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Educational Weekly

Vol. 1.

THURSDAY, APRIL 9, 1885.

Number 15.

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The Educational Weekly.

TORONTO, APRIL 9, 1885.

HAVE our readers ever noticed that the general behavior of the class reflects the behavior of the master? The former is unconsciously influenced by the latter. Let the master be cheerful and eager, the effect of this is at once apparent in the faces and actions of his pupils; let him be morose and indolent, these will soon communicate themselves to those under him.

NOR is this a trivial matter. Life is made up of little things. The most far-reaching phenomena result from causes apparently unworthy of notice. The older we grow the more this truth is impressed upon us. "Methods," said Talleyrand, "are the masters of masters;" and methods deal solely with little things. The most wonderful book was set letter by letter;—the universe itself, is it not a collection of atoms? Alter one of these, and who can trace the changes? The character of the nineteenth century, Victor Hugo tells us, hung on a single sentence from the lips of a Prussian cow-boy.

SCHOOL-LIFE is made up altogether of little things, and school-life, too, let us remember, is the beginning of the future of every man and every woman, and will in some way shape that future. Influence is as indestructible as matter. We are handling daily forces the measure of which is past our calculation, and the scope of which we cannot comprehend. The association and intercourse with our fellowmen are pregnant with never-dying results over which, when our influence is exerted, we have no control. The association and intercourse with our pupils are even more portentous. We possess responsibilities from which we cannot escape. A strange and profound problem; but as real and as vital as strange and profound.

TO go back then, our general behavior in the school room—our manners, our way of treating our children—in a word, our characters as exemplified in our minor acts, are no trivial matter. How many of us look back upon school-life and, with the wider breadth and clearer view that age and observation have given us, have been able to gauge to a certain extent the influence of these upon us? How it was easy to learn under such an one, difficult under such another! How to please this teacher was a joy, to satisfy that one was impossible; and how learning under the one was a pleasure, under the other a toil!

We cannot all have pleasant ways, taking manners. We do not know, some of us, how to deal with children. We make grievous mistakes; we know it; and when alone mourn over it, and, perhaps, envy those who seem gifted above ourselves with judgment and tact. But this in itself, let us remember, this recognition of deficiency and perception of short-comings, is much gained. To see the importance of the manner of our dealings with our pupils, and strive to improve it—what more is required? The effort is everything. Children, let us be grateful for it, are keen in appreciating our attempts at kind treatment, be they never so crude. Unknown to themselves they are ever analysing motives, always tracing actions to their sources. And when they see their master trying his best to act up to the highest dictates of his calm unbiassed judgment they are satisfied.

IT is in our ordinary every-day behavior to our pupils that this effort on our part is chiefly visible, and there are numberless ways of showing it.

THERE is another side to this. This care shown in our daily intercourse with those we are teaching is in itself an educating process, and a powerful one. It works silently but surely. Dropping water, we all have been often told, will wear away the hardest rock. As we are, to a very great extent, will our pupils be also. If we are kind and considerate towards them, they will be so towards us; and not only so, but towards each other. And this latter phase of this beneficial influence we can enhance the value of by inculcating principles of politeness. Politeness, if at bottom it is instinctive can be strengthened and formed by habit, just as it can be weakened and lost by habit. We need not to deliver homilies to our pupils on what constitutes politeness and how important it is. It is for us to show them these by example. The teacher is never wholly unobserved. Many eyes are always turned on him, and eyes that are always critical. Older masters—those who have spent many years in the school room—seem sometimes apt to forget this. They become slovenly (if we may use the word) in manner; forgetful of minor niceties of demeanor; careless in treatment. If they had early trained themselves into an opposite course—such as we have been urging—this would be less frequent. Amiability coupled with firmness would be to them a second nature. For these can be cultivated—can be made a matter of habit. Indeed, has not Aristotle told us that all virtue is a habit?

TO have occupied so much space in touching upon this side of a teacher's duties needs no apologies. Life in these days is fast. Men in business too often think there is no time for the amenities of life. 'Business is business,' they say, and this generally means that no considerateness is necessary. But there is an ethical side even in trade, though this is unfortunately often forgotten, a fact which the phrase 'business is business' only too plainly shows. Our school children will soon find themselves in this arena, and if they have been trained to a different view of life, perhaps when most of the technicalities of school-training are forgotten, this habit of politeness and consideration for the feelings of others will remain. It will be no little thing gained—rather it will be a great victory for teachers if they succeed in bringing up a generation which recognizes a moral side in every profession, in every trade.

AND this is hardly an idle speculation. Is it not within our powers? What is to prevent its being so? If a pupil from the lowest form in the primary school to the matriculating class in the collegiate institute is continually taught to respect his teacher and behave properly to the boy or girl that sits on either side of him, it is not too bold a prophecy to say that a very appreciable change will come over all trades and all professions.

WE have said that there are numberless opportunities of inculcating principles of politeness in the school-room. This is more especially the case upon this side of the Atlantic. The classes are formed of children drawn from very different ranks of society, and possessing very different ideas of manners; and boys and girls are taught in the same room. Both these give ample openings for teaching pupils how to behave one to another.

IT is not an easy matter, however, and requires delicate handling. Still we cannot begin too early, and perhaps it is more easily done when our pupils are young and pliable than when character and manner have become formed. The ethical side of behavior should be insisted on. The children could be shown that there was a right and also a wrong way of doing any, even the most trivial action, and that manners were, after all, but the external appearance of the moral nature.

ABOVE all, schooltime is the best of all times in which to learn to act considerately to one another, for there is restraint which adds to care in our demeanor.

Notes and Comments.

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THE following books, amongst others, have been added to the library of the University of Toronto, within the past three weeks:—

Rhode Island Public School Report, 1885. Comparative Grammar of Anglo-Saxon. By F. A. March.

Homeric Dictionary. By G. Autenrieth. Translated by R. P. Keep.

John Fiske, Works of; 6 vols.

Congregational Government. By Woodrow Wilson.

Religions of Mexico and Peru. By A. Réville (Hibbert Lectures, 1884.)

Method of Least Squares. By W. Chauvenet.

The New Physics. By John Trowbridge. Naturalist's Directory, 1884. By S. E. Cassino.

Prehistoric America. By Marquis de Nadaillac (translation).

Indian Myths, etc. By Ellen R. Emerson.

Ibidatsa Grammar and Dictionary. By Wash. Matthews; 2 vols. in one.

Dictionnaire Francois-Orantagué. By J. M. Shea.

American Palaeozoic Fossils. By S. A. Miller.

Washington Irving, Works of; 18 vols.

Short Studies on Great Subjects. By J. A. Froude; third series.

History of American Literature. M. C. Tyler.

AMONGST educational works just published we may mention the following as being of interest to various classes of readers:—

Aims and Methods of the Teaching of Physics. By Professor Charles K. Wead. Washington: Government Printing-Office. Pp. 158.

Normal Language Lessons. By S. J. Sornberger. Syracuse, N. Y.: C. W. Bardeen. Pp. 81. 50 cents.

Catalogue of the New Orleans Exhibit of Economic Entomology. By Charles V. Riley. Washington: Judd & Detweiler. Pp. 95.

Report of the Entomologist, U. S. Department of Agriculture, for 1884. Washington: Government Printing-Office. Pp. 150.

Sex in Mind and in Education. By Henry Maudsley, M. D. Syracuse, N. Y.: C. W. Bardeen. Pp. 36. 15 cents.

Calisthenics and Disciplinary Exercises. By E. V. De Graff. Syracuse, N. Y.: C. W. Bardeen. Pp. 39.

University of Nebraska. Seventh Biennial Report of the Board of Regents. Pp. 32. The Chancellor's Report. Pp. 75. Lincoln, Neb.

Building for the Children in the South. By Rev. A. D. Mayo. Washington: Government Printing-Office. Pp. 16.

Bulletin of the Washburn College Laboratory of Natural History. Edited by Francis W. Cragin. Vol. I. No. 2. Topeka, Kansas. Pp. 84, with Two Plates. 20 cents.

MR. W. H. HUSTON, Principal of Pickering College, in a long article on "The College Residence" contributed to last week's *Varsity* treats the subject of the advantages and disadvantages of a residence exhaustively and elaborately. The character of a college residence will depend, Mr. Huston holds, upon: (1) Its aim. (2) The character of its officers. (3) The character of its students.

"A college residence," says Mr. Huston, "maintained merely to afford a place in which to eat and sleep can never accomplish any lasting good, unless it should strangely happen that the students were all—what few are—inspired with a love of learning and a desire to struggle against all worldly ills in an onward march towards perfection. If, however, the object of the institution be to encourage the discarding of everything that is base and ignoble, and the cleaving to that which is pure, success is deserved and to a great extent assured. A man, a book, an institution, that aims to teach that there is a reality in life, and moreover a responsibility that there is a work for all and that the call to that work is urgent and imperative, does not exist in vain. A college residence conducted with such a purpose must be a power for good—forever." He touches then upon the necessity of good authorities who should understand and sympathize with the residents and also upon the necessity of keeping up a high character amongst these residents. Applying his conclusions to University College residence, he asks,—“Shall residence be retained? ‘In its present state? No.’ ‘In an improved state? Yes.’ How improved? (1) By being regarded as a means of education. (2) By being placed under a Dean (assisted if necessary) whose sole work will be to see that it is well managed. (3) By being enlarged to such an extent as to afford accommodation to every student that wishes to take advantage of it, no matter to what university faculty he belong. . . . Two courses are open—to abolish or to improve. It is generally easy to destroy; it is

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4. $a^4 + 3a^2b^2 + 4b^4$.
5. $x^4 + 7x^2 + 16$.
6. $x^4 - 9x^2y^2 + 16y^4$.
7. $a^4 - 7a^2 + 1$.
8. $a^4 - 14a^2 + 1$.
9. $x^4 - 17x^2y^2 + 16y^4$.
10. $a^4 + 6a^2b^2 + 25b^4$.
11. $x^4 - 19x^2y^2 + 25y^4$.
12. $9a^4 + 29a^2x^2 + 25x^4$.
13. $16x^4 + 47x^2y^2 + 49y^4$.
14. $25a^4 + 51a^2b^2 + 36b^4$.
15. $36x^4 + 11x^2y^2 + 25y^4$.
16. $x^4 + 4a^4$.
17. $a^4 + 64b^4$.
18. $9x^4 - 51x^2y^2 + 49y^4$.
19. $(a+b)^4 + (a+b)^2c^2 + c^4$.
20. $a^4 + a^2(b-c)^2 + (b-c)^4$.
21. $(a+b)^4 + (a+b)^2(a-b)^2 + (a-b)^4$.
22. $(x+y)^4 + (x^2-y^2)^2 + (x-y)^4$.
23. $(a+b)^4 + 4(a-b)^4$.

PAPERS IN FACTORING. IV.

1. $a^3 + b^3 + c^3 - 3abc$.
2. $x^3 + y^3 + z^3 - 3xyz$.
3. $a^3 + b^3 + 1 - 3ab$.
4. $a^3 + b^3 + 8 - 6ab$.
5. $8a^3 + b^3 + c^3 - 6abc$.
6. $a^3 + 27b^3 + c^3 - 9abc$.
7. $x^3 + 27y^3 + 1 - 9xy$.
8. $x^3 + 8y^3 + 27z^3 - 18xy$.
9. $a^3 + b^3 - c^3 + 3abc$.
10. $a^3 - b^3 + 8c^3 + 6abc$.
11. $a^3 - b^3 - c^3 - 3abc$.
12. $1 - b^3 - c^3 - 3bc$.
13. $x^6 - y^6 - z^6 - 3x^2y^2z^2$.
14. $a^3 + b^3 - 1 + 3ab$.
15. $a^3 + 1 - c^3 + 3ac$.
16. $a^3 - b^3 + 8 + 6ab$.
17. $1 - b^3 + c^3 + 3bc$.
18. $8 - x^3 - y^3 - 6xy$.
19. $x^3 - 1 - a^3 - 3ax$.
20. $a^3 - b^3 - 27c^3 - 9abc$.
21. $8a^3 - 27b^3 - 125c^3 - 90abc$.
22. $a^3b^3 + b^3c^3 + c^3a^3 - 3a^2b^2c^2$.
23. $x^3y^3 - y^3z^3 - z^3x^3 - 3x^2y^2z^2$.
24. $x^3y^3 - y^3z^3 + z^3x^3 + 3x^2y^2z^2$.
25. $1 + a^3 - b^3c^3 + 3abc$.
26. $(a+b)^3 + (b+c)^3 + (c+a)^3 - 3(a+b)(b+c)(c+a)$.
27. $3(a^2 + 2bc)(b^2 + 2ca)(c^2 + 2ab) - (a^2 + 2bc)^3 - (b^2 + 2ca)^3 - (c^2 + 2ab)^3$.
28. $(a+b)^3 + (b-c)^3 + (c-a)^3 - 3(a-b)(b-c)(c-a)$.
29. $(a-b)^3 - (b-c)^3 + (2b-a-c)^3 + 3(a-b)(b-c)(2b-a-c)$.

Educational Opinion.

I.—TREE-PLANTING ON SCHOOL GROUNDS.

HON. H. G. JOLY, QUEBEC.

SOME years ago I found several young oaks growing up among a hedge of rose trees in our garden. As there were no oaks in the immediate vicinity it was rather a subject of astonishment to me, until I found out that my children had picked up some acorns in the woods and had sown them there. Nothing could be more simple and trivial, I admit; nevertheless, it set me a-thinking, and I have not done thinking yet. The children were so young then that I would not have credited them with sufficient reason to go through the process of looking for seeds in the woods, sowing them with the purpose of producing trees, and watching in the following spring for the realization of that purpose.

It struck me then that the growing of trees would be a valuable help towards the education of children. We try to teach them to observe, to think, to persevere, and we have done a great deal when we can make them see clearly for themselves that success is the direct result of labor, and when they have learned to associate the two in their minds. Among all the mental exercises resorted to in our schools, I can scarcely see one that will secure the same results more easily and more effectively than the culture of trees.

There are not so many schools—there ought to be none—with so little ground as not to allow room for at least a seed-bed and a nursery for young trees. Get the children, first of all, to work the ground until it is well drained and sufficiently deepened and mellowed for the purpose. There you combine physical and mental work, and an important lesson for the future; for it is a matter of vital importance that the attention of the growing generation should be turned seriously in the direction of agricultural pursuits; we cannot begin too soon to impress the youthful mind with the idea that conscientious care in the preparation of the soil will be bountifully repaid.

We have been skimming over the surface of this continent of ours, as if it were limitless; we shall, sooner than we expect, be induced to wish, like Alexander the Great, for other worlds to conquer. We must remember that this is the ground upon which the children of over sixty millions of people will have to find food for themselves and their increasing families, and millions of people on the other side of the Atlantic, and still make room for the surplus population of the Old World. It is time to find out what our soil is worth, and learn how to get as much as possible out of it; and the best way to reach the people is to teach the children. But this is a digression; let us return to our subject.

When they have prepared their ground carefully, take the children to the woods to collect the seed, in its season, or buy it if you are too far from the woods. Teach them to discriminate between good seed and bad, and make them sow it properly.

Make them study the form and appearance of the young trees as they first come up out of the ground, so that they will not mistake them for weeds. Make them keep the ground free from all weeds, mellow it, and follow up, step by step, the growth of their seedlings, until they remove them to the nursery beds, where they will require new care and attention, till ready for final transplanting.

Their attention will be fixed, not only for days, but for seasons and years, on their young trees, thereby insuring a continuity of action. Prizes ought to be awarded from time to time, to those whose trees are in the best condition. When there is no more room on the school grounds, for transplanting those trees, the children, on Arbor Day, will have the privilege of ornamenting the streets, squares, walks of their towns and villages with trees raised and grown with their own hands.

It will be, all through, a healthy recreation, and, at the same time, it will call into play every quality of mind which is indispensable for success in life. More than that, the best feelings of the human heart will be nurtured and grow along with those young trees; the love of nature, deep reverence for the power of God, in watching the growth of the tree from its seed, in noticing the development of its life. The child's heart will be enlarged as the range of his sympathies widens; he will see life everywhere—all around him. He will take pleasure in beautifying his school grounds, and by-and-by, his father's home stead; he will get attached to it, and, as he grows older, every tree planted by his hands will become a friend to him; and when the thought enters his mind that he may not live to reap any benefit from his work in growing those trees, he will, at least, learn the greatest of all lessons, that we have not been created by God to work only for ourselves.

II.—ARBOR DAY CELEBRATION BY PUBLIC SCHOOLS.

SUIT. JOHN B. PEASLEE, CINCINNATI.

As chairman of the Committee of the Ohio State Forestry Association, I have prepared exercises for Arbor Day celebration, which will be published by the Association and distributed to the schools of the country in time for the coming celebration. Part first of the pamphlet contains many lessons from history, giving the effects on climate, soil, production and so forth, both of the destruction and of the planting of forests; of the way in which trees grow, of the amount of moisture given out to the atmosphere by trees, of the way they detain moisture in the soil and

feed springs and rivers, of the age of trees, etc. Part second contains many selections on trees and forestry from various authors. Part third, sketches of the lives and writings of a few American authors, and selections from their writings.

The youth of our country must be instructed in the value and utility of forests, their influence upon climate, soil, production, etc. Correct sentiments in regard to trees must be implanted in them, if the best interests of our country in regard to forests are to be subserved, and the most impressive and attractive way of imparting the instruction and of interesting the pupils on the subject is through the celebration of tree-planting. It is also the surest and best way of calling the attention of the public at large to it. The objects of the celebration which I advocate are to instil into the minds of the children and older citizens correct sentiments in regard to trees, and to store their minds with information relating to forestry and to the distinguished individuals in whose honor or memory each tree or group is planted—for I would have all the trees around which the celebrations take place dedicated to great authors, statesmen, soldiers, in brief, to famous men and women whose lives have reflected honor upon our country; to the pioneers and distinguished citizens of each township, village or city, as the case may be, who have passed away or who are living honored lives, and then "make trees," as Holmes says, "monuments of history and character." Yes -

Plant beautiful trees in honor of those
Whose memory you revere,
And more beautiful still they'll become
With each revolving year.

Should the annual celebration of planting memorial trees, the preparation for which affords ample opportunity for imparting all needful information in regard to trees and forestry, become general in our States, the time would not be far distant when such a public sentiment would be formed as would lead to the beautifying by trees of every city, town and village, as well as the public highways, church and school grounds and the homes of the people in the country. In truth, within the next twenty-five years thereafter, the general aspect of many parts of our States would be changed as has been that of Connecticut within the last few years through the instrumentality of the schools under the leadership of Hon. B. G. Northrop, and of her "Improvement Societies," which were organized through his efforts. Pastor Oberlin, after whom Oberlin College is named, required each boy and girl, before he would administer the ordinance of confirmation, to bring a certificate that he or she had planted two trees. If our youth could each year be led to plant their two trees each, how, by the children alone, could our great States be enriched and beautified in the next fifty years!

The trees which the children plant or

which they assist in dedicating will become dearer to them as year after year rolls on. As the trees grow and their branches expand in beauty, so will the love for them increase in the hearts of those by whom they were planted or dedicated, and long before these children reach old age they will almost venerate these green and living memorials of youthful and happy days, and as those who have loved and cared for pets will ever be the friends of dumb animals, so will they be the friends of all our forest trees. From the individual to the general is a law of our nature. Show me the man who in childhood had his pet, and I'll show you a lover of animals; show me the person who in youth planted a tree which has lived and flourished, and I'll show you a friend of trees and forest culture. In this I speak from experience. The pets I had when a child led me to join the "Society for the Prevention of Cruelty to Animals;" the trees I planted in early boyhood in front of my old New England home have made me the advocate of tree-planting and Arbor Day celebrations.

In further illustration of what I have said I will relate an incident in the lives of Alice and Phoebe Cary, Ohio's greatest daughters. In 1832, when Alice was twelve years old and Phoebe only eight, as these little girls were returning home from school one day they found a tree which a farmer had "grubbed up" and thrown into the road. One of them picked it up and said to the other, "Let us plant it." As soon as said these happy little children ran to the opposite side of the road, and with sticks, for they had no other implements, they dug out the earth, and in the hole thus made they placed the treelet, around it with their tiny hands they drew the loosened mould, and pressed it down with their little feet. With what interest they hastened to it on their way to and from school to see if it were growing, and how they clapped their little hands for joy when they saw the buds start and the leaves begin to form; with what delight did they watch it grow through the sunny days of summer; with what anxiety did they await its fate through the storms of winter; and when at last the longed-for spring came, with what feelings of mingled hope and fear did they seek this favorite tree.

But I must not pursue the subject further. It is enough to know that after these two sisters had grown to womanhood and removed to New York City they never returned to their old home without paying a visit to the tree that they had planted, and that was scarcely less dear to them than the friends of their childhood days. They planted it in youth, they loved it in age. That tree is the large and beautiful sycamore which one sees in passing along the Hamilton turnpike from College Hill to Mount Pleasant, Hamilton county, Ohio.

III.—ARBOR DAY IN INDIANA.

HON. B. G. NORTROP.

THE Indiana State Teachers' Association acted wisely in inaugurating plans for observing Arbor Day, and appointing an efficient committee for that purpose. I was glad to learn that State Superintendent Holcombe will heartily give his personal and official influence to second this grand movement. The promised co-operation of the State Horticultural Society will greatly facilitate the work.

A striking example of the practicability of such a plan was given last spring by West Virginia. Hon. B. L. Butcher, the State School Superintendent determined to appoint an Arbor Day. He had no such backing from the State Association as that now assured to Superintendent Holcombe by the teachers of Indiana. In order to secure the co-operation of parents as well as teachers, pupils, and school officials, Mr. Butcher made one issue of the *State School Journal*, of which he is editor, an Arbor number, containing eleven articles on this subject, by such men as Cassius M. Clay and Superintendent J. B. Peaslee, with an introductory article by the writer. He strongly urged that "when land is so cheap as it is in most of the counties of West Virginia, at least one acre be set apart for the grounds of each school house, and be fitly planted with trees and vines. Let each scholar have his own tree or shrub, and the poor man's son, whose father does not own one foot of soil, may date his desire to own land from planting that tree or shrub, calling it his own, and watching it with jealous pride as it puts forth its tiny arms, growing stronger and more beautiful each year." The papers of the State endorsed this movement most heartily.

Afterwards visiting West Virginia, I was exceedingly gratified to learn how generally this invitation was responded to by parents, as well as teachers and pupils. It proved a memorable day for that now progressive State, in the work done around the homes as well as the schools. Probably more trees, shrubs and vines were planted that day in school grounds than ever before in one day in any other State. The results, so far, exceeded the expectations of Mr. Butcher, that he decided to appoint another Arbor Day in the spring of 1884.

West Virginia is entering upon a new career of just pride and prosperity, especially in educational matters. Twenty years ago this State had no free school system. That was inaugurated during the calamities of the war, while West Virginia was the scene of its hottest strife and greatest depredations, with a public treasury worse than empty, and with its own people often meeting on opposing sides in deadly conflict. No State has started free schools under greater embarrassments. Prior to the war, there were

hardly a hundred free school houses in the State outside of Wheeling. Since then about four thousand school houses have been built. True some thirteen hundred of these are log houses, but the logs, the best available in this emergency, are rapidly giving place to "frame," brick and stone. Within twenty years nearly two million dollars have been expended for school houses and equipments. Such liberality, in the face of war desolation, the opposition of an influential class to the plebeian plan of educating the rich and the poor together, and the ignorance or indifference of a still larger number, is remarkable if not unexampled. But the progress already made in the new State is only the promise of still larger advances in the near future.—*Indiana Educational Weekly*.

IV.—TREE-PLANTING BY PUPILS.

HON. B. G. NORTROP, CONNECTICUT.

THE season for tree-planting is near at hand. Teachers can easily interest their pupils in this good work by practical efforts in several directions. *First, by a few brief talks on trees—their beauty, hygienic influence and economic value.* Such talks lead them to admire our noble trees and realize that they are the grandest products of nature and form the finest drapery that adorns this earth in all lands. Thus taught, they will wish to plant and protect trees, and soon find in their own happy experience that there is a peculiar pleasure in the parentage of trees, whether forest, fruit or ornamental—a pleasure that never cloy, but grows with their growth. Such offspring they will watch with pride as every year new beauties appear. Like grateful children, trees bring rich filial returns, and compensate a thousand-fold for all the trouble they cost. This love of trees, early implanted in the school and fostered in the home, will be sure to make our youth practical arborists. They should learn that trees have been the admiration of the greatest and best of men in all ages. The Hebrews almost venerated the Palm and fairly exulted in the magnificent Cedar of Lebanon. The Egyptians, Greeks and Romans were proficients in tree-planting. Hence Thebes, Memphis, Athens, Carthage, Rome, Pompeii and Herculaneum, as their very ruins still show, had each their shaded streets or parks. The paradise of the Persians was filled with blossoming trees and long lines of roses. This taste for beautiful gardens was early transplanted from Persia to Greece, and the greatest Greek philosophers held their schools in beautiful groves. The devastation of parks, the destruction of shade trees, and the neglect of public streets and private grounds and home adornments, were clearer proofs of the great relapse to barbarism than was the vandalism which destroyed the proud monuments of classic art and literature.

Tree-planting is fitted to give a needful lesson of forethought to the juvenile mind. Living only for the present, youth too often sow only where they can quickly reap. A meagre crop soon in hand, outweighs a golden harvest long in maturing. They should early learn to forecast the future as the condition of wisdom. Arboriculture is a discipline in foresight—it is always planting for the future, and sometimes for the distant future.

Teachers should interest their pupils in planting trees and otherwise improving the school grounds. Let one or two Saturdays of the month of April be devoted to this, all hands joining under the lead of the teacher. With proper pre-arrangement as to the selection and procuring of trees and creeping vines or shrubs, one or two days so employed would accomplish wonders. Many hands would make merry as well as light work. It would be an occasion of social enjoyment and improvement. The parents would approve and patronize the plan. It tends to fraternize the people of a district when they thus meet on common ground, and young and old work together for a common object, where all differences of rank or sect or party are forgotten. The plantings and improvements thus made will be sure to be protected. They will remain as silent but effective teachers of the true, the good, and the beautiful, to all the members of the school. They will gradually improve the order and studiousness of the pupils. The educational influence, the æsthetic improvement thus secured, cannot be expressed in words.

Teachers may properly encourage their pupils to plant trees and vines around their homes.—You improve the schools by improving the homes as truly as you improve the homes by improving the schools. "The hope of America is the homes of America." It has been long my ambition to improve the home and home-life of the people, and help them to realize that the highest privilege and central duty of life is the creation of happy homes, for the home is the chief school of virtue—the fountain head of individual and national strength and prosperity. It is a worthy ambition to surround one's home and children with such scenes and influences as shall make the every day life and labors brighter and happier, and help one to go sunny and singing to his work. My experience in extensive travels has led me to expect kindness in the humblest hamlet to which flowers or neat grounds invite. Our youth should be encouraged to share in these efforts for adorning and improving the surroundings of their homes. This work once begun around the school will extend to the home.

Youth may well be stimulated to plant trees by the wayside.—Nothing can add so much to the attractiveness of our roads as long avenues of fine trees. One sees this illustrated in many countries of Europe, where the highways are so often lined with

trees. No time should be lost in securing the same grand attraction to our roads. Growing on land otherwise running to waste, such trees would yield ample returns. The shade and beauty would be grateful to the traveller, but doubly so to the owner and planter. Having in abundance the best trees for the road-side, no class can contribute so much to the adornment of our public roads as the farmers. In portions of Germany, the law formerly required every landholder to plant trees along his road frontage. Happy would it be for us, if the sovereigns of our soil would each make such a law for himself. If Superintendent Higbee appoints an *Arbor-day* let every teacher in Pennsylvania, and through the influence of the teachers, every scholar over ten years of age, and through the scholars, each parent devote that one day to public improvement—especially to "brushing up" each around his school-house or residence, and grand and lasting results will be accomplished. When in any community, every resident is stimulated to make his own grounds and wayside neat and attractive, the entire district becomes so inviting as to give new value to its wealth and new attractions to all its homes, —*Pennsylvania School Journal*.

V.—ARBOR DAY IN PENNSYLVANIA.

STATE SUPERINTENDENT H. E. HIGBEE.

To spend a day each year in planting trees, shrubbery, and flowering plants, will certainly be a profitable and instructive exercise for the children and teachers of our various schools throughout the State, and an exercise which, without doubt, our School Directors will most earnestly encourage. We have been urged, again and again, to appoint a certain day for this purpose, and urge upon the attention of our County Superintendents and others the propriety of observing the same upon the part of all the schools.

Some obstacles, it is true, are in the way. We have as yet no authority of law to fix such a day, but trust that the present Legislature may soon pass a resolution authorizing the Governor to name a suitable day, and issue a proclamation, which will remove this obstacle. Very many of our school-grounds are not enclosed, and are so much neglected during vacations as to make any efforts at ornamentation an almost hopeless task. This, however, is rather an additional reason for beginning the work as soon as possible, that the necessary improvement may have greater stimulus from concerted action. Again, the State is so large that any fixed day to be observed throughout its whole extent is in danger of being too much out of season in many of its sections. In view of this obstacle, we have sought the counsel of Prof. Thomas Meehan, of Germantown, whose knowledge gives him authority, everywhere recognized. He has informed

us by letter, that the difference of season is not so great but that a single day would, if occurring about the middle of April, be reasonable for the whole State.

As soon, therefore, as the Governor may be authorized to fix a day, we shall forward his proclamation to all the Superintendents together with some explanatory information, in way of circular, with the earnest hope and expectation that all the schools will most heartily co-operate in so laudable an undertaking.—*Pennsylvania School Journal for March*.

VI.—PUBLIC SCHOOL GROUNDS AND SHADE-TREES.

STATE Superintendent H. L. Butcher has undertaken to induce the people of West Virginia to enclose their school grounds with neat fences, and to otherwise improve them by the planting of shade-trees and shrubbery. We have only to open our eyes in order to see the need of this improvement.

It seems reasonable to say that a school system which, in order to educate and elevate the mass takes money from taxpayers to buy grounds and build school-houses, ought to make these houses and grounds models of comfort and beauty.

Shade-trees and shrubbery upon school grounds are no longer considered, by intelligent people, as mere matters of taste. They either absorb or destroy the poisonous gases and dangerous effluvia, which may be found in or around crowded buildings. Shade-trees and shrubbery on school grounds, are, therefore, essential to the public health. Next to the draining of swamps comes the planting of shade-trees and shrubbery.

Much might be said of the influence of unattractive school grounds in producing low attendance upon public schools. It is certainly safe to say that if we will make our school buildings and grounds, as beautiful and attractive as the best homes of our people, we will hear less talk about the need of compulsory laws.

Let us now attempt to answer the question, "How shall the work be done?" It is not best for school officers to provide and plant trees. This work, like the ornamentation of the school-room, should be performed by the teacher and pupils of each school. In every section of this State a sufficient variety of native shade-trees may be obtained from the forests, with little or no outlay. And in almost every school district, if the teacher manage the matter skilfully, persons may be found who will cheerfully contribute ornamental trees.

The planting of shade trees upon school grounds may be made a matter of real pleasure to pupils, and the interest created will not cease when their school days are ended. Let the teacher propose that each pupil shall have the privilege of planting a shade tree, a shrub or a flower, upon the

school grounds, and that each tree, shrub, or flower, shall be cared for and cultivated by the one who plants it, whose name it shall bear. All the pupils from the oldest to the youngest, will be anxious to plant something. Let a committee of pupils and patrons be appointed to carefully examine the ground and set stakes where trees and shrubs are to be planted. Let a day (some Saturday), be set apart for the planting. Let the community be invited to come and take part in the planting. When the day arrives and the people are gathered together, the work begins. The teacher plants a tree in a prominent place, which may be called the "Teacher's tree." Each pupil who is old enough, plants something; and the younger pupils have each something planted by their parents.

It is not necessary to say, that the interest in aesthetics, created in the minds of patrons and pupils, by such a day's work, will increase as the trees, and shrubs, and flowers grow which they have planted. This interest will not long be confined to school grounds, but will be clearly seen in the improved surroundings of private residences.

VII.—ARBOR DAY IN WEST VIRGINIA.—APRIL 18th.

MRS. M. L. DICKEY FLEMING.

THE heart of him that gave birth to this day, should be joyous over the response given to his happy, beautiful thought. I verily believe that Arbor Day, properly celebrated, will be more productive of good to the coming generation than all the celebrations of the Nation's great days. Lessons of liberty and patriotism are indeed important, but the boy who, made alive to the beauty and utility of trees, plants his maple, chestnut or oak, gives more certain promise of good citizenship than he who puts the match to ten thousand fire-crackers.

Innumerable lessons, moral and intellectual, beautiful and practical, can be drawn from the study of trees. The teacher, who will prepare himself for imparting such instruction, will find his soul expanding, and a desire will spring up within him to step out of the old, beaten track of country school teaching. As he elevates himself, so will he surely elevate his pupils.

Teachers, have you ever told your pupils the legend of the weeping willow, or of its history? Lossing, in an early number of *Scribner's Monthly*, gives a most entertaining description of this tree of grace. Let me give you a brief sketch of his article:—

A weary band of captives, heart-sick for their own loved land, made sad lament, saying: "By the rivers of Babylon, there we sat down. Yea, we wept when we remembered Zion. We hanged our harps upon the willows in the midst thereof. For they that carried us away captive required of us a song, saying, 'Sing us one of the songs of Zion.' How shall we sing

the Lord's song in a strange land?" And the willows, whose branches had, ere sheltering these Hebrew captives, stood erect, drooped over them in sympathy, and have been weeping willows ever since.

Thus runs the legend; but here, too, is a lesson of England's greatest poet, Alexander Pope. When quite young, this poet lived on a small estate of his father's in Windsor Forest; his delicate health forbade schools. There, among those grand old trees, he studied the poets, while an immense desire grew within him to write poetry. There germinated those grand lines:

All are but parts of one stupendous whole,
Whose body Nature is and God the soul,
That changed through all and yet in all the same;
Great in the earth, as in the ethereal frame;
Warms in the sun, and blossoms in the trees.

A friend in India sent to Pope a box of fruit, in which was found a small twig. This he planted on the banks of the Thames, just in front of Twickenham Villa, as his residence in Windsor Forest was called. It was a happy thought that suggested the river bank for the little twig, for it was a thirsty plant. "It grew rapidly; and, to Pope's delight, proved to be the 'weeping willow,' of which travellers in the East had charmed him with descriptions." And so it became the progenitor of its race in England. In 1775 a twig was plucked from this same tree of the poet's care, and brought to America by an aide to General Clinton; and was given by him to John Parke Custis, an aide to General Washington. The two young aides had become acquainted in the bearing of communications between their commanders. The twig was carefully preserved in oiled silk, and in the spring of 1776 was planted by Custis at his home in Abingdon, Virginia. "Every 'weeping willow' tree in England and America is a beautiful poetic, living memorial of one of the most gifted of the English-speaking race."

What lessons of strength and endurance may be drawn from the study of the majestic oak!

Emblem of England's ancient faith,
Full proudly may thy branches wave.

Can any one wonder that its wide-spreading branches afforded a temple sacred for the Druids of old? The maple, whose botanical family name is *Acer*, meaning sharp, vigorous, will give you beautiful lessons and cooling shade; and this, too, is one of the finest shade-trees in our mountain State. The walnut that bears the nuts beloved by pupils; the laurel, with legend of lore in days of ancient Greece—but the list of trees would grow too long, yet I stop with regret. Commence this instruction and be prepared when Arbor Day comes to honor its arrival. Said our poet, Holmes: "It is a very happy idea to enlist the enthusiasm of the young, and to make trees monuments of character and history."—*West Virginia Educational Journal*.

VIII.—ARBOR DAY.

HOY R. O. NORTHRUP, LL. D.

RECENT spring floods and the diminished flow of rivers in summer have called public attention to the cause and the remedy as never before. At the opening of the last session of Congress attention was called to the subject of forestry for the first time in any presidential message. Bills for the protection and extension of forests are now before Congress and before many state legislatures. The last census presents striking facts which prove this to be a question of both state and national importance. The recent action of the national government shows a new appreciation of forestry. The marvel now is that the general government did not earlier seek to protect its magnificent forests, once the best and most extensive in the world.

But of all these agencies no one has awakened so general an interest in arboriculture as the appointment of Arbor Day, by governors of states, by legislatures, and by state, county, and town superintendents of schools. The plan of Arbor Day is simple and inexpensive, and hence the more readily adopted and widely effective. In some states the work has been well done without any legislation. The best results, however, are secured when an act is passed, requesting the governor, each spring to recommend the observance of Arbor Day, by a special message. The chief magistrate of the state thus most effectually calls the attention of all the people to its importance, and secures general and concerted action. How forests conserve the water supplies and lessen floods is aside from the topic of this paper.

As the destruction of forests has been going on for centuries, the remedy must be the work of time, for it must include slow processes and agencies, each separately minute, which become important when multiplied by myriads and extended over broad areas. Arbor Day has proved such an agency.

It may be objected to Arbor Day or to any lessons on forestry in schools that the course of study is already overcrowded, and this fact I admit. But the requisite talks on trees, their value and beauty, need occupy but two or three hours. In some large cities there may be little or no room for tree planting, and no call for even a half holiday for this work, but even there such talks, or the memorizing of suitable selections, on the designated day, would be impressive and useful. The essential thing is to start habits of observation and occupation with trees; which will prompt pupils in their walks, or when at work or at play to study them. The talks on this subject which Supt. Peaslee says were the most interesting and profitable lessons the pupils of Cincinnati ever had in a single day, occupied only the morning of Arbor Day, the afternoon being given to the practical work. Such talk will lead our youth to admire trees, and realize that they are the grandest products of nature, and form the

finest drapery that adorns this earth in all lands. Thus taught, they will wish to plant and protect trees, and find in their own happy experience that there is a peculiar pleasure in their parentage, whether forest, fruit, or ornamental—a pleasure which never cloy, but grows with their growth. Like grateful children, trees bring rich filial returns, and compensate a thousand fold for all the care they cost. This love of trees, early implanted in the school, and fostered in the home, will make our youth practical arborists.

Arbor Day has already initiated a movement of vast importance in eight states. In tree planting, the beginning only is difficult. The obstacles are all met at the outset, because they are usually magnified by the popular ignorance on this subject. It is the first step that costs—at least, it costs effort to set the thing on foot, but that step once taken, others are sure to follow. This very fact that the main tug is at the start, on account of the inertia of ignorance and indifference, shows that such start should be made easy, as is best done by an Arbor Day proclamation of the governor, which is sure to interest and enlist the youth of an entire state in the good work. When the school children are invited each to plant at least "two trees" on the home or school grounds, the aggregate number planted will be more than twice that of the children enlisted, for parents and the public will participate in the work.

The influence of Arbor Day in schools is in awakening a just appreciation of trees, first among pupils and parents, and the people at large, is of vast importance in another respect. The frequency of forest fires is the greatest hindrance to practical forestry. But let the sentiment of trees be duly cultivated, first among our youth and then among the people, and they will be regarded as our friends, as is the case in Germany. The public need to learn that the interests of all classes are concerned in the conservation of forests. Through the teachings of their schools this result was long since accomplished in Germany, Switzerland, Sweden, and other European countries. The people everywhere recognize the need of protecting trees. An enlightened public sentiment has proved a better guardian of their forests than the national police. A person wantonly setting fire to a forest would there be looked upon as an outlaw, like the miscreant who should poison a public drinking fountain.

—From *The Chautauquan*.

IX. SOCIAL PLANTING REFORM.

BY A. J. DOWNING

WE heartily commend this plan of Social Planting Reform to every desolate, leafless and repulsive town and village in the country. There can scarcely be one where there are not *three* persons of taste and spirit enough to organize such a society; and once fairly in operation, its

members will never cease to congratulate themselves on the beauty and comfort they have produced. Every tree which they plant, and which grows up in after years into a giant trunk and grand canopy of foliage, will be a better monument (though it bear no jing inscription) than many an unmeagre obelisk of marble or granite.

Let us add a few words respecting the best trees for adorning the streets of rural towns and villages. With the great number and variety of fine trees which flourish in this country, there is abundant reason for asking, "where shall we choose?" And although we must not allow ourselves space at this moment to dwell upon the subject in detail, we may venture two or three hints about it.

Nothing appears to be so captivating to the mass of human beings as *novelty*. And there is a fashion in trees which sometimes has a sway no less rigorous than that of a Parisian *modiste*. Hence, while we have the finest indigenous ornamental trees in the world, growing in our native forests, it is not an unusual thing to see them blindly overlooked for foreign species, that have not half the real charms, and not a tenth part of the adaptation to our soil and climate.

Thirty years ago, there was a general *Lombardy poplar epidemic*. This tall and formal tree, striking, and admirable enough, if very sparingly introduced in landscape planting, is, above all others, most abominable, in its serried stiffness and monotony, when planted in avenues, or straight lines. Yet nine-tenths of all the ornamental planting of that period was made up of this now decrepit and condemned tree.

So, too, we recall one or two villages, where the soil would have produced any of our finest forest trees, yet where the only trees thought worthy of attention by the inhabitants are the ailanthus and the paper mulberry.

The principle which would govern us, if we were planting the streets of rural towns, is this: *Select the finest indigenous tree or trees; such as the soil and climate of the place will bring to the highest perfection.* Thus, if it were a neighborhood where the elm flourished peculiarly well, or the maple, or the beech, we would directly adopt the tree indicated. We would then, in time, succeed in producing the finest possible specimens of the trees selected; while, if we adopted, for the sake of fashion or novelty, a foreign tree, we would probably only succeed in getting poor and meagre specimens.

It is because this principle has been, perhaps, accidentally pursued, that the villages of New England are so celebrated for their sylvan charms. The elm is, we think, nowhere seen in majesty, greater luxuriance, or richer beauty, than in the valley of the Connecticut; and it is because the soil is so truly congenial to it, that the elm-adorned streets of the villages there elicit so much admiration. They are not only well planted with trees, but

with a kind of tree which attains its greatest perfection there. Who can forget the fine lines of the sugar maple, in Stockbridge, Massachusetts? They are in our eyes the rural glory of the place. The soil there is their own, and they have attained a beautiful symmetry and development. Yet if, instead of maples, poplars or willows had been planted, how marked would have been the difference in effect!

There are no grander or more superb trees than our American oaks. Those who know them only as they grow in the midst, or on the skirts of a thick forest, have no proper notion of their dignity and beauty, when planted and grown in an avenue, or where they have full space to develop. Now there are many districts where the native luxuriance of the oak woods points out the perfect adaption of the soil for the tree. If we mistake not, such is the case where that charming rural town in this State, (N. Y.) Canandaigua, stands. Yes; we confess we were not a little pained, in walking through the streets of Canandaigua, the past season, to find them mainly lined with that comparatively meagre tree, the locust. How much finer and more imposing for the long principal street of Canandaigua, would be an avenue of our finest and hardiest oaks, rich in foliage and grand in every part of their trunks and branches!

Though we think our native weeping elm, or sugar maple, and two or three of our oaks, the finest street trees for country villages, yet there are a great many others which may be adopted, when the soil is their own, with the happiest effect. What could be well more beautiful, for example, for a village with a deep, mellow soil, than a long avenue of that tall and most elegant tree, the tulip tree or whitewood? We know how little common minds appreciate these natural treasures; how much the less because they are common in the woods about them. Still such are the trees which should be planted; for fine forest trees are fast disappearing, and planted trees, grown in a soil fully congenial to them, will, as we have already said, assume a character of beauty and grandeur that will arrest the attention and elicit the admiration of every traveller.

The variety of trees for cities—densely crowded cities—is but small; and this chiefly, because the warm brick walls are such hiding-places and nurseries for insects, that many fine trees—fine for the country and rural towns—become absolute pests in the cities. Thus, in Philadelphia, we have seen, with regret, whole rows of the European linden cut down within the last ten years, because this tree, in cities, is so infested with odious worms that it often becomes unendurable. On his account that foreign tree, the ailanthus, the strong-scented foliage of which no insect will attack, seems to be becoming a greater metropolitan favorite.—*Indoors and Outdoors.*

TORONTO:

THURSDAY, APRIL 9, 1885.

"ARBOR DAYS" FOR CANADIAN SCHOOLS.

WE devote a large portion of our space this week to articles from the pens of enthusiastic arboriculturists and educationists on the subject of tree-planting, especially of tree-planting in and about the yards of schools. And certainly, if any of our Canadian teachers catch the enthusiasm of these writers, and enkindle a love of arboriculture among their pupils, and then work with them in the beautifying of their school grounds, and the roads leading to them, with some of our magnificent indigenous forest-trees: caring for them affectionately until they are beyond the need of solicitude,—certainly, we repeat, we shall consider this space not vainly occupied.

Fortunately for Canada, arboriculture, though long neglected, has now its earnest and indefatigable devotees, who spare neither time nor pains in diffusing among the people a knowledge of forestry,—of the beneficial influences which growing trees have upon health, of the good they bring to the land on which they are cultivated, and of their value as investments, and further, of the absolute necessity to the continued fertility of our soil and temperateness of our climate of a certain, by no means small, proportion of forest-land. Nor do they speak with less emphasis of the beauty (now that the soil is almost denuded of its natural growth) which planted trees would give to roads and streets, the yards of public buildings, and the squares and parks of villages, towns and cities. The names of these men should be held in honor. Many of them labored for years, before the public so much as admitted that any merit lay in their work. When, twenty years ago, the now venerable James Little, of Montreal, raised his voice against the wholesale destruction of our Canadian forests, the people laughed at him. But thanks to the efforts of him,—the Nestor of American forestry, as he is fittingly called—of the Hon. H. G. Joly of Quebec, of John Dougall, formerly of Montreal, of D. W. Beadle of St. Catharines, of Thomas Beal of Lindsay, of W. Saunders of London, and of such men as Dr. Eby of Sebringville, Dr. Millikin of Hamilton, and Mr. B. Gott of Arkona,—and more lately, of

Mr. W. R. Phipps of Toronto, and Professor Wm. Brown of Guelph, and of others not so well known perhaps, but not less zealous, Canadian forests will in future not wholly be neglected. The eyes of the public are turned towards them; and the Legislature of Ontario, at least, is of a mind that no more forests shall be wantonly destroyed, that what remain shall be cared for, and that encouragement shall be given to the planting of trees throughout the length and breadth of the land.

Nothing can be more bleak in winter, or more desolate in summer, than an average Canadian school house, when the children are not playing around it. The very trimness of the building, its red walls, its white window sills, its natty little belfry, but serve to emphasize the dreariness of the whole. The trustees, perhaps, at the beginning, planted a few trees, but these have been uncared for, and have been left to die. A mile and a half away, you see the building, as lonely upon the horizon as a ship at sea. How much its dreariness could be relieved by the planting of trees about it, and along the roads leading to it! The graceful elm, the symmetrical maple, the deep-hued oak—not to speak of the walnut, the chestnut, the ash, the beech, and the lime—all Canadian trees, found abundantly almost everywhere—are not only not inferior to the trees of other countries for ornament and domestication, but are among the most magnificent of Nature's products. If our school grounds and their approaches were decorated with these easily obtained trees, what beauty would be added to every landscape! How much more pleasing would be the memories of school life everywhere, if with it were always associated a remembrance of the elegant grace and umbrageous comfort of some stately and lofty trees growing in and around the school yard.

When one reflects upon it, it is surprising how much of material comfort, how much of beauty, how much of happiness is missed everywhere in this world, for the lack of a little combined effort, a little self-denying labor, a little public spirit. An instance is here before us. Trees are conducive to health:—they absorb noxious vapors; they prevent dampness from poisoning the soil. They are things of beauty: they give charm to scenery; they are in themselves, especially in form, among the most attractive of nature's gifts. In their power to awaken and sus-

tain interest they are almost human; by them patriotism has been enkindled, loyalty has been kept aflame; to lovers they have been immemorably dear; by childhood and by age alike they are revered and loved. Poets have found in them themes for tenderest song. Historians have truthfully associated them with crises in the world's history. Of all living things they alone seem to knit the ages together. And yet, beautiful, inspiring, and beneficent as they are, in this new country of ours they are often ruthlessly and wantonly destroyed; and the streets and squares of our villages and towns, the public buildings of both country and city are quite frequently as destitute of them as if our land were a desert.

In some of the States of the American Union this is not true. The lack of trees in the prairie States has turned the attention of the people to arboriculture, and laws have been made by which tree-planting is encouraged, and their towns and cities are now more beautifully supplied with shade and ornamental trees than are many cities in the older East. This result has been obtained quite largely through the institution of "Arbor Days"—days set apart by proclamation of the authorities for the planting of trees, both in public and in private places, by the people generally.

In the East, nature once so kind in her arboreal gifts, has now to be coaxed to offer again what before was thanklessly spurned. It is said, however, that the aspect of some of the States has been changed by the tree-planting done by the people; especially by the school children, upon the annual Arbor Days. This work has been sustained largely, at least among school children, by the enthusiasm of the Hon. B. G. Northrop, of Clinton, Conn., a veteran arboriculturist, from whose pen are two of the articles which appear in this number of the WEEKLY. It will be noticed that the school superintendents of some of the other States look to him for encouragement and advice in school tree-planting, and that throughout the Middle States Arbor Days are becoming established institutions.

Should we in Ontario not have our Arbor Days? Our school houses need the humanizing influences of beautiful trees and shrubs. Flowers cannot well be cultivated. The accidents of the playground are too numerous and violent for the delicate nature of flowers. Besides

the hot summer vacations are too severe for them. They wither beyond recovery. But there are many places in a school yard where a young tree can be safely planted. The roadsides, too, near the school, offer ample space for tree-planting, for many years. And if the planting be done well, the summer drought leaves them scarcely hurt.

But little of this sort of school yard decoration has been done in Canada; and yet enough for example and encouragement. Some of our high school grounds are very beautiful. Others are as black as a Saskatchewan prairie. There is no doubt as to the refining influence of a well-kept playground. As far as our experience goes, very few public school playgrounds are furnished with trees. Many have been so furnished—the trees having been put in by the teachers at the erection of the school house. But the casualty of a stray cow's browsing, or of some urchin's jack knife, has been fatal to them. This want of success is no argument against other trials. The true plan is for the *teacher and pupils together*, to do this work. The pupils should be made to feel that the trees are theirs, and are to be cared for by them. Then their protection and growth are assured.

We know of one school where thirty years ago an enthusiastic teacher inspired his boys with a love of trees; and whose yard was then by teacher and pupils together planted with maple saplings. Several buildings, each an improvement upon its predecessor, have succeeded to the log school house of that by-gone time, but the saplings, grown to sturdy trees, will still outlast many a subsequent erection of brick or stone. The school yard for its rare attractiveness is known far and near. Not only this; but the enthusiasm in the young hearts of that early day inspired the fathers and elder brothers of the boys to do similar work; for several miles around the tree-planting went on; and now one of the most beautiful country sides to be found in the Province over, is the result of that public-spirited effort, over a quarter of a century since.

It would be an easy matter for the Minister of Education to proclaim an Arbor Day for Ontario, but until the sentiment of the teachers demand it, it will scarcely be wise for him to do it. But county inspectors in their two semi-annual visits can do much this year towards preparing public

sentiment in favor of an Arbor Day next year. Any county inspector, even despite apathy regarding the matter in all his neighbors, can institute an Arbor Day or his own inspectorate. Or despite even greater apathy than this, any school can, of itself, establish its own Arbor Day, beautify its own grounds, plant trees in memory of heroes of its own choice, and so help to create and strengthen a sense for the beautiful in nature which in this world is one of the chief sources of happiness.

We shall be glad to receive from masters and teachers any opinions concerning tree-planting and Arbor Days, and to publish them, and to chronicle any steps which may be made in the direction we have indicated.

Table Talk.

THE NATION claims the credit of introducing the term "interviewing" into the journalistic vocabulary.

A PROSPECTUS of a new monthly, *Mind in Nature*, devoted to physical, medical, and scientific information, has been sent from Chicago.

MR. GEORGE MACDONALD has published a *Study of Hamlet*, based on the text of the Folio of 1623; the great fault of which, according to the *Saturday Review*, is its "spirit of literalness and far-fetched explanation."

THE *United Service* for March contains some strictures on the British military operations in the Soudan, by General C. P. Stone, and a review of General Grant's recent account, in the *Century*, of the campaign and battle of Shiloh, by General Jordan.

A MONTHLY journal exclusively devoted to Wagnerian music has been established in Paris. Were the great German master living he would assuredly believe that his music of the future had become the music of the present, for he probably thought that Paris would be the last city in the world to manifest such a recognition of his genius.

M. SACC announces that he has discovered a new alimentary substance in the seed of the cotton-tree, which is richer than any other known grain in nitrogenous matters. He believes that the flour of this seed is destined to take an important part in alimentation, and in the preparation of all kinds of paste, in which it acts as a substitute for milk.

FRANCE publishes the largest number of books in proportion to her population, issuing one book annually for every 1,600 inhabitants. England takes second rank; Holland, Denmark, and Norway, third; Poland and Sweden, fourth; Italy, fifth; while Germany stands sixth in the list, issuing one book for every 2,800 inhabitants. Below Germany there is only Russia, which furnishes one book for every 10,000 inhabitants.

THE true source of the Mississippi River has been determined, as he claims, by Captain Willard Glazier, who led an expedition in search of it in 1881, to be a lake a few miles south of Itasca Lake, and not less than three feet above it, in latitude 47° 13' 25". Captain Glazier's party proceeded in canoes *via* Leech Lake to Lake Itasca, and, accompanied by an old Indian guide, pushed down to the new lake, which is of considerable size, and is named after the discoverer, Lake Glazier. It is 1,578 feet above the Atlantic Ocean. The length of the Mississippi, calculated to it, is 3,184 miles. The lake has remained in obscurity so long on account of the wild condition of the country, and because it is out of the usual route of the furtrade.

THE Chautauqua Circle has just added a new and important branch to the many into which it is already divided. This is an art "circle," to be called the Chautauqua Society of Fine Arts, in which it is proposed to give lessons in drawing and painting by correspondence. Every branch of art will be taught, from elementary drawing to oil-painting. The plan is a thoroughly practical one, and will be carried out in the best interests of the fine arts. Mr. Frank Fowler has been appointed director, and Messrs. R. Swain Gifford, Thomas Moran and Will H. Low will act as a committee of award. The course of study will extend over two years, at the end of which time diplomas will be given and prizes awarded for the best work in the different classes. The membership fee is fifty cents a year. Application for circulars and further information should be made to Miss K. F. Kimball, Plainfield, N. J.

A STRIKING feature of the eighteenth volume (Orn—Pht) of the *Encyclopedia Britannica*, ninth edition (New-York: Scribners; Boston: Little, Brown & Co.) is the large number of important papers contributed by non-British scholars. Among the most valuable and most read able of these contributions is part i. of "Philology"—"Science of Language in General"—by Prof. W. D. Whitney, while part ii.—"Comparative Philology of the Aryan Languages"—an equally elaborate but less generally attractive piece of work, is from the pen of Prof. E. Sievers. Prof. Nöldeke is the author of the articles on the Pahlavi language and Persepolis, and of the principal portion of the very comprehensive ancient history of Persia, the rest of which is by Prof. A. von Gutschmid, while Professors Geldner and Ethé discourse on Persian language and literature respectively. Major-General Sir Frederic Goldsmid completes, with his "Modern History and Geography" of Persia, the extensive series of essays devoted to that country, comprising in the aggregate a full hundred pages, brimful with first-class erudition. Dr. Reinhold Rost writes on the Pali language, Dr. A. Führer on the Parsees, Professor Harnack on Paul of Samosata, and Professor Schürer on Philo. Professor Socin's "Palestine" is a mine of information chiefly geographical, and Professor Wellhausen's "Pentateuch" an admirable condensation of the leading criticism of our day on the age and composition of that part of the Old Testament. "Phœnicia" is mainly from the pen of Von Gutschmid, with additions by Socin. It is needless to remark on the excellence of the editorial judgment which thus apportioned the various fields to authorities so exceptionally competent, and safe to surmise that the selection is chiefly the merit of Prof. W. Robertson Smith, who himself contributes the important articles on Palmyra, Passover, and Philistines.—*The Nation*.

Art.

THE EXHIBITION OF ETCHINGS.

WHEN our amiable friend the pessimist takes his position at the mantel in the attitude of graceful negligence which best expresses the faith that is in him, or the want of it, and assures us very solemnly that we are a nation of utilitarian mudsills whose function it is to perpetually manufacture sawbucks and horse blankets, and boil soap, we find it difficult on looking about us to withstand the force of his oracular utterances; whilst we are impressed by the melancholy wail which attests his sincerity. We claim, however, that our country's backwardness in art and higher art workmanship is incidental to the transition state and the condition of being poor. That we have a desire for beauty and are moving forward in the orbit of humanity, the evidences are continually cropping up in art schools, loan collections, etc. I would fain, for lack of argument, draw upon the multiplication of amateur sketch clubs, etching clubs, and even the present exhibition of the Etchers' Society with all the gubernatorial glamour, effusive congratulations, and mutual admiration with which it was opened. But my friend is a sincere soul, the fire within him burns like *Ætna*; I should be overwhelmed in a torrent of righteous indignation, which would be rather inconvenient just now, particularly as I propose to utilize the calm preserved by my discretion in reviewing the exhibition of etchings brought together by the Etchers' Society.

Etymologically, etching is derived from a Dutch word signifying "to bite." The lines drawn on varnished copper are bitten in by acid. The color and values of the lines are obtained by the higher ones being "stopped out" in the process of biting and the blacker ones by longer exposure in the bath. The process, which is very simple, but sufficiently annoying to render it interesting to the enthusiastic amateur, has been admirably explained by Mr. Howland on his table containing plates in the different stages prior to biting, and the tools used.

Etching from the days of Rembrandt to the present has been regarded as an off-hand art abounding in accident and suggestiveness and rich in the color quality obtainable. Its primary function is the securing of rich, true and suggestive memoranda. Its value, however, in reproduction, has been acknowledged to the extent of entirely superseding line engraving. The critic of *The Week* must excuse me, but a steel engraver with his hard metallic regular lines could never reproduce Corot in *Ville d'Avray*, No. 41, as Chauvel has done. Neither could they attempt the color of dirty marble rendered in the figure from the Tomb of the Medici by Gailard of Paris. Macbeth's etching of Pinwell's "Pied Piper of Hamelin," No. 138, is another instance of the superiority of etching to engraving by line. The original is painted in body color, so rich and broken as to be almost prismatic in places, and full of the quality which painters call "accident." Its color and textures are in direct sympathy with the short lines and infinite variety which Mr. Macbeth has so successfully used.

The Harvest Moon, No. 136, although it recalls the picture of the founder of England's pastoral idyllic school is hardly so successful. The short, jerky strokes of a multiple tool in the sky has a tendency to bring it forward, and destroy the atmospheric effect.

Immediately underneath this is W. I. Wylie's etching, No. 269, after his own picture. The technical management and subjective meaning of the picture are so completely in accord, that no other title than "Toil, Glitter, Grime and Wealth on a Flowing Tide," could have been applied to it. The slow movement of the coal barge, notwithstanding the toiling of the bargemen in making lee-way for the outward bound steamer possessing the right of way which wealth always confers, the pulsation of the muddy water (it looks wet by-the-bye), the heat and movement of the whole picture, invests it with a completeness far beyond the realization of mere words. On the wall opposite to this is Seymour Haden's picture of "Calais Pier," after Turner. It is large, boldly bitten, and bad. The water is of a molasses consistency, which persistently refuses to find its own level, and overflows the pier; the sky suggests a fire in the neighborhood, and the nonentities which we are to accept for figures are at least in harmony with the general muddle. However, it is utterly absurd for the critic of *The Week* to adduce from this failure, an argument that Turner's pictures cannot be interpreted by etching. The French etchers have been etching effects of light and gradation superior to Miller's "Grand Canal" for years. I may also observe that there is no mezzotint on this plate, but it is liberally daubed with printer's ink. That Haden is a great etcher when original, is readily granted. His "Lancashire River," No. 104, for the quality of its line and suggestiveness, is unsurpassed. Amongst the American etchers, Stephen Parish, Pennel and Platt are excellent. The strong, positive work of Blanche Delaye, and poetic landscapes of Edith Loring Pierce may also be noted. There is one picture by Lauder of New York, "Homeward Bound," a moonlight effect printed on satin, the satin being used to force the moonlight glitter on water and clouds. The etching is heavy and bad throughout; all that is in it is the millinery. This freak is analogous to the imbecility of Crevelli whose pictures of saints and madonnas are decorated with bits of colored glass representing jewels.

I need not say that this is not etching or good taste. Gravisande, of Brussels, has a series of sketches in Holland scattered through the collection, legitimate, strong, modest work. No. 98, "Entrée du Forêt," a dry point plate, is one of the most effective pictures in the room.

Goldwin Smith in his excellent opening address ventured an opinion that an etching must be "soul or nothing," that the work of the Etchers' Society "looked too finished," he did not say why, as he disclaimed any knowledge of art. But the remark was so apt that we must credit him with having true artistic insight. We may instance Nos. 155, 156, 157, the most pretentious of the lot as showing the applicability of Mr. Goldwin Smith's remarks. The bitten lines (the etching proper) contribute hardly anything to the making of color. That has been done by the printer judiciously wiping out gradations in the sky, leaving black other parts of the plate where there is not a trace or suggestion of the artist's work. This produces the finished look which so completely annihilates the etching character. If those plates were clean wiped, nothing would be left but a few weak, non-committal scratches. There is not an organic line in any of these pictures. "Soul or nothing," remarks Mr. Goldwin Smith; we have the nothing here in the com-

plete negation of every good, desirable quality. There are some attempts, however, at honest work, more or less successful; there are, however, none so good as to interfere with the members taking Ruskin's advice and buying their art. Particularly when a Belgian etching can be had for less than the cost of a copper plate.

We do not expect a society scarcely a year old to accomplish much in an art requiring such knowledge of line and consummate draughtsmanship, we might at least expect them to begin at the right end and learn to draw reasonably well on paper before complicating their troubles on metal. There may be an element of usefulness in the infantile concern not now apparent, and we will patiently await its development.

—C.

THE plan adopted by Mr. Toppa to display the newest fashions in fans proved as great a success as a flower show in Horticultural hall, New York. There was only one regret, and that, it did not last long enough. But such fragile creations cannot bear exposure to the dust and air too long, and whoever sees them now must take them from protecting boxes. An exquisite novelty are the gauze mounts on sticks of ivory or ebony, as slender as reeds, with brilliant winged insects and minute flowers strewn among them. A black gauze fan has splendid dragon-flies that look as if immersed in the airy substance, and a lovely bridal design fairly sparkles with the most perfect paintings of orange buds and delicate sprays of blossoms on the white gauze ground.

THE amateur water-color artist finds a new direction for her talent in the latest Paris desire for lamp-shades, the variety of which seems almost endless. The paper on which she paints must be cut into shape and properly prepared, and afterwards plaited into the requisite shape at some shop where such work is done. All sorts of designs subject to individual taste may be used, but one, thought extremely pretty, has Louis XV. medallion portraits framed in garlands of roses and upheld by plump Cupids in the style of the period. Another design represents a flight of storks, with wasps and bright-winged moths peeping from the amber-colored folds of paper. These paper lamp-screens are of a perishable nature, and great care must be taken to mount them properly.

THIS was the first and inaugural exhibition of the Association of Canadian Etchers. The collection exhibited numbered about 300 pictures. It was formally opened by speeches abounding in felicitous expressions from the president, Mr. T. M. Martin, His Honor the Lieutenant-Governor, Professor Goldwin Smith, Dr. Daniel Wilson, and Mr. W. S. Howland. The collection of etchings is an extensive and most interesting one, comprising copies from the plates of a number of eminent European and American artists, as well as specimens from a large number of local contributors. Many of the productions of the latter are of an ambitious character and exhibit much originality coupled with a high degree of artistic culture, while here and there among them may be seen the less pretentious effort of a tyro in the art.

Promotion Examinations.

NORTH HASTINGS UNIFORM PROMOTION EXAMINATIONS.

WILLIAM MCINTOSH, INSPECTOR.

(Concluded from last issue.)

ARITHMETIC.—TIME, 2 HOURS.

N.B.—Full work required.

1. $100 + 205 + 86 + 209 =$ what?
2. From 907 feet take 319 feet.
3. Write, in figures, six hundred and eight and three hundred and thirty; in words, 746 and 506; and, in letters, 64, 99 and 46.
4. James has 32 marbles, John has 27, Henry has 75 and Tom has 16. How many more have Tom and Henry than James and John?
5. Robert has 107 cents. He spends 18 cents for a slate and 25 cents for a book. How many cents has he left?
6. Add together 789,397 and 57, and then take away 876 from the sum.
7. How much is 756 less than 923?
8. If a boy spends 15 cents a day, how much will he spend in 7 days? (Multiplication must not be used).
9. A little girl has 54 cents. She spends 9 cents on each day for 4 days. How many cents has she left?

Values.—10, 9, 7, 16, 12, 13, 10, 8, 15.

Count 100 marks a full paper.

[The teacher will please note that full marks are to be given for correct solutions only. For answers nearly correct (where the method is quite correct) from 10 per cent to 50 per cent may be given. In marking, neatness of arrangement, etc., should be taken into account.]

WRITING.—TIME, 30 MINUTES.

The teacher will write the extract upon the board. Pupils will write it but once. See note to time table.

ENTRANCE TO SECOND CLASS.

Dare to do right; dare to be true!
You have a work no other can do;
Do it so bravely, so kindly, so well,
Angels will hasten the story to tell.

ENTRANCE TO THIRD AND FOURTH CLASSES.

A dreary place would be this earth,
Were there no little people in it;
The song of life would lose its mirth,
Were there no children to begin it.
Life's song, indeed, would lose its charm
Were there no babies to begin it;
A doleful place this world would be
Were there no little people in it.

NOTE.—In the examination of writing, the last copy book (at least 12 pages) written by the candidates should be examined closely, taking penmanship, neatness and cleanliness into account. The maximum for copy books and "specimens" (written at the examination) is 50 marks for each. In reporting, the marks awarded for copy books and "specimens" must be distinguished from each other. At the next examination, the pupils of the third class will be examined in Canadian history. The second and third classes will be examined in drawing.

READING.

FIRST READER, PART II, page 75—"Now and again" to "had drawn hers best."

SECOND READER, page 219—"One fine" to "as he then was."

THIRD READER, page 283—"The language of" to "or play with tigers."

Value.—A maximum of 35 marks to be given for ability to read the words correctly at sight; and of 35 marks for expression (including articulation, emphasis, and the natural rendering of the thought.)

NORTH WELLINGTON PROMOTION EXAMINATIONS.

MARCH 13TH AND 20TH, 1885.

FIRST CLASS—PROMOTION TO SECOND.

READING.—TIME, ONE HOUR.

First Book, Part II., page 60:—"This hill is a fine place" . . . "down steep hills."

Value.—30 marks.

WRITING.—TIME, ONE QUARTER OF AN HOUR.

Copy on slates in script (not printing), page 78:—"God made the sky" . . . "her young."

Value.—20 marks.

DICTION.—TIME, 30 MINUTES.

(Pupils will take separate seats with slates. To be conducted in writing.)

1. He got near to the school, while the boys were at play after dinner.
2. The next day the young mouse was in great haste.
3. All through the night they kept a bright blaze.
4. A box of pork floated to the place.
5. The old mouse got off with a mere bruise.
6. Puss shut both her bright green eyes.
7. The young birds were all crying for food.
8. The sleigh turned and he was thrown off on the hard ice.
9. The brooks were full of trout, and chub, and fish of all kinds.
10. The old man was thankful to them, and gave them his hands.
11. The groom found him and took him home.
12. The ship was lost through his quiet and love of self.
13. A fierce dog sprang at him and bit him on his leg.
14. They would not like some great rough creature to steal them away from their home.

The above is to be written neatly.

Value.—50 marks, with 2 marks off for each error.

ARITHMETIC.—TIME, TWO HOURS.

1. Write in words the numbers expressed by the following figures:—938, 1120, 709, 675, and 249.
2. Write in figures the following numbers:—Three hundred and eight, nine hundred and six, one hundred and ninety.
3. Write in Roman numbers, 69, 97, 201, and 40.
4. Write in figures XXXIX., XIX., XXIV., XC., XLIX.
5. A newsboy sold 245 papers in February, 506 in March, 179 in April, and 482 in May; how many papers did he sell in the four months?
6. Add \$5.75 + \$405.08 + \$71.90 + \$10.
7. The sum of two numbers is 907, and the smaller number is 118; what is the greater?

8. From 11682145 take 10791654.

9. A man bought a house for \$2,419; he paid \$287 to have it painted, and \$38 to have it shingled; for what amount must he sell it in order to gain \$275?

10. A man received \$356.03, and paid out of this sum to one man \$63.15, to another \$117.59; how much has the man left of his money?

Value.—100 marks—10 each.

ENTRANCE TO THIRD CLASS.

GEOGRAPHY.—TIME, ONE HOUR AND A HALF.

SEE TIME TABLE.

(Answers to be written on paper.)

1. Draw a map of the County of Wellington, showing its townships, county towns, towns, incorporated villages, railroads, and chief rivers.
2. Bound the township of Erin.
3. Name the county roads in Peel Township.
4. Name the post-offices in Guelph Township, Arthur, and Minto.
5. Name the incorporated villages in this county.
6. Give the local name of your school-house, its number, and the township in which it is situated.
7. Name two rivers in Minto Township.
8. What is a lake, isthmus, strait, cape, bay?
9. What counties south of Wellington? What counties west of Wellington?
10. In what townships is Arthur Village? Drayton? Guelph?
11. Name the railways and the stations in Wellington.

Value, 80 marks.—1, 10; 2, 6; 3, 6; 4, 12; 5, 6; 6, 3; 7, 3; 8, 10; 9, 5; 10, 6; 11, 10.

SPELLING.—TIME, THIRTY MINUTES.

(To be read slowly and distinctly, and the greatest care taken that each pupil understands every word. Each sentence to be first read in full, the pupils simply paying attention, then again slowly, the pupils writing.)

1. The lonely woman perished the victim of his guile.
2. Little tongues should speak the truth, as by Scripture taught.
3. He killed the great fierce beast with one blow of his good axe.
4. The pulley-rope was then made fast to the twine.
5. Having satisfied himself, he walked out again quite leisurely.
6. The dog, freed from restraint, at once rose higher in the water.
7. It was not a wearisome job for the robust and healthy boys, to saw, split, and pile up the poor widow's half-cord of wood.
8. The brave boy could bear to be punished for his little faults.
9. Among her other acts of cruelty, she made him sleep on a wretched bed placed in an old loft.
10. So distinctly did these words appear to be addressed to him, that he resolved to bear any hardships rather than check his way to fortune.
11. How noble it was in Joseph to forgive his wicked brothers!
12. Sheltered, crouched, drowned, curtains, precious, inclement, hospitable, entangled, assistance, favorable, objection, proceeded.

Value, 100—4 marks to be deducted for each mistake.
(To be continued.)

The High School.

ANTIBARBARUS.

[By the courtesy of Edgar Shumway, Professor of Latin in Rutgers College, the editor of *Latine*, we are permitted to reprint these useful papers which have been translated from the German of Meissner.]

(Continued from a previous issue.)

Concern. As far as concerns —, should be expressed by placing the thing to be emphasized first (with following, quidem, not by quod attinet in epistolary style), or by quod—pertinet, which equals "as far as conformable with my duty."

Condition. On condition, ea condicione, hae lege, not sub ea condicione.

Conduce to health, or hurt, salutem, perniciem afferre alicui, not saluti pernicii esse; to advantage, usui, ex usu esse, not utilitate esse.

Connection of the thought. Ratio, qua sententiae inter se excipiunt, not nexus sententiarum, since nexus, in Cicero, is limited to the two meanings, first, combination (atomorum), second (nexus se obligare).

Consecrate to. Consecrate one's time to literary pursuits, tempus in litteris consumere; one's life to literary pursuits, aetatem in litteris ducere, agere; to entirely consecrate one's self to literary pursuits, se totum litteris tradere, dedere, not tempus litteris consecrare (which = to make sacred or holy to).

Consider (i. e., have regard to) something. Respicere aliquid, not ad aliquid, which = to look back after something. With regard to —, si respicimus, rationem habemus (with genitive), or respiciens (see concern), not ratione habita non ratione.

Consolation. Solacium, consolation, which = the act of consoling, not solamen (poetic and post-classical).

Console. Consolari (aliquem de aliqua re an se consolari aliqua re or de aliqua re), not solari (poetic and post-classical).

Consume (time, labor, money) in something, conficere tempus ad aliquid; consumere, collocare, ponere operam in aliqua re, not in or ad aliquam rem.

Content. Rebus suis, sorte sua contentum esse not absolutely contentum esse. I am content with (participle), satis mihi est with infinitive, not contentus sum.

Continuation (further discussion, narration), reliqua pars, pars altera, tertia, etc., not continuatio, which equals, 1, unbroken continuation (imbrium); 2, unbroken chain (causarum). Continuation and conclusion, res instituta porro tractatur et absolvitur. Continuation follows (i. e., to be continued), reliqua deinceps persequemur.

Contract a disease, etc., morbum, malum, poenam contrare, not sibi contrare. To bring upon one's self one's hatred, alicuius odium subire, suscipere, in se convertere, sibi consilare or in alicuius odium incurere; to draw upon one's self enmity, inimicitias suscipere; to bring upon one's self vituperation, in vituperationem cadere, venire, vituperationem subire, not odium, inimicitias vituperationem contrare.

Contradict some one, contra aliquem dicere, not contra dicere alicui.

Corruption, of manners, mores corrupti or perditii, not corruptela morum.

judicium vocare aliquem, so in iudicium venire, in

iudicio adesse, to appear before the court, not ante—; certain, so much is certain, hoc certum est, not tantum certum est.

Cradle, poetically for origin, incunabula, orum, not cunabula.

Create the world, procreare, aedificare, condere mundum, not creare; creator, procreator, not creator.

Crime, scelus, not crimen, which = accusation, charge.

Cruelty. Toward any one, crudelitatem exercere in aliquo, not in aliquem.

Cultivate the mind, excolere animum, not colere, which in connection with animum is used only figuratively. Cicero uses, however, "Artes et studia, amicitiam, iustitiam colere" (foster).

Culture, animi ingenii cultus, not cultura (only united with agri), and not cultus without genitive.

Cure, aegrotum sanare, not curare. 1. Care for in the capacity of physician; 2. To nurse, foster.

Day, before day, daybreak = ante lucem, not diem; at daybreak = prima luce. Day is breaking, luccescit; illucescit (dies), not lux fit.

Dear. Carus, or possessive pronoun, not amatus or delectus.

Debts, aes alienum, only used in sing.

Declamation (oratorical delivery). Pronuntiatio, not declamation, which = an oratorical exercise for practice. So to declaim, Pronuntiare, not declamare, means to practise oratory.

Declaration of war. Belli denuntiatio, or through bellum indicere, denuntiare, not belli indictio.

Declare. Dicere, not declarare, which means make clear or evident by act. Declare war. Bellum indicere, not bellum declarare.

Deem worthy, dignum habere, ducere, iudicare aliquem aliqua re, not dignari (which, by Cicero, is used only passively—e. g., tui honore dignati sunt).

Deep, figuratively, magnus, summus, et al.—e. g., deep peace, summa pax; deep night, multa nox; deep (profound) learning, subtilis, exquisita doctrina, not profundus, which is used only of space.

Defunct, mortuus, not defunctus, as defungi in classical prose is not used absolutely for mori, but defungi vita means to end a life which has been full of trouble.

Deify, referre in numerum deorum, not in numero.

Depart to the war, proficisci ad bellum, not in bellum.

Depend on. Pendere ex, not ab; also not dependere (post-class., and unusual, only once in Livy).

Desire (greediness for). Cupiditas, not cupido, which is not used by Cicero.

Discontented. Sorte sua non contentum esse, also fortunae suae paenitere, not incontentum esse, which is not Latin.

Disdain to, nolle, non curare, not aspernare with inf.

Disobedience = immodestia, contumacia, not inobediencia (post-class.).

Disobedient, non oboediens, dicto non audiens, et al., not inobediens (post-class.).

Court. To bring one before the court, in ius,

Dispute for and against. Disputare in contrarias partes, not pro et contra.

Dissertation. Disputatio, not dissertatio (which is post-class.).

Dissuasion. Dissuasio, not dehortatio (late Latin). But we may use dehortare aliquem ab aliqua re or ne.

Do we not see? Videmusne? not nonne videmus? so videsne? viditisne?

Doubt, without any doubt, sine dubio, not sine ullo dubio. On the other hand, sine ulla dubitatione, without any hesitation.

Dream, in a dream, per somnium, in somnis, per quietem, in quiete, not in somnio.

The East. The west as country, orientis, occidentis (solis), terrae, partes, regiones, gentes, not simply oriens, occidens. Eastward, westward, qua or ea pars quae ad orientem, occidentem (solem) vergit, not orientalis, occidentalis (post-class.).

Educated, vir or homo doctus, not doctus alone. While "a wise man" is sapiens (may be used without the homo), the wisest man, sapientissimus.

Election, to assemble for election, comitiis (abl.) convenire, not ad comitia convenire.

Emigration, migratio, demigratio, not emigratio (post-class.). Emigrate may be used, however. Emigration or cessation of the Plots, secessio in montem sacrum.

Emotion, animi motus, commotio, perturbatio, not affectus.

Employed, to be employed in something = occupatum esse in aliqua re, not aliqua re.

End, the end of the book. In extremo libro, not in fine libri. The end of life, finis vitae. To end, finem facere alicuius rei, conficere (bellum), not finire, which = limit or hem in.

Endowed (gifted). Bona indole (always in sing.) praeditus, not praeditus alone.

Endure (last), manere, vigere, esse, tenere, not durare which = make hard (used first by Livy) (i. 19) in the meaning "last," and only of objects instead of things, not about circumstances or events).

Enjoy a good education = liberaliter, ingenue, bene educari; enjoy some one's instruction = disciplina alicuius uti, magistro aliquo uti, not frui, which is only used when there is actual enjoyment—e. g., voluptatibus, otio frui.

Enjoy life. Vita, hac luce frui, not gaudere.

Enmity. Inimicitiae in the plu., not in sing., except when the abstract meaning is desired.

Enter a city. Intrare urbem, not in urbem.

Equal, parem esse (alicui), not aequare, which = to make equal. To place on a par with, aequare aliquem cum aliquo.

Equip an army, or ship. Instruere exercitum, navem, not exstruere, which = construct.

Equipment. Apparatus in sing., not in plu.

Escape. It escapes me, fugit me, not effugit me.

Estrange from one's self, aliquem or alicuius animum, voluntatem a se abalienare, aliquem a se alienare, not animum sibi alienare.

Etymology, hominum interpretatio, not etymologia.

Everlasting, of earthly things, perpetuus, diuturnus, not aeternus or sempiternus. Forever = in perpetuum.

Every one who, quisquis or quicumque, not omnis qui.

Everywhere, omnibus locis, nusquam non, not ubique, except after relatives.

(To be continued.)

The Public School.

THE ART OF QUESTIONING ILLUSTRATED.

THE teacher who questions well possesses great power. Improper questions waste time, distract the attention, and injure the mind, while proper ones arrest and hold the attention and strengthen the mind by giving it healthful exercise. Improper questions come from ignorance and carelessness—proper ones from knowledge and care. Take, for instance, the reading lesson. How often the whole exercise is spoiled by the neglect of the teacher to prepare good questions upon the selection to be read. The class is prepared, but the teacher is not.

We will give a few examples of questions frequently heard. Suppose the subject is "The Chambered Nautilus," printed below :

THE CHAMBERED NAUTILUS.

This is the ship of pearl, which poets feign,
Sails the unshadowed main,—
The venturous bark that flings
On the sweet summer wind its purpled wings
In gulfs enchanted, where the Siren sings,
And coral reefs lie bare,
Where the cold sea-maids rise to sun their streaming hair.

Its webs of living gauze no more unfurl;
Wrecked is the ship of pearl!
And every chambered cell,
Where its dim dreaming life was wont to dwell,
As the frail tenant shaped his growing shell,
Before thee lies revealed,—
Its irised ceiling rent, its sunless crypt unsealed!

Year after year beheld the silent toil
That spreads his lustrous coil;
Still, as the spiral grew,
He left the past year's dwelling for the new,
Stole with soft step its shining archway through,
Built up its idle door,
Stretched in his last-found home, and knew the old no more.

Build thee more stately mansions, O my soul,
As the swift seasons roll!
Leave thy low-vaulted past!
Let each new temple, nobler than the last,
Shut thee from heaven with a dome more vast,
Till thou at length art free,
Leaving thine outgrown shell by life's unresting sea!

What does the first line say?
What kind of a main does it sail on?
What does the bark do?
What is said about the coral reefs?

These questions are bad, because they do not arouse thought. The pupil can answer them all with his eyes on the line.

What is meant by the first line of the second stanza?
State the meaning of the 3rd, 4th, and 5th lines, in your own language?

These are too general—too indefinite. The

pupil has only a faint idea of the meaning, perhaps, and so stumbles, and becomes discouraged in his efforts to make a statement.

Did each year change the shape of the coil?
Did he stay in the old dwelling after the new was built?

Was it not because he would never go back into the other chamber that the door was said to be idle?

Here the teacher does all the thinking, leaving nothing for the pupil. Consequently, no strength is gained, and interest is lost. The teacher might ask such questions all the year round, and no good would be done. Why? No spirit of investigation is aroused, no mental curiosity is excited.

Give the derivation of "venturous." Where are coral reefs found? Give an example of enchanted. What wrecks ships? What is a tenant?

Such questions are too narrow. They dwell too much upon the mere words, and lead away from the thought instead of bringing it out.

Is the soul material, or immaterial? Why can it be said to live in a mansion? In what condition is the soul when free?

What is meant by life's sea? Why is it called unvesting?

These are too abstruse for a class of immature thinkers. Such questions discourage. The excellence of questions is shown by the degree of interested discussion aroused.

Now examine the following questions :

Are they too easy? Do they excite thought or investigation? Are they adapted to the grade of pupils reading such a selection? Are they lively? Will they make the pupils talk back? We offer them for your criticism.

What does the poet call the "ship of pearl." Give the meaning of "nautilus." Why called "chambered." State meaning of "feign." What has been "feigned" about the nautilus?

*Why is it called a "ship of pearl"? Why is it said to sail the "unshadowed main"?**

Why call it a "venturous" bark? What are its "purple wings"? Give the fable about Sirens. What difference between Sirens and sea-maids?

Why were their haunts considered enchanted?

Describe coral reefs. What part of the nautilus is meant by the "web of living gauze"? Why are they so called?

Give the meaning of unfurl.

* The nautilus was said to close its sails, and dive below whenever the shadow of a cloud passed over the sea.

For what purpose are sails unfurled? What is meant by "wrecked is the ship of pearl"?

What was the tenant? State the meaning of "irised ceiling." What is meant by "crypt unsealed"? What by "he left his past year's dwelling for the new"?

Why say "stole with soft step its shining archway through"?

What was the "idle door"? and why called "idle"?

Why could he be said to "stretch" in his new home?

How did each new chamber of the nautilus differ from the others?

Why was a larger chamber needed each year?

To what does the poet compare the nautilus?

How does the soul differ each year from its state in former years?

In what way can it grow?

Why may the past be called low-vaulted? When, and from what, will the soul at last be free?

—Teachers' Institute.

MR. RICHARD ATKINSON PRACOCK, an English engineer and geologist, whose special study was the investigation of the causes of volcanoes and of subsidences of the earth, died in London, February 2nd, in the seventy-fourth year of his age. He was the author of books on "What is and What is not the Cause of Activity in Earthquakes and Volcanoes," "On Steam as the Motive Power in Earthquakes and Volcanoes," and on "Physical and Historical Evidences of Vast Sinkings of Land on the North and West Coasts of France and South-western Coasts of England."

THERE is a story that a very distinguished writer and personal friend to Mr. Whistler offered to look over the manuscript of his lecture, revise it for him, and put it into shape. The manuscript was duly committed to the hands of this good friend, who found it—he says so himself—so much superior to anything he could have written, that he returned it to Mr. Whistler untouched and with many apologies for his offer. In truth, nothing was more admirable in this performance than its perfection of literary form. The lecture abounded in polished epigram, in sparkling paradox, in picturesque and poetic passages. It had, however, a definite aim, and every arrow shot from that platform went straight to its mark. To Mr. Whistler, art is a religion. His discourse is in the devout strain of a worshipper, but enlivened throughout by wit, and by raillery as subtle as it was good-humored. Its success was never a moment in doubt. Laughter and applause accompanied the speaker throughout, and congratulations flowed in upon him at its close. Nor was the cordiality of the audience in any wise diminished by its perception of the fact that some flashes of brilliant impertinence which lighted up the lecture scorched and dazzled certain well-known members of the company there present.—*G. W. S. in New York Tribune.*

Educational Intelligence.

NORFOLK COUNTY TEACHERS' INSTITUTE.

THE Teachers' Institute of the County of Norfolk was held on April 1st and 2nd at the Union school-house, Simcoe, with an unusually large attendance of members. A good paper on "An Analysis of the Human Mind with some Pedagogic Influences" was read by Mr. D. S. Paterson, B.A. Miss E. Watts, with her junior class of pupils, gave an amusing and instructive example of a primary reading lesson. At the evening meeting, Ex-M.P. Wallace being chairman, an address was delivered by Dr. Mulvany, of Toronto, on "Art Education in the Public School." Dr. Mulvany said that the new system of art schools in connection with Mechanics' Institutes would benefit both the teachers and the industrial classes. The teacher who could draw a picture with a few bold strokes on the blackboard, and could teach the pupils to do the same, must rise in the estimation of those who attend the school exercise, "the eye being more trusted than the ear," and the advantage of education thus more distinctly realized. Secondly, the teacher who could study at an art school, and obtain a diploma to teach drawing—and experts have proved that anyone who can teach *writing* can teach *drawing*—will receive an addition to the regular salary. Many people had *talked* and written about improving the teacher's income. Mr. Ross was the only one who had taken a practical step in that direction. The speaker proceeded to show the present deficiency of trained artistic skill in Canada. A few weeks ago a large order came to a Toronto firm of jewellers to execute ornamental medals for the late Montreal Carnival. The work had to be done by imported technical skill. Artistic training would double the market value of every Canadian manufacture. In speaking of the Art School at Toronto, Dr. Mulvany advised everyone who visited Toronto to procure a copy of the catalogue of the Art Museum compiled by Dr. May. Little was to be gained by walking through an art gallery without such an aid. The new catalogue was, in fact, a history of art in every department of painting, sculpture and ornamental work, and contained much valuable and instructive information.

On Wednesday, April 2nd, a general discussion was held on "Teachers' Difficulties," the point discussed being whether total silence should be enforced in school, or whether the "active hum" of study should be allowed. Messrs. Carson and Paterson favored the latter, Mr. Paterson being also of opinion that it was often useful to allow the practice of two pupils "studying together" so as to aid each other. The general feeling of the meeting was decidedly against this, as being liable to abuse.

Dr. Mulvany gave an address on "Canadian History." He confined himself to one point, the contrast between the modes of settlement of French and of English Canada. The former was sparse, tentative, the work of the soldier-noble and the missionary-priest; the latter was essentially popular, effected *en masse* by the immigration of the U. E. L. refugees in 1789. It began from the first to educate, vote and legislate. The address was a vivid historical sketch, and was warmly applauded.

Mr. J. H. McFaul, drawing master of the Normal School, Toronto, gave a lecture on drawing, illustrated by some clever, off-hand sketches. He was heard with much interest. In consequence of the attention drawn to this subject by Mr. McFaul, and by the address on art training of the previous evening, it is probable that steps will soon be taken for the establishment of an art school at Simcoe in connection with the Simcoe Mechanics' Institute.

SCHOOL ACCOMMODATION AT KINGSTON.

MR. J. J. TILLEY, Government Inspector, was requested by the Board of Education for the city of Kingston, to attend one of their meetings and report to the Minister of Education on the subject of public school accommodation in that city.

Mr. Tilley, on being introduced, remarked that he was in doubt as to how he should address the Board, *i. e.*, whether he should confine himself to the over-crowded condition in which he found the schools, or whether he should suggest plans for the relief of that over-crowding. He remarked that he was present as a matter of courtesy to acquaint them with the general tenor of the report he was about to submit to the Minister of Education. On the board expressing the wish that Mr. Tilley should fully consider the question, the Inspector entered into some minutiae.

Arguing from the assessors' figures, Mr. Tilley showed that in 1884 the number of school children would be 2,900. The number on the rolls was 1,907. The accommodation at present admitted only 1,783.

Passing from statistics Mr. Tilley discussed the subject of attendance. He considered fifty far too large a number of pupils for one master to teach in the senior classes, in the lower he thought sixty not too many. Then computing the numbers in attendance at the various schools in Kingston he found the total excess, after placing fifty in each room, to be 167. Upon the school buildings, too, he passed some condemnatory criticism, and pointed out how high, ventilation and conveniences required alterations.

Coming to his own suggestions as to improvements, Mr. Tilley advocated the erection of a senior boys' school in a central locality. Many, he knew, were kept away from school owing to the over-crowded state of the rooms. By the erection of a new building the attendance would in all probability be increased. He proposed also the addition of four rooms to the Louise school. He urged speedy action being taken.

A vote of thanks was tendered to Mr. Tilley on the conclusion of his address.

THE EXHIBITION OF ART SCHOOL STUDIES.

An exhibit of students' work from the Art Schools of Toronto, London and Ottawa, was displayed in the Library of the Parliament Buildings on the 15th and 16th March.

This exhibit was made by the direction of the Minister of Education for the purpose of showing the members of the Legislature the kind and quality of the work executed in the Art Schools receiving Legislative grants.

The collection of art studies displayed was so excellent that encomiums of praise were universal; many persons were astonished that so much had been accomplished and

that such progress had been made in art work applicable to the various branches of industry, in the short time that the Education Department has recognized instruction in art as part of its province.

The display from the Toronto School of Art consisted of Drawings from the Antique, Industrial Designs, Freehand Drawings, and Paintings in monochrome. Many of the drawings from the antique were pronounced by visitors quite equal to those exhibited in European galleries, and although all the examples exhibited were drawn from the "round" they were so artistically finished, that several persons thought them to be photographs.

Some of the designs would be suitable for paperhangings, and showed the students to be well grounded in geometrical construction, and endowed with a taste for the beautiful. The freehand drawings were good examples of real freehand work, the straight lines and curves were free and without breaks.

The exhibit from the London School of Art consisted of drawings of machinery, oil paintings, models in clay, paintings on China, and crayon drawings.

The models in clay attracted much attention. Groups of flowers, of fruit, and of animals, were beautifully executed. These were modelled from lumps of clay by simple instruments and then baked in an oven. Modelling in clay is now taught in the principal Art Schools in Europe and the United States. It is valuable to artisans in making designs for various branches of manufacture, and we are pleased to know that this branch will be taught in the Toronto School of Art next session.

The drawings of machinery were very good. This is a branch of study well worthy of encouragement.

The painting on China exhibited was very beautiful; and although in London it is to a certain extent a branch of industry, it is as a rule studied only as an accomplishment.

The exhibit from Ottawa consisted of studies from life, paintings in oil and water colors. The work exhibited was very excellent.

The people of Ontario may be proud of such exhibitions, which have a tendency to stimulate a taste for artistic work, and it is gratifying to believe that the time is not far distant when similar exhibitions will be held in all parts of the Province, as there are already over fifty different institutions affiliated with the Education Department conducting classes in all the branches of Industrial Drawing.

IN European Russia there are 22,770 schools of all kinds for popular instruction, with 1,140,915 scholars, of whom 904,918 are boys and 235,997 are girls. In these schools are engaged 36,955 teachers—namely, 12,566 teachers of religion, 19,511 other male teachers, and 4,878 female teachers. For every 1,000 children of a school age there are 1.8 schools; the highest per cent being found in the German province of Dorpat—namely, 4.9. In the districts of Kiev and Odessa there is but one school for every seven villages; in the Petersburg district one school for 29 villages; in the Wilna district one for 33 villages; in the Mosean district one for 18 villages; in the Orenburg district one for 14 villages; and many other districts in proportion. For these schools the sum of 6,158,155 roubles is yearly expended.

The University.

M'GILL UNIVERSITY NEWS.

AT the meeting of the corporation on Wednesday, the announcement was made of a further benefaction from the Hon. D. A. Smith, for the purpose of providing for separate classes for women in the special course in the faculty of arts, up to the final examinations, along with resolutions of the board of governors thereon. The effect of this additional donation would be to raise the entire endowment to the sum of \$120,000, which will bear the name of the "Donald A." endowment. Thereupon the thanks of the corporation were unanimously voted to Mr. Smith, and the matter was remitted to the faculty of arts, with the view of enacting the necessary regulations to give effect to the liberal intentions of the donor. Power was also given to the faculty to make known the general nature of the arrangements proposed in the forthcoming calendar, for the information of intending students.

On intimation from the secretary of the British Association that it is the wish of the Council that the Association gold medal shall be offered for competition in the approaching examinations, and on report of the faculty of applied science thereon, it was resolved that for the present session the medal be offered for competition in the graduating class in mining engineering.

It was announced by the library committee that the Council of the Zoological Society of London has placed the University on the list of institutions receiving its publications. The thanks of the University were voted to the Society.

The report of a Committee of Conference with other bodies on the subject of uniformity in the educational requirements for entrance into the study of professions was read and adopted, and the committee was continued.

The meeting was adjourned to Saturday, at 4 p.m., to receive reports of the faculties of law and medicine, preparatory to the meeting of convocation, to be held on Monday and Tuesday next.—*Montreal Gazette.*

THE following are the newly-elected officers of the Literary Scientific Society of University College:—

President, Wm. Houston, M.A.; 1st Vice-President, Jas. Ross; 2nd Vice-President, C. J. Harvie; 3rd Vice-President, W. H. Hodges; Recording Secretary, J. McD. Duncan; Corresponding Secretary, J. E. Martin; Treasurer, J. A. Duff; Curator, Thos. Marshall; Secretary of Committee, P. A. Gibson; Councillors—R. Ross, R. Kent, J. T. Crawford, J. A. Sparling, E. S. Hogarth.

THE Provincial University of New Brunswick was recently a subject of discussion in the Legislative Assembly of that Province, and some very plain language was used by members on both sides of the House. It was asserted that the university does not meet the demands of public opinion, that its staff is not equal to the work imposed upon it, that in point of discipline it is in a demoralized state, that on account of its defective condition many young men have to go abroad to

complete their education, that the course is too short and the curriculum too limited, that the governing body needs an infusion of new blood, and that generally the college needs a good deal of shaking up. These charges come from members of both political parties, and the Premier, while admitting their truth, confessed himself at a loss for a remedy.

It is worthy of note that in describing the curriculum as too limited one of the speakers complained of the omission of "the group of subjects embraced in political science," except in so far as they are dealt with in Mill's "Political Economy," and he added that "no young man can be called liberally educated unless he understands something about the constitution of his country and the principles of international law." To these subjects he might have added the principles of jurisprudence, and of political science proper, in the sense in which the term is now used by leading writers. It is to be hoped that the time will soon come when more attention will be paid to this important group of subjects in all Canadian Universities, and when every one who wishes to do so will be able to gain a clear view of the political and legal system under which he lives, without going to a foreign country for the purpose.—*Varsity.*

Personals.

MONSIGNOR CAPEL will spend most of this spring in Washington.

DR. E. A. FREEMAN is going to edit a series of historical handbooks on English cities and towns.

PROFESSOR THOROLD ROGERS is writing a work on the progress of the privileges of British citizenship.

MR. THOMAS MASON of Glasgow is soon to publish by subscription a work on *The Public and Private Libraries of that City.*

PROFESSOR DRUMMOND, the author of *Natural Laws in the Spiritual World* has accepted, since the publication of the book, and now holds, a theological professorship at the college connected with the Church of Scotland in Glasgow.

SIR JAMES BURGESS was an English statesman and amateur in poetry of the last century, whose life lasted over through the first quarter of the present century. A volume of *Selections from his Letters and Correspondence*, with biographical notes, has been edited by Mr James Hutton.

TWO at least of three new English bishops just appointed by Mr. Gladstone, have made a place in literature: Bishop Temple of London as one of the authors of the once famous *Essays and Reviews*, and Bishop Bickersteth of Exeter as the author of the widely-known poem, *Yesterday, To-day, and Forever.*

"WOMEN AS COMPANIONS," is the subject of an entertaining paper in *The Current* of March 21st, by Harold Van Santvoord. He shows the relations of women to many eminent writers, poets, and philosophers, and the influence of the former upon the latter, reaching the conclusion that "a warm sympathetic heart" is woman's most desirable quality.

THE 4th of February was the sixtieth birthday of Mr. F. J. Furnivall, and the University of Berlin sent him its degree of Doctor of Philosophy *honoris causa*, as a present on the occasion, in acknowledgment of his important services to early English literature. It was a graceful compliment to one who does all his work with German thoroughness, though eminently free from German pedantry.

THE journalistic career of Helen Wilmans, editor and owner of that peculiar reform paper, the *Woman's World*, though entirely creditable, has been quite Bohemian. Before she entered journalism, she says that she found every door to occupation bolted and barred to her; she thus concludes that she was fated to be a journalist. The candor, courage, and kindheartedness which characterize all this woman speaks, writes, and prints would grace many a prosperous daily or weekly.—*The Literary World.*

THE *Graphic* compliments Bret Harte for sticking to his last, and it gives this pleasing assurance to his American admirers: "He lets the foreign countesses, dukes, princesses, black-browed villains, and so forth, that form the staple stock of foreign writers, stay serenely at home, where they belong, in their airy castles and so forth. And he stays at home among the people and characters he knows and who know him. He is wise and continues original. He will never degenerate into a bad English or French imitator."

"I BELIEVE," writes a *Pall Mall Gazette* correspondent, "that the connection of the Hittites with the blameless Ethiopians of Homer is the really important factor in the Soudan question, and I believe Mr. Gladstone agrees with me. I believe that Prince Bismarck's transitory policy is less momentous than the hypothesis that the founders of Troy were prehistoric Germans, and I believe Mr. Gladstone agrees with me. I believe Homer was interested in an early edition of the Anathasian Creed, derived by the Helli of Dodona from the Phœnicians, who got it from the Hebrews, and I believe Mr. Gladstone agrees with me. Lastly, I think that to hold in ethnology and archaeology opinions worthy of Jacob Bryant or Mr. Casaubon is in itself a proof that a statesman comprehends the meaning of plain facts and obvious arguments; also I believe that as a caustic Mr. Gladstone missed his chance by not living in Pascal's time. And I wish he had."

DR. WM. HAND BROWNE, the librarian of the Johns Hopkins University, is one of the few Baltimoreans who have received appointments in that institution. He is a gentleman of fine scholarly attainments, and devotes his leisure hours to literary work. His chief writings are a *Life of Alexander H. Stephens*, the *History of Maryland*, in the American Commonwealth series, and a *School History of Maryland*, the latter in conjunction with John Thomas Scharf, who collected a good mass of material which Dr. Browne put into shape. He also helped the indefatigable Mr. Scharf in preparing his voluminous *History of Maryland*. Dr. Browne was the assistant editor of the *Southern Review*, in 1866-7, and editor of the *Southern Magazine* from 1870 to 1875, when its publication ceased. A few years since his controversy with Mr. Wm. F. Poole on the subject of "convict indexes" caused a ripple of excitement and a ruffle of temper.—*Literary World.*

Examination Papers.

[We intend for the future to insert under this heading, in chronological order, the various examination papers that have been set for admission to high schools.]

Our file being now complete we insert the omitted papers on

GEOGRAPHY.

DECEMBER, 1881.

1. What is Political Geography? Physical Geography? Define the following:—First Meridian, Zone, Equinox, Plateau, Water-shed, Glacier, Climate.

2. Give the boundaries of the different zones, and the breadth of each zone in degrees. Account for the positions of the bounding lines of the zones.

3. What and where are the following:—Vancouver, Three Rivers, Trinidad, Avon, Corfu, Mersey, Stromboli, Hamburg, Hindoo Koosh, Lyons?

4. Name the bodies of water into which the following rivers flow:—Garonne, Tagus, Elbe, Volga, Oder.

5. Between what cities in the United States and the British Islands is trade with Canada chiefly carried on? Tell what you know of the commodities exchanged.

6. Over what railroads would you pass in going from (1) Toronto to St. Thomas; (2) Owen Sound to Ottawa? Describe a trip from Montreal to Lake Superior.

7. What information respecting a country can be obtained from a knowledge of its mountains?

8. Name and classify according to slopes the principal rivers of Asia.

9. From what countries do we chiefly obtain the following:—Coal, iron, cotton, rice, sugar, coffee, silk, opium?

DECEMBER, 1882.

1. Tell what you know about the earth's shape, size, motions and distance from the sun.

2. What place has latitude 0° and longitude 0°? In about what latitude do we live? Where do all meridians meet? Where is a degree of latitude longest? What zone is Ontario in? How many degrees broad is the torrid zone?

3. Bound the Dominion along the south from ocean to ocean. Give the Provinces of the Dominion, their capitals and positions. Put down in order the names of the rivers, lakes, canals or rapids through which a vessel passes in a voyage from Duluth to Quebec.

4. Tell what you know about the chief seaports of the Dominion.

5. The Province of Ontario is partly bounded by Lake Ontario. Draw a line indicating the course of this boundary, and mark the position of the principal towns and cities.

6. Define—Delta, Oasis, Longitude, Zenith, Horizon, Zone, Watershed.

7. Where and what are the following:—Alexandria, Blanc, Capricorn, Euphrates, Iowa, Jersey, Kars, Land's End, Potosi, Queenston, Rigga, Madeira, Congo, Vienna, Tel-el-Kebir; Hobart Town, Funen, Helligoland, Arran?

8. State the population of the Dominion, and mention the chief exports of each Province.

ARITHMETIC.

AUTUMN TERM, 1873.

1. By what number must £4 16s. 3¼d. be multiplied to give a product of £89 17s. 3¼d.?

2. If I own ¼ of 4/5 of 2/3 a ship worth \$20,000, and sell 1/4 of the ship, what will the part I have left be worth?

3. Prove the rule for multiplication of fractions.

$$\text{Simplify } \frac{1\frac{1}{2}}{1\frac{1}{2}} \div \left(\frac{2\frac{1}{2}}{4\frac{1}{2}} - \frac{7\frac{1}{2}}{31} \right) + 3\frac{1}{2}.$$

4. If A can do a work in 3¼ days, and B in 4½ days, in what time will both working together do the work?

5. If the 2lb. loaf cost 6¾ cents, when wheat is \$1.10 a bushel, what is the price of wheat when the 2lb. loaf costs 7½ cents?

$$6. \text{ Simplify } \frac{3\frac{1}{2} - .04}{5 - .0625} \div \frac{.015 + 2.1}{.035}.$$

7. Find the expense of fencing a railway (both sides), 73 miles in length, at the rate of \$5.50 per yard.

8. If a wheel make 260 revolutions in passing over one mile, 520 yards, 2 feet, what is its circumference?

9. Find cost of 7,225lbs. coal at \$7.25 per ton of 2,000lbs.

10. Find the sum and difference of 2754¼ and 2633¼.

NOTE.—Candidates for classical course omit Nos. 5 and 6.

Ten marks for each question.

JANUARY, 1874.

N. B.—Full work required.

1. By what must £157 12 10½ be divided to give a quotient of 33½?

2. How much wheat is necessary to sow a field containing 7¾ acres if ¼ of an ounce is sown on every square yard?

3. How many minutes between 12 o'clock noon, May 24th, and half-past nine in the forenoon of September 3rd? and express the answer as a fraction of the year.

$$4. \text{ Add } 1\frac{1}{2} \text{ of } \frac{1}{2}, \frac{2}{3} \text{ of } 1\frac{1}{2}, \frac{1}{2}, \frac{1}{2}.$$

5. A house and lot cost together \$3,600; the value of the lot is ¼ that of the house. Find the value of each.

6. Subtract 2¾ sq. yards from ¾ of ¼ of 3 acs.

7. Prove that multiplying the numerator of a fraction by any number produces the same effect as dividing the denominator by the same number.

$$8. \text{ Simplify } .75 \text{ of } 1\frac{1}{2} \div 7.6 \text{ of } \frac{1}{2} - (1.875 - 1\frac{1}{2}) \times 2 \div \frac{4.875}{4\frac{1}{2}}.$$

9. If ¾ of ¾ of an acre produce 42 bushels of potatoes, how many bushels will an acre produce?

10. A man working 9¼ hours per day finishes a piece of work in six days; in what time would he have finished if he had worked 8¾ hours per day?

NOTE.—Candidates for the classical course may omit Nos. 8 and 10.

JUNE, 1874.

N. B.—Full work required.

1. The *dividend* is one billion two hundred and twenty million two hundred and thirty thousand and ninety-two, the *quotient* six thousand and eighty-four, and the *remainder* forty-eight thousand. Find the divisor.

ac. ro. sq. pr sq. ft. sq. in.
2. Reduce 3 2 14 4 72 to square inches; and 170184 square feet to acres.

3. 797 tons, 19 cwt. 2 qrs. 14 lbs. is divided among a certain number of people, so that each receives 5 tons, 3 cwt. 2 qrs. 16 lbs. How many people are there?

4. Shew which is the greatest and which the least of the following fractions:— 1/4 of 1/2, 1/2 of 1/3, 1/3 of 2/3.

5. Reduce to its simplest form:

$$\left\{ \frac{2\frac{1}{2} - \frac{1}{3} \text{ of } 1\frac{1}{2} - 1}{1 \text{ of } 3\frac{1}{2} + \frac{1}{18}} - 2\frac{1}{2} \right\} \div \frac{5\frac{1}{2}}{8\frac{1}{2}}$$

6. What fraction of £58 5s. 6d. is 3/4 of £17 2s. 3d.?

7. A man invested 1/2 of his capital in bank stock, 1/3 of the remainder in real estate, and had still \$6,000 left. Find his capital.

8. Find the value of 43 cwt. 2 qrs. 21 lbs. a £2 16s. 8d. per cwt. (Qr. = 25 lbs.)

9. Find the difference between

$$\begin{array}{r} .26 + .2 \text{ of } 3 \cdot 7 \quad 4 \cdot \dot{3} + 5 \cdot \dot{6} \\ \hline .48 - .014 \text{ of } 20 \quad 7 \cdot \dot{4} - .2 \text{ of } 11. \end{array}$$

10. A person after paying out of his income for a year, a tax of 4 cents in the dollar, has \$7,200 left. Find his income for a year.

DECEMBER, 1874.

N. B.—Full work required.

1. The difference between the product of two numbers and 467 is ten millions, ten thousand, and ten; one of the numbers is twenty-one thousand and twenty-eight; what is the other number?

2. A cannon ball travels at the rate of 1,500 feet in a second and a half; how far will it have gone in 1/4 of a minute?

3. How many grains are there in 9 oz., 17 dwts., 22 grs., and how many acres, &c., in 167,412,715 square inches?

4. How many yards, &c., of carpet 2 feet 1 inch wide, will it take to cover a floor that is 19 ft. 7 in. long, by eighteen ft. 9 inches wide?

5. After taking out of a purse 1/2 of its contents, 1/3 of the remainder was found to be 13s. 5½d. What sum did it contain at first, and what part of £3 is that sum?

6. Find the value of

$$\frac{5\frac{1}{2} \div \frac{2}{3}}{1\frac{1}{2} \text{ of } \frac{1}{2} \div 10\frac{1}{2}} \times \frac{1\frac{1}{2} \text{ of } 4\frac{1}{2}}{13\frac{1}{2} \text{ of } 5\frac{1}{2}}$$

7. What must be the length of a plot of ground, if the breadth be 15¼ feet, that its area may contain 46 square yards?

8. A pint contains 34¾ cubic inches; how many gallons of water will fill a cistern 4ft. 4 in. long, 2 ft. 8 in. broad, and 1 ft. 1½ in. deep?

9. Reduce to a simple quantity

$$\frac{2.8 \text{ of } 2.27}{1.136} + \frac{4 \cdot 4 - 2.83}{1.6 + 2.629} \text{ of } \frac{6.8 \text{ of } 3}{2.25}$$

10. The chain for measuring land is 66 ft. long, and is divided into 100 links; what is the length of a fence that measures 2,456 links, and how much would it cost at \$8.86 per yard?

Value of the above—10 each. Candidates for classical course may omit No.'s 9 and 10.

(To be continued.)

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