a blank space in the school register. If you feel that you cannot do any good, do not observe the day. It is my opinion, however, that there is no teacher so situated but that she can do so with profit. But you say, "I have no fence." "The soil is not suitable." That may

be, and is true in many cases; but I look upon the mere planting of trees as secondary in the observance of the day. Interest your pupils in trees, and their growth and care. Prepare a programme of exercises, and indulge in a general cleaning of the house and premises. If you plant trees, exercise a little common sense in the selection and placing of them. You can easily see what kind of trees thrive best in your locality. I would not advise you to plant an elm on a rock. Do not place the trees close under the windows, or where it would be a great misfortune if they happened to grow.

If you think Arbor Day will come too late, plant your trees before that date and have your exercises then. It does not answer to set out trees after the buds begin to open. It is very difficult three or four weeks in advance to prognosticate the season, and the date fixed has generally been too late. I hope the inspectors, in addition to reports from teachers, will insist upon a reasonable showing at their next visit. It is to be hoped, too, that teachers will report fully. It should be under the following heads: No. of Trees; No. of Shrubs; No. of Flower Beds; General Improvements; Programme of Exercises. The last should probably be placed first. It is to be hoped that there will be no reports like this "Arbor Day was observed in this district by the planting of trees."

Culled from N. B. Inspectors' Reports.

INSPECTOR MERSEREAU (District No. 1):

Nearly all the teachers in my inspectorate subscribe for and read the *EDUCATIONAL REVIEW*, which they profess to find exceedingly helpful in all their school work, but especially in lessons on Nature, while it keeps them in touch with the great body of educational thought and experience throughout the Maritime Provinces.

* * * Inexperience and insufficient preparation have made the tree-planting on Arbor Day a failure. Not one per cent. of the trees planted last year lived during the summer. However, much good has undoubtedly been accomplished in other directions, and it is to be hoped that in the course of time experience will teach us how to transplant and care for trees.

INSPECTOR SMITH (District No. 2):

* * * I have found, with few exceptions, teachers interested in their work, and on the alert for any suggestions that might be of use to them. There are, however, still a few teachers who cling to the idea that their success depends entirely upon pleasing the parents, and these follow the old custom of hurrying the pupils through the reading books as the rate of speed at which a pupil goes through a book is the measure of success laid down by some parents. * * * I have been much pleased with the disposition manifested by trustees and ratepayers generally to carry out suggestions in the way of improving the school houses and grounds, and many necessary improvements have been made during the year. I find some difficulty, however, in convincing trustees that good maps and blackboards are absolutely necessary for the success of the school in the fullest sense, and that those schools amply provided with apparatus, other things being equal, do much better work than where a scant provision is made; though many teachers do good work under very unfavorable circumstances, and with the most meagre supply of apparatus.

INSPECTOR STEEVES (District No. 3):

* * * As I have pursued my work much of a cheering and encouraging nature has come under my observation. To have a good

school, well equipped and capable of giving the children correct instruction and proper training, is the pride of many districts. The value, on educational as well as physiological grounds, of good school houses, well lighted, neat, clean, comfortable and pleasant, the desirability of the school premises being attractive and well kept, are properly estimated by an increasing number of people. Many Boards of Trustees show themselves anxious to secure the most energetic, industrious and progressive teachers, whom they encourage and support in promoting the highest welfare of the school. On the other hand, many trustees consider that if they keep the school house door open a part of the year no more should be asked. They would cramp and cripple the energies of the best teacher. Indeed, I am forced to the conclusion that many Trustees are elected with the avowed sole purpose of keeping the taxes down to the lowest possible figure, and that they use their official position to hinder the advancement of the school, and sometimes to deprive the district of any but the scantiest school privileges. These cases are deplorable.

INSPECTOR CARTER (District No. 4):

The majority of the teachers seems to be imbued with a desire to keep abreast of the times and to improve themselves. There are few who do not read educational papers and attend their County Institute when possible. This year, as in the past, I have found them most ready and willing to respond to any suggestions in the way of improving their surroundings. Districts owe to their teachers more than ever improvements in furniture, apparatus, libraries, flags and repairs. I have pointed out a few of them in my general report, but not nearly all. I regret as the years go by to notice that some of our oldest and, at one time, probably our best teachers, becoming worn in the service and failing in effectiveness. * * * I think it is a blot upon the civilization of the present age that no provision should be made for worn-out teachers. Teachers themselves should take the initiative in this matter, and do as has been done in a few other places—start a Superannuation Fund in their own ranks first. When they are found ready to help themselves, others will, no doubt, help.

INSPECTOR BRIDGES (District No. 5):

Arbor Day is observed largely throughout this Inspectoral District and its benefits are, year by year, becoming more apparent, both in the grounds of the school and also in the decoration of the school room. Trees of substantial growth may be observed in almost all school grounds, and the bare walls of the school room are relieved by tasteful, as well as instructive, decorations.

During the year more than usual activity has been displayed by local school boards in maintaining efficient schools in their respective districts, and no organized district was without a teacher for the full year. * * * The local license is a thing of the past. Much interest also has been shown in improving the school houses in appearance, both internally and externally, and in furnishing something more than the bare necessities of school apparatus and appliances.

INSPECTOR MEAGHER (District No. 6):

School libraries have been established in a number of districts during the year just closed. The work in this direction is very encouraging. * * * Allusion has been made in previous reports to the necessity of licensing untrained teachers to conduct the schools in a number of districts of this county, and the consequent set-back that has been given to educational progress in those quarters where that necessity exists. The outlook in this direction is now much more encouraging.

Lay on the edge of a table a long and narrow paper bag, and place some heavy weights—two dictionaries for example—upon the closed end. The books can be overturned without being touched, simply by blowing.

The compressed air will swell the bag so violently that the weights upon it will be raised and thrown over. This experiment enables us to measure the strength of our breath by overturning objects of various weights, and will prove that an adult can, without fatigue, raise with his breath a weight of at least twenty pounds.

N. S. Inspectors' Reports.

INSPECTOR MACNEIL (District No. 7):

The average of salaries paid to teachers of the different grades in both counties indicates a slight advance over that of last year, with one or two trifling exceptions. I wish I could believe that this advance, small as it is, was due to some fixed principle of annual increase, or to a recognition of the inadequacy of the salaries generally paid, especially in rural sections. We could then look forward hopefully to the time when it would be comparatively easy to keep all the schools in operation . . .

It is difficult to persuade the average ratepayer, especially if he be at what he considers an inconvenient distance from the school house (and that, now a days, is not very long) or from the proposed site of one, of the unwisdom of subdividing large sections into small and consequently weak ones. The advantages of the division of labor secured by the graded system do not enter into his calculations, but the baneful result of the policy of division are ever painfully present to the "mind's eye" if not to the physical optic of the inspector, who encounters in this tendency to disruption, an element which calls for the expenditure of a great deal of time, and the exercise of as much patience, tact, and diplomacy as he may be possessed of to combat it. . . .

I am pleased to report that Sydney Academy, still under the efficient management of Principal MacKeen, ably assisted by Vice-Principal Stewart, and supported by an energetic and public spirited school board, has passed through what was probably, in many respects, the most successful year in its history. . . .

Excellent work in the high school curriculum is being done in several high schools throughout the inspectorate. Without going into details, I may particularize those of North Sydney, Sydney Mines, Glace Bay, Gowrie (Port Morien) and Bridgeport—schools comprising from eleven to four departments. . . .

If it is true that "the teacher makes the school," the truism is more applicable to the modern than to the ancient school, and it should be the aim of every intelligent and wide-awake board of trustees to secure the very best teaching talent available. It should also be their aim to place within the reach of the teacher as many aids as possible, not only the apparatus prescribed by law as of obligation, such as maps, dictionaries, gazetteers, etc., but other good books and periodicals. The generality of our teachers are not, unfortunately, overburdened with this world's goods, and the acquisition of needed literature is, to them, not always easy. History is making every day, and in order to keep himself *au courant des choses*, so as to be in a position to let his pupils know what is going on in the world, the industrious and earnest teacher must read current literature. And yet, how many teachers do we not find who do not receive even a local newspaper! Now if the suggestion thrown out in my last report were acted upon and the EDUCATIONAL REVIEW subscribed for by every board of trustees, that excellent periodical would receive such a start, and be placed on such a footing as would enable it, I feel confident, to be transformed into a weekly instead of a monthly magazine, containing, in addition to its usual wholesome and instructive bill of educational fare, such notes on current events as would make it fill the place, to the general run of teachers, of a first class newspaper. Its usefulness would be immeasurably extended,—it would become a convenient medium of inter-communication and correspondence on subjects germane to the profession, and we would have an organ whose influence could be made a power in the land. And who would feel the expense?

INSPECTOR MCKINNON (District No. 8):

In the counties of Inverness and Victoria a very great work has to be done in order to place education where it should be. In beginning his duties Inspector McKinnon has to contend against lack of interest, disorganization, small sections, and poverty. We hope his subsequent reports may be characterized by a more hopeful tone.

At present too many teachers, in the lower grades especially, are mere hearers of the lessons learned by rote from text books, and they quite misapprehend the proper function of the teacher. There are others, however, I am glad to say, who without any special aid or training, have developed into teachers of a high order, showing what original capacity developed by experience can attain to.

A very considerable number of sections are too weak financially, and too small, to maintain an efficient school, hence in a great degree the large number of sections vacant during the year now expired. * * *

The compulsory clauses of the Education Act have been adopted in a considerable number of sections. I do not anticipate that the power thus acquired will be exercised to any material extent in the meantime. A more coercive enactment is needed to accomplish the desired reform.

INSPECTOR MACLELLAN (District No. 9):

I am trying to interest pupils and teachers, as well as parents and trustees, in the good work of increasing the attractiveness of school-rooms and premises. In not a few instances I have met with gratifying success, and I am not without hope that a movement has begun which may soon become general. * * *

Possibly a little less time than formerly is being wasted on the alleged teaching of grammar and analysis, geography and history. There would seem to be a growing tendency to re-capitalize "the three R's." In the opinion of many they have too long figured as little r's.

I fear that I cannot vouch for the usefulness of the "nature lessons" given in a majority of the schools. Teachers who have won their licenses by committing text-books to memory could scarcely be expected to prove competent guides in the realms of nature; and I beg to assure you, that they are not. Many of our teachers will have to be taught before we need look for really good work from them.

INSPECTOR CRAIG (District No. 10):

Success in all callings requires a special preparation to attain high standing, and I think there is no room for questioning the beneficial influence exercised by the normal school upon the common schools of this district. During the past three years I have been able to note the rapid growth professionally of many teachers after attending this institution. Yet I find occasionally among the untrained teachers persons who are richly endowed with a strong personality, and who are more than the equals of those having any amount of theory and practice. * * *

There is but one subject in the course of study which I wish to refer to briefly, that is agriculture, which is first mentioned in the eighth grade. I beg leave to suggest its place in all the grades. The Nature work may be so adapted that its trend may be in this direction. Let the lessons in botany, ornithology, entomology, chemistry, have a bearing on the agricultural life of the section. There is no factor so potent to popularize that calling, from which we have been drifting away so long, as the profession of teaching.

The very nature of an inspector's duties gives him the best opportunity to know the conditions and requirements of rural life. Associated a greater portion of the year with the farming class, he hears their grievances and discovers their wants. It is strikingly noticeable the improvidence displayed in the homes and upon the farms of fifty per cent of the people. This arises mainly from an ignorance of the first principles taught in the elementary sciences.

Ninety per cent of the farmers do not enjoy the luxuries which Providence has placed within reach of their hands were they taught how to extend them. The delicacies of a good garden are almost unknown. The continual and injudicious cropping of farms in the first settled portions of the county have forced hundreds to leave them for the precarious living of city or town. But our teachers need first to be taught. Few, though coming from country homes, have a practical, much less a theoretical knowledge of farming. The excellent institution at Truro affiliated with the normal school, has been munificently equipped for an agricultural education, and the fullest advantage should be taken of it. No teacher should leave the training school until he or she has completed a course in some branch of agriculture. * * *

The permanent location of the Summer School of Science in Parrsboro I believe to be in its interests. Geographically it is in the centre of its constituency, and can be reached by rail and boat daily from almost any point of the Atlantic Provinces. The surrounding country affords the very best opportunities for study either in geology, mineralogy, or botany. To these must be added the attractions of a clean seaport town, charming scenery unsurpassed by any other parts of the provinces, scenes abounding in history and Indian legends, and last but not least, a cool, healthy atmosphere, when inland towns are suffering from summer heat.

The practice of dismissing school five minutes before the hour all who come punctually, and then the unpunctual at the exact moment is not a bad one.

For the REVIEW.] NATURE LESSONS.

What a chorus! How uproarious!
"Burr-urr." O how glorious!

"Peep, peep, pape, peep,
Cold feet can't sleep."

"Burr-urr, don't stir,
Little frogs are not born with fur."

"Cold, boled, told, doled,
The wee, little frogs are cold, cold."

"Burr-urr, go off, then to sleep,
And pray the Lord your souls to keep."

As thus I translated the song of the frog
My heart was borne off with them into the bog;

I felt the cold chill of the dark peaty water,
And howled with the hylas until it grew hotter.

Yes, hotter; for water is hotter than ice,
Which only just thawed made the frogs feel nice.

This gave me the key to their musical speech,
The howl was their highest hilarious screech.

They hold their house warming just every spring,
With bag-pipes and cornet they make the air ring.

When the ice is all melted; and to aid in their play
They light the black pond with the dark X ray.

A RELATIVE OF THE FROG.

In the EDUCATIONAL REVIEW of May, 1888, are some notes on the frog and its relatives. The thirteen species found in the Atlantic Provinces are classified into the two sub-divisions of the "tailed" and "tail-less" amphibians. Of the former there were named one "water newt" and four "salamanders," by some people wrongly called lizards, of which we have none in these provinces. To the "tail-less" amphibians were relegated one toad (*bufo*), four frogs (*rana*), and three piping or tree frogs (*hyla*).

Now our water newt, newt, evet, or eft, is a very strange and interesting animal, and one which has not very generally been observed. The first references to it in these provinces was to one in the collection of the Pictou Academy in the article referred to about eight years ago. Since then several specimens have been found and studied. Its scientific name given by Rafinesque is *Diemyctylus viridescens*. Now as one of you has captured a fine specimen which I have here in the water in this glass jar, let us have a talk about him. Tell us where you found the specimen.

S. I found him in a little lake near our place. I was bent over the bank looking into the edge of the water when I saw something like what they call a lizard, but which you say is only a salamander, swimming or walking at the bottom of the water. It was

about four inches long, its back of a dark olive gray, with some fine spots on it, its body was only about two inches and a little more, with two fore feet, with four fingers each on them, and two hind feet, with five fingers each on them, and the tail was about an inch and a half long, and flattened on the sides, the upper edge ran up on the back like a sort of a slight crest.

T. Very good. But how did you catch it?

S. I was afraid it might be poisonous, so I took a net for catching butterflies and caught it as with a scoop net.

T. Yes, but you see it is quite harmless, as I put my hand under him in the water and take him out. You see he wants to get back into the water again, and does not hurt any more than a fly. What is the color of its under parts?

S. A pale orange yellow, with small dark spots.

T. What do his eyes and mouth remind you of?

S. Of those of a small frog. Why has it got four fingers on its fore feet and five on its hind feet?

T. I cannot tell that. It is like its nearest relatives — the salamanders — in that respect. If it were a lizard, it would have five toes, or fingers, as you call them, on the fore feet as well as the hind ones, and its skin would be covered with scales, and not naked like that of the frog. Now let me take this small speck of fresh meat on the end of this splinter of wood and put it near his mouth.

S. O, he bites it. See what antics he makes in trying to swallow it. He is trying so hard to jerk it down his throat. He looks as if he might break his neck with some of his jerks.

T. Well, to be brief, let me give you an outline of his remarkable life. The egg was glued like the head of a very small pin to one of the small leaves of the small weeds growing in the lake or pond. It was surrounded by a transparent albuminous sphere like the eggs of the frogs, only the eggs are smaller and are placed singly on these small leaves.

When the egg is hatched out, the larva is of a dark olive grey color, with gills and a tail-fin, and by September may be over an inch in length. But about that time the fish-like gills and tail-fin become nearly absorbed, and the young newt climbs out of the water a little, and looks in a sort of wondering and longing manner towards the unknown land. After several repetitions of such apparent meditations on the distant world he betakes himself to the land. He soon begins to change his color, first becoming dark red, and finally a vermilion red. He is during this time feeding on spiders and other such insects, while he delights in retreating for the most of the time to the moist shelter

of rotten logs and the like. For perhaps more than two years he may live this terrestrial life, and breathe by means of his lungs, while the cells covering his throat and all the air passages become like those of all air-breathing animals. But he finally returns to the water, where the female deposits her eggs on the small leaves of water plants. He very soon loses his bright coloring, becomes grey olive, as you see him, loses the peculiar character of the mucus lining of his air passages, begins to breathe as a water animal, as he did originally. If you look closely at his back you will notice a row of small bright vermilion spots on each side, the vermilion spots being surrounded by a minute circle of black. For this reason he is sometimes called the vermilion spotted newt.

Until quite lately naturalists thought that the two stages of the life of this species constituted two distinct species. Speckled dark grey olive in water, it becomes red and even vermilion on land; but the bright yellow of its under parts in water, together with the red spots and the reddish tinge of the yellow, show always some connection with its peculiar land color.

S. What does it feed upon, and how can we keep it in order to study how it acts?

T. Keep it in fresh water, often changed. The presence of rotten wood in the water is not distasteful to it. Feed it occasionally with very small shreds of fresh meat; but do not allow fragments of the same to remain long in the water, as it putrefies and makes the water more or less injurious to its health. It naturally feeds upon small water insects. You may have something rising above the water, so that if he wants to take the air occasionally, he can do so. But be careful that he cannot climb up the walls of the vessel, or some day he will escape and be lost to you, and destroy himself by wandering into some crevice in the house where he cannot continue long to live. I had one, who apparently took a strong fancy to the land again, and, after some longing, actually scaled what was thought an impassable height and disappeared forever, leaving a lonely mate behind.

CLOUD STUDY.

An international committee of meteorologists are going to commence a special study of clouds in various portions of the world for one year, beginning with the first of May next. The committee may help to fix upon a good method of classifying and naming clouds. Our teachers who keep their eyes open to cloud phenomena during the year will be in a position not only to utilize the findings of the said committee, but to enjoy their whole report.

The April Sky.

The two greatest planets, Jupiter and Saturn, are well situated for observation this month. While Jupiter is slowly sinking in the west, Saturn is rising in the east, and, between ten and eleven o'clock at night, the observer, with a small telescope, may turn alternately from the belted to the ringed planet and enjoy the striking contrast between them. Jupiter is in the constellation Cancer, moving slowly eastward. It rises in the middle of the day and is well situated, west of the meridian, during the entire evening. Saturn is in Libra, a little east of the star α . It becomes well elevated in the southeast by ten o'clock p. m. Mercury, which is in Pisces at the beginning of April and in Taurus at the end, is too near the sun to be observed. It passes behind the sun on the 17th, emerging afterward into the evening sky, where it will become visible in May. Venus is also too near the sun for convenient observation, although early risers may catch sight of it before sunrise in the constellation Aquarius, from which, in the course of the month, it will move eastward into Pisces. Mars also is an early morning star, being situated at the opening of the mouth in the eastern part of Capricorn and at the end in Aquarius, still nearer the sun. Uranus is in Libra, six or seven degrees southeast of Saturn, and Neptune is in Taurus, near the star i . * * *

At the time of the conjunction with Jupiter, on the 20th, the moon will be near first quarter, and the conjunction will occur a little more than half way from the eastern horizon to the meridian. If the sky is clear, it should be possible to find the moon easily with the naked eye. A telescope directed to the moon at about three p. m., and swept carefully toward the south, will enable the observer to pick up Jupiter by daylight—a very interesting observation for an amateur. The planet, at that hour will be about two degrees from the moon, in a southerly direction.

The starry heavens are very attractive in April. Between nine and ten p. m., about the middle of the month, Sirius is flashing near the western horizon while the brilliant Vega is rising in the northeast. Nearly overhead shines the Great Dipper, and south of it appears the softly twinkling Berenice's Hair. East of the latter is Arcturus, a royal star in brightness and color, while between Arcturus and Vega glitters the pure white Spica in the constellation of the Virgin.—*Garrett P. Serviss in Scientific American.*

When one derides teaching and child-study it is well for us to remember that Aristotle said, "That the nature of everything is best seen in its smallest portions."

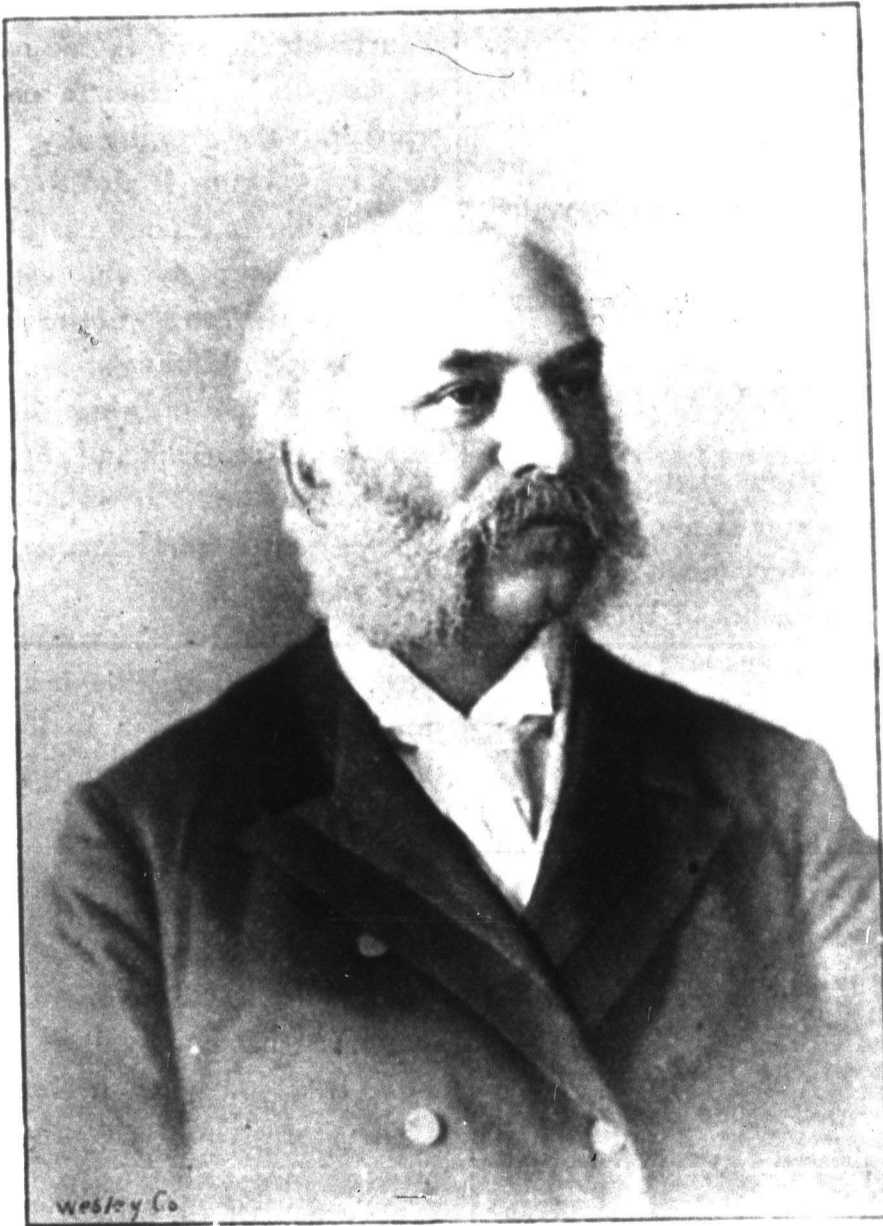
Our School Trustees.

The appointment of Judge Barker to the chairmanship of the St. John Board of School Trustees is one that gives satisfaction to all classes of citizens. He is a gentleman of scholarly tastes, sound judgment, and with some experience in school administration. Judge Barker was born at Sheffield, N. B., Dec. 27, 1838, and was educated at the Sunbury grammar school under the Rev. Geo. S. Milligan, formerly of St. John, but for some years past a resident of St. John's, Newfoundland, where he occupies the position of chief superintendent of education. In June, 1853, Judge Barker matriculated at King's College, Fredericton, where he graduated B. A. in June, 1856, special honors having been awarded him by the examiners at his final degree examination. In 1858 he passed the necessary examination for the degree of M. A., which was duly conferred upon him in June of that year. In 1861 he was admitted by the University of New Brunswick to the degree of B. C. L., and in 1866 to the degree of D. C. L.—both degrees having been taken in due course. In Trinity term, 1856, he entered as a student at law with the late Judge Fisher, and in Trinity term, 1860, he was sworn in an attorney of the supreme court, and a year later called to the bar.

He commenced practising in St. John in November, 1860, and he has resided there ever since. In 1865 he entered into partnership with the late Judge Wetmore, and they continued doing business together until Mr. Wetmore was appointed to the bench. In 1873 Judge Barker was appointed a Q. C., and in December, 1893, a judge of the supreme court—in the place of Judge Fraser, who accepted the office of lieutenant-governor

of the province. Judge Barker was also president of the Barristers' Society, and of the St. John Law Society, and for many years a member of the council of both societies, and as such acted for some years as an examiner. He was also appointed by the Provincial Government in 1875 as a commissioner in conjunction with Mr. Skinner and Judge Wetmore, now of the Northwest Territories, for the consolidation of the New Brunswick statutes. Later on he received similar appointment in a law commission, to suggest legislation in practice and procedure.

Judge Barker has always taken an interest in educational work, though his professional duties have occupied too much of his time to admit of any very prominent part in it. He was for many years a member of the Senate of the University of New Brunswick, and also secretary and treasurer, and for a time president, of the associated alumni of that institution, a society which, in a large degree, owes its existence to his exertions. He is at present one of the board of governors of the Girls' Church School at Windsor, N. S., and also one of the governors of the Madras School of this province. When the present school law was passed, he was appointed a member of the Portland school board, a position which he held



JUDGE F. E. BARKER, CHAIRMAN ST. JOHN SCHOOL TRUSTEES.

until he removed from the town of Portland to the city.

It is hoped that Judge Barker's somewhat exacting legal duties may allow him sufficient leisure for the position to which he has been called, and which he is so well adapted to fill both by character and education. It speaks well for the future of education in the province when men of dignity, wide social influence, and unblemished reputation, accept without pecuniary reward the responsible duties of its administration.

Hints and Selections for Arbor Day.

State Superintendent Hon. Henry Sabin of Iowa, in his excellent Arbor Day leaflet, well says:

"Arbor day has two missions—one of tree planting and one of nature study. Wherever there is a barren, desolate piece of ground called 'the schoolhouse yard,' there its mission is to plant trees and shrubs; to care for them, and teach the children to love the trees they plant as one friend loves another. There are hundreds of such yards which need to be made beautiful and attractive to the children. Select a thrifty young tree, such as grows most luxuriantly in your section of the state, and ask some one who knows how to direct you in planting it. Interest the children in caring for it, that it may get well-rooted before the dry summer months come on. Every such tree planted by you, if it lives and grows, will prove a blessing to the district and State.

"The other mission of Arbor Day is broader and reaches out into the entire realm of nature. Its exercises should be such as in after years will awaken pleasant memories and recall the associations of a happy childhood. Nature is many sided. She reveals her beauties in a thousand varied forms. To lead the child 'to look from Nature to Nature's God' is the work of a teacher who himself knows her secret ways and her pleasant paths.

"The spirit of Arbor Day should remain throughout the year. The exercises should be made to minister to building the character of the child. Character is always fashioned after some ideal. This should be the tendency of Nature lessons, to form the right ideal of truth, reverence and worship, as well as of knowledge. If it is not, then the golden opportunity is lost."

Subjects for Essays: The Value of Trees; The Prettiest Evergreen; The Prettiest Deciduous Tree; How should Trees and Shrubs be Cared for after they are Planted; A Description of some Trees that Grow near the School Grounds; Well kept School Grounds show the Character of the Neighborhood; The White Birch; The Sugar Maple, etc.

RESPONSIVE RECITATION FOR NINE PUPILS.*First Pupil:*

Old Mistress Chestnut once lived in a burr,
Padded and lined with the softest of fur.
Jack Frost split it wide with his keen silver knife,
And tumbled her out at the risk of her life.

Second Pupil:

Here is Ben Almond, a grandee from Spain,
Some raisins from Malaga came in his train;
He has a twin brother a shade or two leaner,
When both come together we shout "Philopenal!"

Third Pupil:

This is Sir Walnut; he's English, you know,
A friend of my Lady and Lord So-and-So.
Whenever you ask old Sir Walnut to dinner,
Be sure to have wine for the gouty old sinner.

Fourth Pupil:

Little Miss Peanut, from North Carolina—
She's not 'ristocratic, but no nut is finer.
Sometimes she is roasted and burned to a cinder.
In Georgia they call her Miss Goober, or Pinder.

Fifth Pupil:

Little Miss Hazelnut, in her best bonnet,
Is lovely enough to be put in a sonnet;
And young Mr. Filbert has journeyed from Kent
To ask her to marry him soon after Lent.

Sixth Pupil:

This is old Hickory, look at him well.
A general was named for him, so I've heard tell.
Take care how you hit him. He sometimes hits back!
This stolid old chap is a hard nut to crack.

Seventh Pupil:

Old Mr. Butternut, just from Brazil,
Is rugged and rough as the side of a hill;
But like many a countenance quite as ill-favored,
His covers a kernel deliciously flavored.

Eighth Pupil:

Here is a Southerner, graceful and slim;
In flavor no nut is equal to him.
Ha! Monsieur Pecan, you know what it means
To be served with black coffee in French New Orleans.

Ninth Pupil:

Dear little Chickapin, modest and neat—
Isn't she cunning, and isn't she sweet?
Her skin is as smooth as a little boy's chin,
And the squirrels all chatter of Miss Chickapin.

All:

And now, my dear children, I'm sure I've told
All the queer rhymes that a nutshell will hold,
—St. Nicholas.

Thank God for the Trees.

Children, thank God for these great trees,
That fan the land with every breeze,
Whose drooping branches form cool bowers,
Where you can spend the summer hours,
For these thank God.

For fragrant sweets of blossoms bright,
Whose beauty gives us such delight;
For the soft grass beneath your feet,
For the new mown hay and clover sweet,—
For all thank God.

—Selected.

Arbor Day.

Dear little tree that we plant today,
What will you be when we're old and gray?
"The savings bank of the squirrel and mouse,
For robin and wren an apartment house,
The dressing room of the butterfly's ball,
The locust and katydid's concert hall,
The schoolboy's ladder in pleasant June,
The schoolgirl's tent in the July noon
And my leaves shall whisper them merrily
A tale of the children who planted me."
—Youth's Companion.

The Trees.

(For six children. Each one may hold in the hand a branch of the tree which he or she represents.)

I am the oak tree! For ages I've stood
Acknowledged by all to be king of the wood;
I've weathered the storms of the centuries,
The suns that scorch and the frosts that freeze.

I am the willow tree! Bending low
I seem to be bearing a burden of woe;
In my drooping branches all day long
The winds seem singing a strange sad song.

I am the pine tree! Gracious and green,
Rearing my crown to the heavens I'm seen.
Inhale the air and you will divine
The balsamic breath of the odorous pine.

I am the palm tree! Yea, and I stand
Fruitful and fair on the hot desert land,
Under my shade the caravans rest,
But the dates that I bear the children love best.

I am the aspen tree! Who can explain
Why it is that I quiver like one that's in pain?
There's a story that tells why the aspen tree grieves,
But the fact is it's all just because of its leaves.

I am the cedar tree! Ho! I can tell
A tale that I'm sure you will like pretty well.
The highest and lowest are happy, I say,
When I'm laden with presents on Christmas day.

We are the trees! Our story we've told,
And all will agree with me, youthful and old,
That there's nothing the eye of the gazer sees
More worthy of love than the beautiful trees.

—Susan M. Best.

He Who Plants a Tree.

He who plants a tree
Plants a hope;
Rootlets up their fibres blindly grope;
Leaves unfurl into horizon free.
So man's life must climb
From the clods of time
Unto heaven sublime.
Canst thou prophesy, thou little tree,
What the glory of thy boughs shall be?
He who plants a tree,
Plants love;
Tents of coolness spreading out above
Wayfarers, he may not live to see.
Gifts that grow are best;
Hands that bless are blest;
Plant! Life does the rest!
Heaven and earth help him who plants a tree
And his work its own reward shall be.

—Lucy Larcom.

"He governs best who seems to govern least."
Gentle measures are preferable to harsh ones; yet when
gentle measures fail, as they frequently do, sterner
means must be employed to preserve order in school.

The Vocation of the Teacher.

The most potential factor in the teacher is the social environments in which he is born. In a large measure, we are all the essence of this environment. The child has a capacity for something higher than absorbing and assimilation, and it is to develop this that the teacher is necessary. No business in which men can engage equals it in delicacy and significance to society. A teacher is a fellow worker with the Creator. The responsibility of a teacher is enormous, as the work is done when the child's mind is in its most plastic state. If this is the end of education, we must have a select class to perform the functions.

Nothing is more fatal to a teacher than mental stagnation. A teacher should possess an encyclopedic interest in everything, and an insatiable thirst for knowledge. He who has ceased to have this thirst has ceased to be a good teacher.

The crown and glory of all the qualifications of teachers is to love the children. No one has ever succeeded, no one ever will succeed, and no one can succeed as a teacher who is not loved by the children.

The teacher who loves and is loved gains an insight into the children's ways. Children have a self-centered life of their own; they have their own ways of thinking and feeling. Neglect to study children is one of the sins of the profession.

The idea of selecting books and then making children study them—books that the children do not like or will not become interested in—will soon fade away. Progressive teachers are using books that are the children's ideal, and this, to coin another new word, is what I call pedocentric.

The time is not far off when the children will be treated as independent individuals, and the work will begin with a study of the children and a deep insight into their natures and dispositions. The business of the teacher is not entirely to instruct but to love. A sound character and a loving heart are the substance out of which good teachers are made.

Great stress should be laid upon the scholarship and professional qualifications for the work that the teachers presume to undertake. It is just as difficult to-day, with all the public instruction, as it was 2,300 years ago, to get a competent teacher.

The profession of teacher should be lifted to a position among the learned professors. We are not yet a profession.

A drawback is in the shifting ranks in the teachers' line; men enter the ranks temporarily, and then three-fourths of the teachers are women, and of course they marry—this partly explains the shifting.

I believe that so far as qualifications of school teachers are concerned, mistresses of elementary schools should be graduates of a high school, and the mistresses of high schools should be college graduates.

No one can teach all or one-half of what he or she may know. Teachers should keep at least four years ahead of the pupil.

A hope and dream that I have cherished is that at some time a higher college for teachers shall be started a department similar to the present law and medical departments of universities where nothing but sociology, logic, ethics, educational economy, etc., will be the course, and the course to last two years. I may be too sanguine, but, like Plato, I am a man with aspirations.

Pres. J. G. Schurman, Cornell Univ.

Suggestions on Teaching Literature.

We are told that the way to become a good writer is to write; this sounds plausible, like many other pretty sayings equally remote from fact. No one thinks that the way to become a good medical practitioner is to practice; that is the method of quacks. The best way to indeed to become a good writer, is to be born of the right sort of parents; this fundamental step having been unaccountably neglected by many children, the instructor has to do what he can with second or third class material. Now a wide reader is usually a correct writer; and he has reached the goal in the most delightful manner, without feeling the penalty of Adam. What teacher ever found in his classes a boy who knew his Bible, who enjoyed Shakespeare, and who loved Scott, yet who, with this outfit, wrote illiterate compositions? This youth writes well principally because he has something to say, for reading maketh a full man; and he knows what correct writing is in the same way that he knows his friends—by intimate acquaintance. No amount of mere grammatical and rhetorical training, nor even of constant practice in the art of composition, can attain the results reached by the child who reads good books because he loves to read them. We would not take the extreme position taken by some, that all practice in theme-writing is time thrown away; but after a costly experience of the drudgery that composition work forces on teacher and pupil, we would say emphatically that there is no educational method at present that involves so enormous an outlay of time, energy, and money, with so correspondingly small a result. To neglect the teaching of literature for the teaching of composition, or to assert that the second is the more important, is like showing a hungry man how to work his jaws instead of giving him something to eat. In order to support this with evidence, let us take the experience of a specialist who investigated the question by reading many hundred sophomore com-

positions in two of our leading colleges, where the natural capacity and previous training of the students were fairly equal. In one college every freshman wrote themes steadily through the year, with an accompaniment of sound instruction in rhetorical principles; in the other college every freshman studied Shakespeare, with absolutely no training in rhetoric and with no practice in composition. A comparison of the themes written in their sophomore year by these students showed that technically the two were fully on a par. That is weighty and most significant testimony.

If the teachers of English in secondary schools were people of real culture themselves, who both knew and loved literature, who tried to make it attractive to their pupils, and who were given a sufficient time-allotment to read a number of standard books with their classes, the composition question would largely take care of itself. Mere training in theme-writing can never take the place of the acquisition of ideas, and the boy who thinks interesting thoughts will usually write not only more attractively, but more correctly, than the one who has worked tread-mill fashion in sentence and paragraph architecture. The difference in the teacher's happiness, vitality, and consequent effectiveness is too obvious to mention.—*The Century (Editorial)*.

The Cause for Old Maids.

Much time and thought have been spent, of late, in trying to solve the "old maid question," with the result now and again of the thinker being logically forced to the conclusion that possibly the standard of manhood needed to be elevated somewhat before modern womanhood would bow low before her lord and master. This was tersely expressed "by one of them" in the following instance:—

The professor of natural science at Ann Arbor was discussing the process of fertilizing plants by means of insects carrying pollen from one plant to another, and to amuse them told how the old maids were the ultimate cause of it all. The humble bees carry the pollen; the field mice eat the humble bees; therefore the more field mice the fewer humble bees and the less pollen and variation of plants. But cats devour the field mice and old maids protect cats. Therefore the more old maids, the more cats, the fewer field mice, the more bees. Hence old maids are the cause of variety in plants. Thereupon a sophomore with a single eye-glass, an English umbrella, a box-coat, with his "trousers" rolled up at the bottom, arose and asked:—

"I s-a-ay, professah, what is the cause—ah—of old maids, don't you know?"

"Perhaps Miss Jones can tell you," suggested the professor.

"Dudes," said Miss Jones sharply and without a moment's hesitation. There was a silence in the room for the space of thirty seconds, after which the lecture was resumed.

Talking School.

"What is the matter? Can't you make them mind?"

A teacher was recounting her weariness, her general tiredness of school and all pertaining thereto, to a neighbor, and that was the answer she received.

The teacher flushed under such an ejaculation and this is what I said to her afterwards.

"I have been through it all—the fatigue, the vexation of spirit, and the longing for sympathy, and from the abundance of my experience I want to say 'Don't!'"

"In the first place, do you really feel any better for telling how tired you are, what a hard case Johnny Smith is, and how inadequate, in your opinion, is the compensation of teachers?"

"In the next place, do you realize that as a general thing you are boring your friends terribly? How much more interesting, think you, you would be both to them and to yourself, were you to introduce some bright topic of the day, say, or follow the lead when some one else does, instead of veering off upon dreary pedagogical details?"

"And finally, do you know that it militates greatly against your establishing a reputation as a successful teacher,—this enumerating the difficulties you encounter in disciplining your room, your 'dead tiredness,' and your general discontent with school matters?"

My young friend looked down in a hopeless sort of a way, but she was as certain she had my sympathy as that she had my advice.—*E. R. in Primary Education.*

Reasons for Protecting Forests.

When the rain falls on a surface covered by vegetation, the water, by slowly trickling down the stalks or stems of the leaves, branches, and trunks of the trees, finds a ready entrance into the ground by following their surfaces and discharging into the porous ground lying outside their roots.

A forest, that is a section of ground covered by trees, permits this action to take place quite readily.

A forest, therefore, tends to decrease the frequency of floods, because it decreases the amount of the rainfall that drains directly from the earth's surface.

A forest also tends to prevent the occurrence of too little water in a river, because it ensures the filling of the reservoirs of springs, which discharge their waters into the rivers in the intervals between the rainfalls.

The forests must therefore be preserved in order that the rivers may properly aid in draining the earth.

Forests promote healthfulness by their influence on atmosphere. Evaporation in open country is five times as great as in the woodlands.

Forests produce rainfalls. Six per cent more rain falls yearly in forests than in the open fields. Ten per cent of this rainfall is caught by the leaves and reaches the earth gradually.

The dense carpet of leaves in forests creates an absorbent, sponge-like surface. Leaf mold is usually several inches and sometimes several feet in depth. It lessens the freezing in the ground and absorbs and retains rains and melting snows that gradually sink into the soil. Snow melts more slowly protected by trees.

Decaying limbs and trunks of trees, and bulging roots near the surface check the water on the hill-sides till it can filter into the soil and gradually feed springs and rivers.

Roots of trees have a wonderful power to penetrate into hard sub-soil and by their mechanical action lift or break it up, forming deep passages for water. This water penetrates through hard pan into more porous strata or subterranean reservoirs and thus insures the regularity and permanence of springs. When the forest is destroyed the mechanical action of live roots is destroyed and these orifices become obstructed. Burned-over lands consume the leafy mold and the melting snows and rainfalls rush down and wash away soil.

Land may be reclaimed by planting trees. Ten thousand acres on Cape Cod have been planted and where once it was only sand, now it is soil.

All woods consists mainly of carbon drawn from the air. Under the action of sunlight trees substitute oxygen for carbonic acid.

Forestry is considered a science in Europe. It received national recognition there about a century and a half ago. The first schools of forestry were established in Germany in 1717. A chair of forestry was established in Germany in 1825 in a university, and has since become a part of several other universities. There are nineteen schools of forestry in Europe. *J. Sterling Morton.*

What in the world is to be done with those otherwise good people who persist, in conversation, in using "I" and "he" in the objective? Most of these people know better, though some of them are college graduates; but they go on saying, "Will you go with Dick and I to the symphony?" and even, "It was between he and I," though they would never, of course, say, "Will you go with I?" The number of people who use this solecism is apparently increasing. Public school teachers use it, and the sound of it is not altogether unfamiliar in what is called good good society, though "me and him did it" is not a whit more ungrammatical than "between you and I." Evidently some people use the phrase without knowing that they do it; but why should they? Still other people, who have been taught that "me and him went" is not correct, ignorantly suppose that "between you and me" is also ungrammatical. In this case, of course, the mistake is due to pure ignorance, and no one can complain of it, because ignorance is generally a misfortune rather than a fault. But when people who have been to school use the nominative case in the objective, and say "between you and I," or "I will let you and he know," one feels like projecting some convenient article of furniture at them. Perhaps some form of violence will have to be resorted to break up the practice.—*Boston Transcript.*

Do We Give the Most Useful Education?

The learning of the school is not operating beyond school days. Any kind of learning which does not become an organic part of the personality, through its applicability to the necessities of life, cannot in the nature of things, become a power beyond school days. The reason why the learning of the schools is inoperative beyond school days, is chiefly due to the fact that it has little or nothing to do with the actual business of life. We still continue to indoctrinate pupils with useless learning and wonder why, when school days are ended, they relieve themselves of the burden so quickly.

While we have arrived at the positive and industrial stage of development in secular affairs, the school whose business it is to prepare its pupils for the demands of such an age, still continues enamoured of "other worldliness" and metaphysics. It seems high time that we should awaken to the fact that education is preparation for the actual affairs of life. Yet we continue to waste hours upon mathematical problems which apply neither to "the heavens above or the earth beneath." Our histories are filled with fantastic and useless facts, while the political and economic development of the country is discussed in a few paragraphs. Thousands die annually from zymotic-filth-diseases, avoidable if proper physiological and hygienic knowledge were taught, yet educators question the right to the small amount of time already allotted to these subjects. The argument of Herbert Spencer demonstrating the *primary* importance of physiological knowledge has never been invalidated, yet educators relegate the subject to the background. Every Roman youth knew the common laws of his country, yet our young people are ignorant of the common law pertaining to every-day acts and misdemeanors.

It certainly seems time to consider the correlation of the school with the conditions of the age. When we have made the readjustment required, we may proceed with some degree of success to the concentration of studies. — G. M. W.

Dr. Wilder, of the Cornell Brain Association, has made another appeal to educated and moral persons to bequeath their brains to the institutions for scientific study. In response to this letter, the society has already received eight brains, and has the promise of 25 others which are as yet being used by their owners. These latter include the brains of Thomas K. Beecher, of Elmira, and Mrs. McGee, daughter of the astronomer Simon Newcomb.

PRIMARY DEPARTMENT.

Arbor Day.

After an appropriate song, the first topic,—Uses of forests,—was taken up. By means of judicious questioning, some giving of information and the use of a bit of crayon, the following suggestive outline was evolved and placed in the hitherto blank space under the subject mentioned.

1. Furnish fuel and lumber.
2. Make soil.
3. Promote and regulate rainfall.
4. Protect country from destructive winds.
5. Hold water in soil, preventing floods.
6. Breeding place of birds and animals.
7. Promote health by using poisonous gases and giving off oxygen.
8. Source of wealth to a country.
9. Add beauty to scenery.

Following a similar plan with all the topics, they finally read like this:—

FOREST PRODUCTS AND THEIR USES.

1. fruits for food.
2. lumber for { shelter,
manufacturing.
3. wood } for fuel.
coal }
4. bark }
roots } for medicines.
leaves }
5. leaves }
berries } for beverages.
6. Barks for tanning
7. tree-trunks for { ship-masts,
telegraph-poles, etc.

ENEMIES OF FORESTS.

1. Forest fires.
2. Lumber mills.
3. Factories.

COMPARATIVE VALUE OF FOREST PRODUCTS.

- 3 × all mineral products.
10 × all gold and silver (estimate for one year).

INTERESTING FACTS.

1. *R. R. Ties.*

All R. R. ties in use in the United States, placed end to end, would span the earth fifteen times at the equator or reach more than 20,000 miles beyond the moon. Made from 30-year old trees last only five to eight years.

Must cut from 60,000 to 100,000 acres each year to keep supply.

2. *Fuel.*
145,000,000 eds. used annually.
3. *For Burning Brick.*
2,000,000 eds. used annually.
4. *Matches.*
300,000 eds. used annually.
5. *Shoe-pegs.*
100,000 eds. used annually.

After recapitulating the five topics already considered, considering the great need of forests and the constant loss through so many channels, Miss Brown was able to emphasize the great importance of the last one which brought out the real thought of the day, and which on the board was briefly summed up as follows:

HOW SHALL FOREST SUPPLIES BE KEPT UP?

1. In Europe, mostly under government control.
2. In U. S., by means of Arbor Day tree-plantings and getting people interested in the study of forestry. (N. B.—Kansas has 20,000,000 fruit trees and 200,000 more acres of forest, because of Arbor Day.

—*Popular Educator.*

The Dull Pupil.

Do we not make serious mistakes in that we are always ready to censure the slow pupil?

Here is little Olga, naturally timid, and seemingly dull. She is constantly failing. The teacher takes great pains to notice it, and when she calls her arithmetic class, she keeps before her mind the too oft-repeated failures of the child. On calling for 4×5 , all hands are raised save one; the child notices her teacher looking at her, and immediately becomes confused. Sarcasm and disgust are plainly written on the teacher's face. With, "Of course, Olga, *you* don't know; you never do!" she passed on. Is not this a cruel thrust? Do we consider what we are doing? Do not let us make the dullard believe he "never knows," but help and encourage him with kind words and gentle ways. Let us cheer him on to quicker ways; encourage him with gentleness and sympathy. How much better for Olga if her teacher had said, "What, Olga! Don't you know? I'm sure you can answer as well as the rest. Now think a little while, and let me see *your* hand, too." Thus by encouraging, we give them faith in themselves, and strength to do, what before, was seemingly hard. Dear comrades, if we have an Olga, do not let us chill all that is best in her, but help along a thousand times rather than hinder once.

"It is not so much what we say,
As the manner in which we say it."

—*Primary Educator.*

Reading.

It is such an uncommon occurrence for a child to say "I do not know what that means," in a reading recitation, that both teacher and pupils look up in surprise, causing that thoughtful child to feel very uncomfortable. Yet it is of very frequent occurrence that children do not understand what they read, as can be proved by questioning them.

Reading recitations are often purely mechanical, no questions being asked by the teacher to set the children to thinking, or to test them to see if they are thinking.

Interesting aims are very valuable in keeping the children alert in the recitation. If the children have read the lesson before coming to the class, they may be questioned on what they read in the class, to see if they are thinking.

Did you ever encourage the children to act out the stories as they read them, not as fully as in the literature class, but enough to give added force to what they read.

In the more mechanical part of the reading exercise—the pronunciation of new words—the child should do for himself as far as possible. Teachers make a mistake when they fail to provide the child with the tools—the sounds of the letters—by which he may become an independent word pronouncer, at least, and he cannot get the thought unless he first recognizes the words. *Primary Educator.*

Children cannot be forced to sing, they must be led says Frederick E. Chapman, director of music in the public schools of Cambridge, Mass. When after the exercise of meekness, gentleness, patience and other virtues the teacher has led the boy to sing, says Mr. Chapman, "I have repeatedly observed a total change in a boy's character, by leading him to feel that he cannot only sing for his own pleasure, but can afford much enjoyment and gratification to his friends that he could not possibly expect to do in any other way."

The moral strength of a man is measured pretty accurately by the cordial reverence with which he regards whatsoever has the right to call itself his master. Estimated by this criterion the average American boy is a discouraging type of humanity, and is a severe reflection upon the crude attempts at manhood manufacture evinced by the typical American home. If our homes cannot turn out children that will respect authority, there will be no authority in a great while either at home, in the state, or anywhere else, that will be worth their respecting.—*Dr. Parkhurst.*

Books are used in which the chief aim of the writer is to repeat over and over the same words, instead of giving the child something which he will enjoy. At this day there is no excuse for the poor material. For first grade we have Cyr's "Primer," "Tables and Rhymes for Beginners," "The Werner Primer," "Hearts of Oak," (I) "Verse and Prose for Beginners," and Miss Burt's "Nature Reader." For second grade, Wiltse's "Grimm's Fairy Tales," "Nature Stories for Young Readers," "Easy Steps for Little Feet," Cyr's "Second Reader," Cooke's "Nature Myths and Stories." These are not all, but enough to show that the field is rich.—
Primary Education.

Teach them to guard with jealous care
The land that gave them birth,
As patriot sons of patriot sires—
The dearest spot of earth;
Teach them the sacred trust to keep,
Like true men, pure and brave,
And o'er them through the ages bid
Freedom's fair banner wave.
—*Author of "America."*

St. Nicholas Magazine recently offered prizes for the best correction of a misspelled poem. More than ten thousand answers were received, and the committee has been overwhelmed with work, the results of which and the names of the prize-winners appeared in the January *St. Nicholas*. Answers came from all over the world, from Turkey, from Egypt and from Europe— from a little countess in Vienna, and from the grandchildren of Emerson and Hawthorne in America. The committee reluctantly make the admission that the penmanship of the English and Canadian children excels that of Uncle Sam's boys and girls.

QUESTION DEPARTMENT.

G. M. P.—Asks for question 4, Sec. III, page 184, of Hamblin Smith's arithmetic. In our edition of that arithmetic there is no such question. We take for granted that page 185 is meant.

(1) A man having lent \$10,000 at 5 per cent interest, half-yearly, wishes to receive his interest in equal portions monthly, and in advance; how much ought he to receive each month?

He is entitled to receive \$250 at the end of each six months

But if he is paid monthly in advance the first payment will be six months in advance, the second payment five months in advance, etc. Of these payments he will only receive the present worth.

∴ \$250 = 1st payment + interest on it for 6 months +
2nd " + " " 5 " +
3rd " + " " 4 " +
4th " + " " 3 " +
5th " + " " 2 " +
6th " + " " 1 " +
= 6 payments + interest on a payment for 21 months at 5%.
= 6 payments + $\frac{21 \times 5}{12 \times 100}$ of a payment.
= $6\frac{7}{8}$ payments.

$\$41\frac{33}{87} = 1$ payment.

For another solution see REVIEW for May, 1895.

(2) How much may be gained by hiring money at 5 per cent to pay a debt of \$6,400 due in 8 months, allowing the present worth of this debt to be reckoned by deducting 5 per cent per annum discount?

Interest on \$6400 for 8 mos. at 5% = \$213½ = discount.
∴ sum he has to hire = \$6400 - \$213½ = \$6186½.

Amount of \$1 for 8 months = \$1.03½.

" \$6186½ for 8 mos. at 5% = \$6392.88½.

∴ the sum gained = (\$6400 - \$6392.88½) = \$7.11½.

(Solution by Clara MacMiller, Class C, Halifax Academy.)

For another solution see REVIEW, May, 1895.

W. H. B.—(1) The first question asked was solved in the REVIEW, May, 1895, and is now again solved in another way above.

(2) Hamblin Smith's arithmetic, page 190, ex. 2:

The items on the debtor side fall due on Oct. 12, Nov. 14, Jan. 17 and Dec. 31, respectively.

Then we have $0 \times 927.30 = 0$
 $33 \times 342.75 = 11310.75$
 $80 \times 175.50 = 14040.00$
 $97 \times 212.13 = 20576.61$

$1657.68 \quad 45927.36$ (28 nearly.)

28 days from Oct. 12 is Nov. 9; therefore \$1657.68 is due Nov. 9.

On the credit side we have:

$0 \times 500 = 0$
 $41 \times 300 = 12300$
 $51 \times 250 = 12750$

$1050 \quad 25050$ (24 nearly.)

24 days from Oct. 10 is Nov. 3.

Therefore \$1050 is due Nov. 3.

If \$1050 gain a certain interest in 6 days, the balance \$607.68 will gain the same interest in 10½ days. The eleventh day from Nov. 9th is Nov. 20th, on which day the balance will be due.

(3) The gross receipts of a railway company in a certain year are apportioned thus: 40 per cent to pay the working expenses; 54 per cent to give the share-

holders a dividend at the rate of $3\frac{1}{2}$ per cent on their shares, and the remainder, \$42525 is reserved. What was the paid-up capital of the company?

40 for working expenses.

54 for dividends.

$$\therefore 6 = \text{remainder} = \$42525.$$

$$\therefore \text{Dividends} = 54 = \$42525 \times 9.$$

$$= \$382725.$$

But $3\frac{1}{2}$ on the shares = dividends.

$$= \$382725.$$

$$\therefore 100 \text{ of the shares} = \frac{382725 \times 100}{3\frac{1}{2}} = \$10935000.$$

T. E. McL. If two exterior angles of a triangle be bisected by straight lines which meet in F, prove that the perpendicular from F on the sides produced of the triangle are equal.

Let ABC be any triangle, and let the sides CA and CB be produced to D and E respectively. Let the exterior angle DAB be bisected by AF, and the exterior angle ABE be bisected by BF. Then the perpendicular FG on the side DC = the perpendicular FH on CE. From F let FK be drawn perpendicular to AB.

Then FH = FK. Euc. I, 26

FG = FK. "

\therefore FH = FG. Q. E. D.

E. M. L.—(1) If a straight line is drawn through one of the angles of an equilateral triangle to meet the opposite side produced, so that the rectangle contained by the segments of the base is equal to the square on the side of the triangle, show that the square on the line so drawn is double of the square on a side of the triangle.

Let BAC be an equilateral triangle, and let E be any point in its base produced so that AE, CE = BC², then BE² = 2 BC².

Draw BD perpendicular to AC.

Then it may be shown by I, 26 that AC is bisected at D. Hence, by II, 6, AE, CE + DC² = DE².

To each of these equals add BD².

$$\therefore \text{AE, EC} + \text{DC}^2 + \text{BD}^2 = \text{DE}^2 + \text{BD}^2.$$

$$\text{AE, EC} + \text{BC}^2 = \text{BE}^2.$$

But AE, EC = BC² (Hyp.)

$$\therefore 2 \text{BC}^2 = \text{BE}^2.$$

(2) ABCD is a quadrilateral, and x the middle point of the straight line joining the bisections of the diagonals; with x as a centre any circle is described, and P is any point upon this circle. Show that PA² + BP² + PC² + PD² is constant, being equal to XA² + XB² + XC² + XD² + 4XP².

Let H and K be the middle points of the diagonals BD, AC.

Now PA² + PC² = 2 AK² + 2 PK². (By a previous ex.)
and PB² + PD² = 2 BH² + 2 PH².

By addition PA² + PB² + PC² + PD²

$$= 2 \text{AK}^2 + 2 \text{BH}^2 + 2 \text{PK}^2 + 2 \text{PH}^2$$

$$= 2 \text{AK}^2 + 2 \text{BH}^2 + 4 \text{XH}^2 + 4 \text{XP}^2$$

$$= 2 \text{AK}^2 + 2 \text{XK}^2 + 2 \text{XH}^2 + 4 \text{XP}^2$$

$$= \text{XA}^2 + \text{XC}^2 + \text{XB}^2 + \text{XD}^2 + 4 \text{XP}^2$$

1. A. DeW. (1) A uniform rod weighing 5 lbs. is 6 ft long, at the ends are placed weights of 6 and 8 lbs. respectively. Where is the centre of gravity of the whole?

The centre of gravity for the rod will be 3 ft. The centre of gravity for the weights will be

$$8x = 6(6-x), x = 2\frac{1}{2}.$$

Again, the centre of gravity for 5 lbs. and 14 lbs. $\frac{1}{2}$ of a foot apart will be

$$5x = 14(\frac{1}{2} - x), x = \frac{1}{3}.$$

The correct answer, therefore, is $3\frac{1}{3}$.

(2) Demonstrate the following rule: To find the area of a quadrilateral when the four sides and the inclination of the diagonals is given. Add the squares of each pair of opposite sides together; subtract the less sum from the greater; then multiply the difference by the tangent of the angle formed by the diagonals, and one-fourth of this product is the area.

Let the sides of the quadrilateral be designated by a, b, d, c . Let w, y be the segments of the diagonal subtending a, b or c, d and z, x be the segments of the diagonal subtending the sides c, a or b, d , and i the angle contained by w, z or x, y .

Then area = $\frac{1}{2} wx \sin. (P-i) + \frac{1}{2} xy \sin. i + \frac{1}{2} yz \sin. (P-i) + \frac{1}{2} zw \sin. i$. Therefore $a^2 = w^2 + x^2 - 2wx \cos. (P-i) = w^2 + x^2 + 2wx \cos. i$, $wx = \frac{a^2 - w^2 - x^2}{2 \cos. i}$
 $wx \sin. i = \frac{1}{2} (a^2 - w^2 - x^2) \tan. i$, $xy \sin. i = \frac{1}{2} (x^2 + y^2 - b^2) \tan. i$, $yz \sin. i = \frac{1}{2} (d^2 - y^2 - z^2) \tan. i$, $zw \sin. i = \frac{1}{2} (z^2 + w^2 - c^2) \tan. i$.

$$\text{Area} = \frac{1}{4} \{a^2 + d^2 - (b^2 + c^2)\} \tan. i.$$

We know of no better rule than the above.

(3) Can ice have a lower temperature than 32° F. or 0° C.?

Certainly, ice in this respect differs from no other substance.

(4) and (5) The questions 23 (3), page 91, and 35, page 92, of Eaton's Prac. Math., are both defective.

QUESTIONS ASKED.

1. When and where was the crown at present worn by Queen Victoria made? Please give some of its interesting features—as size, weight, shape, composition, etc.

2. Was the crown lost by King John in crossing "the Wash" the same one that William the Conqueror won?

3. Can you print an old poem which I would suppose is entitled, "There's Life in the Old Flag Yet." I heard it at a lecture some two years ago and would like to see it in print. G. E. S., P. E. I.

Will any of our readers please supply the desired information?

SCHOOL AND COLLEGE.

Dr. W. W. White has been appointed as school trustee for the City of St. John in place of Dr. Hetherington, resigned.

His Honor Lieut-Governor Howlan of P. E. Island, recently visited the Miscouche school, and after visiting the different departments expressed himself as well pleased with his visit and with the splendid condition in which he found the school. Teachers and pupils alike were greatly encouraged in their work by His Honor's visit to them.

The teachers of Charlottetown recently had a unique experience, when Dr. and Mrs. Taylor of that city, invited the entire teaching staff and their wives to an "at home" at their residence on the 5th ult. The evening was a most enjoyable one, music,—instrumental and vocal readings and speeches, together with interminable conversation, whiled away the time, until the closing, originally intended for eleven, did not occur till half-past twelve. A bountiful repast was prepared by Mrs. Taylor. Ere the parting came, Dr. Taylor in a neat speech, containing some reminiscences of his experience as a teacher—for the Doctor was once a teacher—and also his appreciation of the labors of the teacher which he classed as above that of any other profession—proposed the health of the profession and those engaged therein. Responses were made by Dr. Anderson, of Prince of Wales College, Principal McSwan of Queen's Square, school, and Mr. McCready of the *Guardian* for the press was also there, as everywhere. Dr. Anderson in an excellent speech proposed "the health" of the host and hostess, which was enthusiastically drunk by the guests, who vociferously, if not melodiously, burst out with "He's a jolly good fellow." In reply, Dr. Taylor expressed his pleasure in being able to entertain the teachers, and intimated that though this was the first of the kind, it would not be the last in Charlottetown. With the singing of "Auld Lang Syne," a most enjoyable evening was brought to a close.

Through the efforts of Mr. I. R. Hetherington, B. A., of the Bathurst Grammar School and his associate teachers, a very good start has been made towards a school library. Already about four hundred volumes have been purchased, and the teachers look forward to further additions in the near future. Mr. T. D. Adams was an unsolicited subscriber to the extent of one hundred dollars, the balance being raised by a concert and by public lectures, to which an appreciative public has given generous patronage.

High-sheriff Gaffrey, chairman of the Summerside P. E. I., School Board, recently addressed the pupils of the High School, taking for his subject Canadian History. The address was replete with information on the history of Canada, from the earliest times down to the present, and was enjoyed alike by teachers and pupils.

His Honor Judge Fitzgerald has very kindly given a series of talks to the pupils of Prince Street School, Charlottetown, P. E. I., on British History. Much valuable information is given by the Judge, who has made British History a special study. His fortnightly visits are much appreciated by teachers as well as pupils.

At a recent meeting of the Charlottetown Teachers' Institute, Professor Shaw, of the Prince of Wales College, read an admirable paper on "Language Through Nature's Studies."

Mr. G. W. Ganong, of St. Stephen, has been appointed a member of the Senate of the University, in place of J. E. B. McCready, resigned. Mr. McCready proved a most painstaking and useful senator and will have a worthy successor in Mr. Ganong.

Inspector Carter has announced Friday, May 8, as School Arbor Day for his district.

Dr. Inch recently gave a lecture at Sackville on the Progress of Education in New Brunswick.

A number of the St. John principals, at the invitation of Inspector Carter, met at his house to talk over a scheme for a teachers' association. A committee was appointed to prepare a plan to be submitted to a meeting of teachers.

Inspector Carter hopes to complete his work in St. John City in April and visit the schools in the towns of Charlotte during the latter part of this month and the first of next.

Mrs. Clarke, formerly Miss Richardson, of the N. B. Model school, has been appointed school trustee in Fredericton.

Some changes were made during the last session of the House in the N. B. school law. The annual school meeting comes hereafter on the second Saturday in October (Saturday is an unfortunate selection as it is market day). Teachers will hereafter be paid by government as provided for in contract with trustees, viz.: by the days taught, not by the term as formerly.

Inspector Mersereau has appointed May 15th as Arbor Day throughout his inspectorate.

Some of my fellow teachers in need of apparatus for their schools may be encouraged to make an effort to obtain these by my experience. The trustees had no money; I needed apparatus. I had read about the man who put his shoulder to the wheel successfully, so to the wheel I went. The wheel took the form of a public school concert. The lady teachers soon took hold with me, and then the wheel rolled. The principal citizens gave a helping hand. The wardens of the Church of England placed their fine hall at our disposal free of charge. The concert was quite successful and we realized about thirty five dollars, which enabled us to procure quite an assortment. After paying expenses we had twenty eight dollars left. We have expended about twenty dollars for chemicals and apparatus, which are necessary for the most important experiments in Williams' Chemistry. We bought test tubes, glass tubing, flasks, acids, and in fact everything needed with the exception of the most expensive articles. We are more than satisfied with our success and we recommend other teachers in similar circumstances to try something in the same line and hope that all who do so will meet with like success.

Chester, N. S., March 13th, 1896.

R. F. MORTON.

BOOK REVIEWS.

ENGLISH IN AMERICAN UNIVERSITIES. By the English professors of twenty representative institutions. Edited, with introductions, by William Morton Payne. Price, \$1.00. Boston: D. C. Heath & Co. This work is composed of papers, nearly all of which have appeared in *The Dial*, Chicago, and are written by such men as Brander Matthews and John F. Genung. It cannot fail to be of great interest and value to those interested either in the teaching or study of English literature, and in setting forth the theories and motives of so many colleges, it points out the direction in which modern methods of literary education are tending, while, read as a whole, it sets up sound ideals of literature and literary training.

ELEMENTS OF BOTANY. By J. Y. Bergen. Boston, Ginn & Co., 1896, 275+57 pp. This is the age of new movements in knowledge and education, and in the progress which the phrase indicates the science of botany is sharing. The "New Botany" studies the plant as a living being of which the structure is determined by function; it replaces the older order which received the plant as a sort of anatomical puzzle, the parts of which had functions of some interest to the curious, but of no very great importance. Mr. Bergen's book is the first in this country intended for elementary instruction which attempts to impress at the start the moulding of structure by function; but very wisely, as we think, the author does not make the book an extreme example of this logical mode of treatment, for the transition would be so abrupt that most of our teachers would be unable to use it. We cannot give a better idea of its scope

than by quoting an extract from the preface. "The attempt is made to discuss plants dynamically rather than statically—to view them as contestants in the struggle for existence, and to consider some of the conditions of success and failure in the vegetable world. While the determination of species by means of an artificial key is illustrated, preparation for this process is by no means the main object or even a principal end which the author has had in view. The tendency of botany-teaching seems to be more and more away from the old ideal of enabling one's pupils to run down a species as expeditiously as possible, and teaching them how to preserve a properly ticketed memento of the chase." The promise of the preface is fully carried out in the book. Perhaps the most striking feature is the early introduction, abundance and simplicity of the physiological experiments, nearly all of which can be performed in any school room with home-made and inexpensive apparatus. Those who are accustomed, or prefer to teach in the old lines will find, however, that nothing of importance in anatomy has been omitted—the work is remarkably condensed though complete. It is profusely illustrated, though the quality of the pictures is uneven, and is in all ways a good specimen of book-making. We predict that this book will have great influence upon the teaching of Botany in the higher schools, and we commend it to the teachers of the Atlantic Provinces as indispensable to all those who wish to keep in touch with progress in teaching the science.

SELECTIONS FROM EPICTETUS. By Edwin Ginn. Price 50 cents. Ginn & Co., Publishers, Boston. The editor of this edition of Epictetus, which is especially intended for the use of young people, has aimed to give in a small compass the choicest sayings of this celebrated philosopher from whom Marcus Aurelius drew much of his inspiration. The great principles which underlie all activity and character are so tersely and so wisely set forth by this great Stoic, that his writings serve admirably to train young people to endure, with greater fortitude and composure, the trials of life.

April Magazines.

In the *Atlantic Monthly*, the second paper upon The Case of the Public Schools is by Fred W. Atkinson, Principal of the High School, Springfield, Mass. His paper has the suggestive title, The Training of The Teacher. . . . "Teaching—A Trade or a Profession?" is the title of a brilliant article by President Schurman, of Cornell University, which appears in April's *Forum*. . . . In *The Popular Science Monthly*, the educational value of the "New Geography," which describes processes as well as their results, is pointed out by Alfred P. Brigham. Under the title The Ways and Means of Ants there is a readable bit of description by Norman Robinson. . . . *Chautauquan*—Cracker English, by Mrs. E. F. Andrews; the Kindergarten, by Mary Chisholm Foster; Current History (editorial). . . . *McClure's*—the new marvel in photography, by H. J. W. Dam; chapters from life (autobiography), by Elizabeth Stuart Phelps, helpful alike to teachers and writers.