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Educational Weekly

Vol. I.

THURSDAY, MAY 7, 1885.

Number 19.

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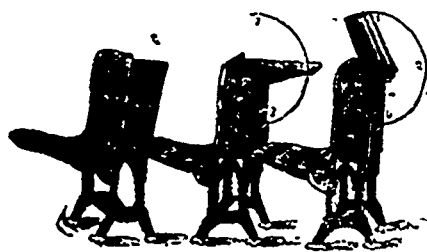
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PUBLISHERS' NOTE.—The Americanisms in pronunciation throughout the edition of ORTHOEPIST used last year were objected to by Canadian educationists, and have all been eliminated in the present edition, and every word in the book made to conform to the latest STANDARD ENGLISH AUTHORITIES, viz: THE IMPERIAL DICTIONARY and STORMOUTH. A chapter has been added on Etymology that gives the essentials for Teachers' Examinations, and saves the price of an extra book on this subject, and a chapter added to VERBALIST saves the price of an extra work on English Literature.

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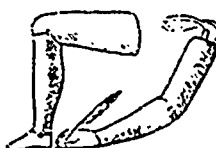
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The Educational Weekly.

TORONTO, MAY 7, 1885.

WE have in another column spoken on the subject of "How to Read." It is addressed to those only who do really read, in the proper sense of the word; who devote a certain portion of time systematically to the perusal of the best authors, who do not merely take up now and again a work which they consider it is imperative upon them to know something of, in order, perhaps, to be able to say that they have read it, but who study the creations of great authors either for delight, for ornament, or for ability.

There are those, of course, to whom it never occurs that such reading is either necessary or beneficial: who certainly employ their leisure hours in reading, but in reading a light and evanescent description of literature, such as not only is of no advantage to them, but is often perhaps a real disadvantage. To such we would point out a few of the pleasures of which they thus voluntarily deprive themselves, and of the enormous advantage those have over them who give themselves up to a conscientious study of classical English and other authors.

Reading produces a taste for reading, and reading the best produces a taste for reading the best. The converse is equally true. A steady and continuous course of E. P. Roe, or May Agnes Fleming, or such like, insures eventually a dislike for Scott or Thackeray, to say nothing of Macaulay or Gibbon. Whereas close attention to Macaulay or Gibbon will lead to delight in the heaviest works in literature according to the tastes of the reader—it may be Bacon, or Locke, or even Kant. To which is added this additional benefit: Having acquired a taste for what by the majority of persons is considered "dry," it is possible to read the more frivolous productions in the sphere of fiction and romance not only without being ensnared by such lower grade of writing, but with the power to use these to greater advantage, by using all that is useful in them and adding this to our store of information or theory.

And to the teacher more, perhaps, than to any other class of people, this taste for the best that is written in our own language or in any other is an absolute necessity. The mind, if constantly called upon to produce, if incessantly drawing upon its capital, will soon be impotent, will soon exhaust that capital, and will find itself weak and irritable, so much so that it will find it irksome, and sometimes even impossible, to attend to trivial and minor matters.

The teacher is called upon to produce continuously or rather perhaps we should say the good teacher will continuously pro-

duce, and will add to the matter of the textbook with his own knowledge. To do this he must add systematically to his own knowledge.

Nothing will accomplish this better than a well-ordered system of good reading. We do not mean to assert that he will by this means only lay in a stock of information which he can afterwards call up and use for the benefit of his pupils; he will do more than this, he cannot help—if, that is, he is a man of any education—doing more than this. Of this added advantage of constant reading we will now take notice.

The mind cannot at all be likened to a mere syphon: if it draws material from any source, it will not simply again pour forth that material unchanged; it will in all cases color it according to its own peculiar powers. These powers will always be brought into play in any careful reading, and this exercise of these powers is of the utmost benefit to the teacher. This is a point upon which we wish to lay especial stress, and to which we have purposely led up.

To compute the whole effect of judicious and thoughtful reading upon the mind is out of our power; some of these effects, however, it is possible to mention.

The taste will be elevated. A high, critical, and refined taste is, perhaps, the salient characteristic of the widely-read man. We know of nothing that conduces so efficiently to this as wide and varied reading. Glance at the words of those who were great readers—Hallam, De Quincey, Macaulay: did they ever egregiously sin against good *taste*? There is but one answer.

And this possession of a refined taste is a possession of inestimable value—to those whose duty in life it is to guide and educate our youth above all. But it is a possession that can only be acquired after long and conscientious study.

The style of language will be improved. Let a man read carefully one book, he will find that his vocabulary and his ability to express himself intelligibly and fluently will be wondrously enhanced and in a manner quite evident to himself, even though this was not at all his object in reading such book.

The breadth of mind will be increased. By this we mean that the constant reader will have a firmer and larger grasp of any subject to which he may afterwards apply his mind. It may be urged that, even if this be the case, the reader of books is often apt to be visionary and theoretical. True; but these are faults into which it is not very likely that any teacher will fall unawares. His duties are so eminently practical that they will counteract any tendency in the

opposite direction. But even so, we can by care and attention, undertake occupations, and pay attention to subjects, which will eliminate any leaning towards a vague or visionary frame of mind. "There is no stoned or impediment in the wit, but may be wrought out by fit studies."

The difficulty of obtaining books is, we know, to those with limited means, ever a source of sorrow. But the reading we speak of need never be affected by any such hindrance. A number of books is not necessary to the cultivation of this habit, though certainly—if we can escape the temptation to merely toy with a varied collection of works—though certainly a heterogeneous assortment is well calculated to enhance the pleasure of all reading. It is always possible to purchase a few excellent books—especially in these days of cheap editions. The circulating libraries may be used. It is quite legitimate to borrow—*teste* Coleridge, or Lamb, or Mill, or Carlyle. And, after all, one work well studied will accomplish all, or nearly all, we have spoken of.

There is this peculiarity in the habit of reading which the teacher who is called upon daily, even hourly, to produce thought of some kind will find invaluable: No matter how different the subject of the book may be from that upon which the teacher is engaged, the very process of actively employing the mind seems to create activity in all directions. Energy apparently produces energy. The mind, if exercising its powers continuously—within, that is, normal limits—is able to bring its whole weight to bear on any topic presented to it. If, on the contrary, it is not exercised, it becomes dull and apathetic, and unable to concentrate its faculties to any advantage on any subject. This is another and highly important advantage resulting from a system of careful reading. This reading, it is hardly necessary to add, in order to bring about such much-to-be-desired advantages, must be always accompanied by thought. It will be of very little if any use to set apart so many pages to be read daily, if these are hurried over without consideration in a purely perfunctory manner. Far better a few pages carefully studied with notes, questions, explanations, criticisms, than many books merely "skimmed." We are speaking, of course, of such books as are to be "chewed and digested," for these are they from which the greatest amount of good is to be derived.

These are a few of the benefits accruing from the habit of constant reading. It is a habit easily acquired, but more easily acquired when young. It is a habit which should be looked upon as a duty by all teachers.

Contemporary Thought.

THERE can never be enough study of Franklin and of Lincoln to exhaust their capabilities to be of value and charm to their countrymen *Brooklyn Eagle* (March 15) on Carl Schurz's lecture.

THE London School Board, by a vote of 31 to 4, adopted a resolution providing that teachers should not require home study of pupils who are in a delicate state of health or whose parents object thereto. Several steps have recently been taken by the English educational authorities toward making the school life of children less arduous. Such expressions of public opinion as have been obtained indicate a general disposition on the part of parents in favor of less hours and less work for the children.

THERE having been many expressions of late by prominent individuals in favor of a permanent tenure of office to teachers, Mr. Horace E. Scudder, in *The Independent*, advocates the present system of yearly appointments by school-committees. He maintains that under it the teaching profession has gained in character and dignity, that it is less liable to abuse than the new system proposed, and that, above all, "it is more consonant with the fluid condition of our society which is its salvation." He maintains that the democratic ideal is not "the level of the unmovable prairie, but the level of the unresting sea." It is evident from this that it is going to be as difficult for the teachers to introduce the principle of permanent tenure into the public educational policy as it was to secure its adoption by the General Government for the civil service.—*The Current*.

"THERE are good reasons for giving special attention to the teaching of English. A thorough knowledge of one's own language is a very desirable accomplishment, but to the child it is more—it is a necessity, for it is the medium through which all the knowledge acquired in other departments must be conveyed. Children who have heard nothing but pure English, from the cradle, learn to speak correctly without an effort; they learn as the mocking bird learns—by imitation. The great majority, however, hear nothing from infancy but poor English, and by imitation they form incorrect, and often, ludicrous habits of speech, which, in after life, become a source of mortification and annoyance, unless they are broken up before they grow strong and unyielding. Hundreds of witnesses testify to this fact frankly and sadly."—*Mrs. Haynie, in the Illinois School Journal*.

IN the *Nineteenth Century* there is an article by an Eton master on that seat of learning. He points out that the boys learn nothing, and can learn nothing, owing to the system which allows them to get up their lessons when they like, to repeat their lessons to their tutors, and then a second time "in school." Everything is sacrificed to teaching Greek and Latin, and yet neither language is acquired. The only remedy which he perceives is to do away with the tutorial system; but this, he fears, is unlikely, as it brings in much money to the tutors. It certainly is absurd that a boy should go over a lesson twice, to two separate masters, and yet that he should not necessarily have learnt it. A boy at Eton costs a parent about £200 per annum. He is about four months in

each year at home, and "the number of whole and half-holidays in the summer school-time of 1884 was forty-four, exclusive of Sundays; while the whole school-days numbered only thirty-five." The greater portion of this £200 per annum is supposed to be absorbed in board, although the board is so scanty that the boys are obliged to supplement it with their pocket-money.—*London Truth*.

EVERY Canadian boy is, in my opinion, influenced injuriously by the fact that he is born to be only a colonist, not a citizen of an independent nation. Every Canadian statesman is repressed and narrowed by his subordination to a stronger but distant political power. For this reason, among others, no colony has ever produced great men. Can my reverend critic point to one? or can he tell us of a poem, picture, statue, book or invention produced by colonists which is known and valued by the world? No; all is a dreary blank of unknown mediocrities, and such it must continue until the dependent colony rises to the dignity of the independent nation, working out its own destiny, inspiring and calling forth the patriotism, enthusiasm and genius of its sons. When every Canadian boy feels he is part of a proud nation, which he will in time be called upon to govern, that he is possessed of every political privilege, and may aspire to the highest position in the State, and when these highest positions are of the State and not imposed upon it, Canada may then be expected to contribute something to the world's progress, but not till then.—*Andrew Carnegie, replying to Rev. T. Fenwick in Scottish American Journal*.

BREAD and weak tea form the sole sustenance of many children for long periods. Other children are left wholly unprovided for by their parents and have to forage as best they can for themselves. I found one lad immersed in geography who had had no breakfast, and whose dinner consisted of two rotten oranges thrown away from a huckster's stall. To look at these half-starved children in London schools is to be "full of sorrow." Very touching is it to think of the quiet heroism with which, when hunger is gnawing within and the dull misery of want overflows them, they sit uncomplaining at their little desks, toiling at their allotted tasks, wondering no doubt, sometimes, what it all means, but bearing their burdens patiently. These children want blood, and we offer them a little brain-polish; they ask for bread and receive a problem; for milk, and the tonic sol-fa system is introduced to them. And in all this there is an aggravation of their suffering and risks. To educate a half-starved child at all is to oppress it, and the facts that there are a number of half-starved children in London schools, and that they are not merely being educated, but prepared for examination—the same examination which has to be passed by their plump, well-fed companions—is to substantiate the statement that educational over-pressure exists.—*Crichton-Browne*.

THE *Educational Weekly* suggests the appointment of an Arbor Day (or day for planting trees) for our public and high schools. The idea is a good one, and may be called novel, although it was carried out by the Rev. H. W. Davies, D.D., when he was Principal of the old Cornwall grammar school, just twenty-five years ago; and was assisted by Mr. Wilson, who has since become the

well-known Dr. Wilson, of Salvation Army fame, in Kingston. They are growing now, around the high school building, here, trees which were planted by boys and girls, some of whom are happy and prosperous, some of whom, unhappily, are scattered in distant lands, or who have gone to that bourne whence no traveller returns. The cultivation of a loving regard for the humble *alma mater* of their earliest efforts is well calculated to keep alive those clustering memories of early days, which go so far to soften the asperities of after life, when boys and girls have become men and women—fathers and mothers—and when to recall the happy hours of youth, serves to renew youth even as the eagles.

Since writing the above, we learn from a Toronto despatch that the Minis' of Education has set apart Friday, May 8th, as a school holiday throughout the Province, for the purpose of planting trees and otherwise beautifying the school grounds. We have no doubt it will be taken advantage of generally.—*The Cornwall Reporter*.

A YOUNG man, a Bostonian, graduated from Harvard, a few years ago, with honor. He looked over the professions and himself, and decided that his vocation was business. He applied to several merchants, through his father, for employment as a clerk. One reply met the application—"We don't want a college graduate for a clerk; we prefer a boy who comes from the English High School." At last, the father asked a merchant on whom he had a claim for consideration, to receive the young man as salesman. The merchant did not absolutely refuse, but hesitated. "I would like to oblige you," he answered, "but, to speak frankly, I don't believe in college graduates. They are too uppish, and they don't know anything but a little Greek and Latin, and less arithmetic. They can't sell goods, and they don't like to bone down to hard work." "Try him for six months," said the father, "and then, if he don't suit, discharge him. But I want you to give him a fair chance to show the stuff that's in him." The young man was taken on trial. He was observing, eager and obliging, ready to do even the most insignificant duty that pertained to his business. The goods of his house he made his constant study, eagerly assisting in every department, that he might acquire the knowledge he sought. The result was that with a mind trained and receptive he learned in twelve months' time what it would have cost an untrained clerk two years of apprenticeship. At the end of that time he was put upon the road as a salesman. A good salesman's strong point is his knowledge of human nature. The young man had studied human nature where there were several hundred specimens of all sorts. Thus equipped, and with the address and manners of a gentleman, he went out among buyers. He made failures, of course, but they taught him more than his successes. Experience gave him confidence, and soon the employer complimented him. The four-months' salesman sold large bills to paying customers, at satisfactory prices. One day the merchant said to the youth's father: "I am satisfied; he is a better salesman than some men we have had in our employ for several years. I believe now in college men—at least, I should say, perhaps, in college men who have good common sense, and are not afraid of hard work."—*The Youth's Companion*.

Notes and Comments.

WANT of space prevents our concluding the article on "What to Expect From Our Public Schools," from the *Andover Review* for May.

OUR readers will understand that Mr. Reading's article on Elementary Drawing, although not specified as being number one, is the first of a series.

MR. READING'S long-promised article on Elementary Drawing appears in this issue, as also a continuation of his papers on Perspective. The former, though headed Public School, will, we think, be found interesting to all.

WE have spoken in our leading articles of how and why to read. Perhaps the most beautiful thoughts on these subjects—both as regards their value and their melodious expression—are to be found in Mr. Ruskin's two lectures: "Of Kings' Treasuries," and "Of Queens' Gardens."

AMONGST the magazines of which we have been in receipt this month is *The Chautauqua Young Folks' Journal* for May. In it "The Children of Westminster Abbey," "Souvenirs of my Time," "The Temperance Teachings of Science," "The Making of Pictures," "Boys' Heroes," "Search-Questions in American Literature," and "In Leister's Times" are continued.

"A TEACHER," says the New York *School Journal*, "ought to have the very soul of honor and conscientiousness." Very true, but it need scarcely be said of teachers only. However, the *School Journal* proceeds very well to show that this "honor and conscientiousness" should affect the relationships of teachers to each other. This is often forgotten. Teachers have rights and duties as regards each other equally as regards their pupils.

REV. DR. LEONARD WOOLSEY BACON maintains the curious theory in *The Independent* that the richer the colleges are in endowments the greater the cost to the pupils, and he reaches the somewhat paradoxical conclusion that as the sons of poor men can get their education at the least expense at colleges without endowments (which he holds to be borne out by the facts), colleges ought not to be endowed in order that poor boys may have a chance. He desires some one to explain this perplexity and contradiction.

IS or is not the introduction into this Dominion of ours of American forms of thought (using the word American as restricted to our neighbors in the States) an introduction to be fostered as higher and better than any others or than any which we ourselves may

happen to be possessed of? That such forms of thought are being introduced among us is indisputable. Cheap magazines, cheap books, cheap papers, all of which are most easily obtained, must influence the Canadian people at large. It is a question upon which many, no doubt, find it difficult to form an opinion.

MESSRS. SELBY & CO., the enterprising publishers of kindergarten works and Hermes' drawing books, have made arrangements with Mr. Arthur J. Reading to give lectures on elementary drawing to teachers' associations. The Messrs. Selby believe that if the subject of teaching drawing be brought before teachers, more interest will be taken in the subject, and that therefore there will be a larger demand for all sorts of drawing material. Knowing Mr. Reading's ability and enthusiasm they believe that the impetus the study of drawing will receive from his lectures will indirectly recoup them for the expense they incur in engaging him. We think associations will find it to their advantage to correspond with Messrs. Selby on the matter.

EUROPE still hovers on the brink of war. Mr. Gladstone, by a brilliant speech on the vote of credit for \$55,000,000, aroused enthusiastic cheers from both sides of the House and allayed many misgivings. England, he showed, was doing her utmost to avert so universal a calamity as a war between two such countries as Russia and herself must under any circumstances be, but England would at the same time uphold her honor to the utmost. It seems very lamentable that some powerful nation, such as Germany, for example, does not step forward and boldly do her best to prevent bloodshed. Petty rivalries probably are the cause of this. If Germany were to assert her intention to side with Great Britain if Russia assumed the aggressive her fear would in all probability be that France would ally herself with Russia, and thus the event which the former power endeavored to prevent would take place in aggravated form. Meanwhile both Russia and England are preparing to meet any contingency with the utmost possible haste.

IN the extract from Carlyle's diary which we have inserted under Literature and Science is a magnificent list of names—names of philosophers, poets, historians, novelists, and others, with which, sooner or later, those now under the care of our high school masters will become acquainted. An opportunity is here presented to teachers of senior classes of bringing before their pupils such names. With some of them probably the more widely-read of the class will be already familiar, with Raleigh, Scott, Goethe, Voltaire. On the others the master might most interestingly say a few words now and

again in a way which would be within the comprehension of his listeners, and which might lead them to individual attempts to learn more of them. If this latter result is brought about we strongly recommend that instead of going to the ordinary biographical dictionary for information, boys be urged to resort to higher sources. All that the ordinary dry biographical dictionary tells us it is not by any means hard to contrive to forget; but if we go to Carlyle's essays, to Macaulay's essays, to Matthew Arnold's essays, to De Quincey's essays, and such like, we must learn a great deal that fastens itself in the memory. Who has read Carlyle on Johnson or on Diderot without a vivid recollection of the pleasure it gave him? Herder, perhaps, is the only name mentioned in the extract from Carlyle's diary which is a little out of the ordinary reader's circle of literary acquaintances. A beautiful little essay on Herder will be found in the twelfth volume of De Quincey's works as published in 1880 by the Black's, of Edinburgh.

AMERICAN educators doubtless will read with great interest the report of the royal commission appointed in England in 1882, to inquire into the instruction of the industrial classes in certain foreign countries, and note the influence of such instruction upon manufactures and other industries, the second volume of which, on technical instruction in America and Canada, has just been issued in London. Not less than one hundred educational institutions and manufacturing establishments were visited, and special reports were made upon the institutions regarded by the commissioner as typical. The most interesting portions of the report are those relating to the colleges and institutions devoted to art, science and technical instruction. The methods of instruction, the plan of government, the resources and special features of each institution are critically noted; but only that phase of the instruction which pertains directly or indirectly to technical education is emphasized. Very little space is devoted to the handicraft schools in which the industrial education is made an end, and not a means to foster intellectual development. Close attention was paid to the workshop-schools erected by certain great railroad corporations to educate apprentices for responsible positions in the service of the roads; but no comment is made upon the efforts being made in several sections to introduce technical instruction into the public schools. Not a single institution was heard of in America, by the commissioner, which aimed to give instruction in the textile industries. The commissioner is of the opinion that the technical schools of America have already accomplished great results; but that their high fees often tend to exclude the artisan class.—*The Index*.

Literature and Science.

MY OWN FOUR WALLS.

THOMAS CARLYLE.

The storm and night is on the waste,
Wild through the wind the herdsman calls,
As fast on willing nag I haste
Home to my own four walls.

Black tossing clouds with scarce a glimmer
Envelope earth like sevenfold palls;
But wifekin watches, coffee-pot doth simmer,
Home in my own four walls.

A home and a wife I too have got,
A hearth to blaze whate'er befalls;
What needs a man that I have not
Within my own four walls?

King George has palaces of pride,
And armed grooms must ward those halls;
With one stout bolt I safe abide
Within my own four walls.

Not all his men may sever this,
It yield's to friends', not monarchs', calls;
My whinstone house my castle is—
I have my own four walls.

When fools or knaves do make a rout
With gignen, dinners, balls, cabals,
I turn my back and shut them out:
These are my own four walls.

The moorland house, though rude it be,
May stand the brunt when prouder falls;
'Twill screen my wife, my books, and me,
All in my own four walls.

NOTE.—“The only poem, perhaps, that Carlyle ever wrote that is characteristic of him.”—*J. A. Froude.*

HOW CARLYLE READ.

As he grew more composed, Carlyle thought of writing some kind of didactic novel. He could not write a novel, any more than he could write poetry. He had no *invention*. His genius was for fact. to lay hold on truth with all his intellect and all his imagination. He could no more invent than he could lie. Still he labored at it in his thoughts, and in the intervals he threw himself into a course of wide and miscellaneous reading. Sir Thomas Browne, Raleigh, Shaftesbury, Herder, Tieck, Hans Sachs, Werner, Sir William Temple, Scaliger, Burton, Alison, Mendelssohn, Fichte, Schelling, Kant, Heine, Italian books, Spanish books, French books, occupied, or at least distracted him, and short extracts or observations mark his steps as he went along.

“December 3, 1826.—The conclusion of the essay on Urn-burial (Sir Thomas Browne) is absolutely beautiful: a still elegiac mood, so soft, so deep, so solemn and tender, like the song of some departed saint flitting faint under the everlasting canopy of night; an

echo of deepest meaning ‘from the great and famous nations of the dead.’ Browne must have been a good man. What was his history? What the real form of his character? *Abiit ad plures.* ‘He had gone to the greater number.’ Two infants reasoning in the womb about the nature of this life might be no unhandsome type of two men reasoning here about the life that is to come. I should like to know more of Browne; but I ought to understand his time better also. What are we to make of this old English literature? Touches of true beauty are thickly scattered over these works; great learning, solidity of thought; but much, much that now cannot avail any longer. Certainly the *spirit* of that age was far better than that of ours. Is the form of our literature an improvement intrinsically, or only a form better adapted to our actual condition? I often think the latter. Difficulty of speaking on these points without affectation. We know not what to think, and would gladly think something very striking and pretty.

“Sir Walter Raleigh’s ‘Advice to his Son,’ worldly-wise, sharp, far-seeing. The motto, ‘Nothing like getting on.’ Of Burghley’s ‘Advice’ the motto is the same; the execution, if I rightly remember, is in a gentler and more loving spirit. Walsingham’s ‘Manual’ I did not read. These men of Elizabeth’s are like so many Romans or Greeks. Were we to seek for the Cæsars, the Ciceros, Pericles, Alcibiades of England, we should find them nowhere if not in that era. Wherefore are these things hid, or worse than hid, presented in false tinsel colors, originating in affected ignorance and producing affected ignorance? Would I knew rightly about it and could present it rightly to others. For ‘hear, alas! this mournful truth, nor hear it with a frown.’ There in that old age lies the *only true poetical* literature of England. The poets of the last age took to pedagogy (Pope and his school), and shrewd men they were; those of the present age to ground and lofty tumbling, and it will do your heart good to see how they vault.

“It is a damnable heresy in criticism to maintain either expressly or implicitly that the ultimate object of poetry is sensation. That of cookery is such, but not that of poetry. Sir Walter Scott is the great intellectual *restaurateur* of Europe. He might have been numbered among the Conscript Fathers. He has chosen the worse part, and is only a huge Publicanus. What are his novels—any one of them? A bout of champagne, claret, port, or even ale drinking. Are we wiser, better, holier, stronger? No. We have been amused. Oh, Sir Walter, thou knowest so well that *Virtus laudatur et alget!* Byron—good, generous, hapless Byron! And yet when he died he was only a *Kraftsmann* (Powerman as the German’s call them). Had he lived he would have been a poet.

“What shall I say of Herder’s ‘Ideen zur Philosophie der Geschichte der Menschheit?’ An extraordinary book, yet one which by no means wholly pleaseth me. If Herder were not known as a devout man and clerk, his book would be reckoned atheistical. Everything is the effect of circumstances or organization. *Er war was er seyn konnte.* The breath of life is but a higher intensation of light and electricity. This is surely very dubious, to say no worse of it. Theories of this and kindred sorts deform his whole work—immortality not shown us, but left us to be hoped for and to be believed by faith. This world sufficiently explainable without reference to another. Strange ideas about the Bible and religion; passing strange we think them for a clergyman. Must see more of Herder. He is a new species in some degree.

“December 7.—Chateaubriand, Friedrich, Schlegel, Werner and that class of man among ourselves are one of the distinctive features of the time. When Babylon the Great is about to be destroyed, her doom is already appointed by infidelity; and religion, too much interwoven with that same Babylon, has not yet risen on her mind, but seems rather, only seems, as if about to perish with her. A curious essay might be written on the customary grounds of human belief. Yes, it is true. The decisions of reason (*Vernunft*) are superior to those of understanding (*Verstand*). The latter vary in every age (by what law?), while the former last forever, and are the same in all forms of manhood.

“Oh Parson Alison, what an essay ‘On Taste’ is that of thine! Oh most intellectual Athenian, what accounts are those you give us of Morality and Faith, and all that really makes a man a man? Can you believe that the ‘Beautiful’ and ‘Good’ have no deeper root in us than ‘association,’ ‘sympathy,’ ‘calculation’? Then, if so, whence, in Heaven’s name, comes this sympathy, the pleasure of this association, the *obligancy* of this utility? You strive, like the witch in Hoffman, to work from the outside inwards, and two inches below the surface you will never get.

“The philosophy of Voltaire and his tribe exhilarates and fills us with glorying for a season—the comfort of the Indian who warmed himself at the flames of his bed.

“A clown that killed his ass for drinking up the moon, *ut lunam mundo redderet. In Lud. vivet.* True of many critics of sceptics. The sceptics have not drunk up the moon, but the reflection of it in their own dirty puddles; therefore need not be slain.

“January, 1827.—Read Mendelssohn’s ‘Phædon,’ a half translation, half imitation of Plato’s ‘Phædon,’ or last thoughts of Socrates on the immortality of the soul. On the whole a good book—and convincing? *Ay de mi!* These things, I]fear, are not to be proved,

but believed; not seized by the understanding, but by faith. However, it is something to remove errors if not introduce truths; and to show us that our analogies drawn from corporeal things are entirely inapplicable to the case. For the present, I will confess it, I scarce see how we can reason with absolute certainty on the nature or fate of anything, for it seems to me we only see our own perceptions and their relations; that is to say, our soul sees only its own partial reflex and manner of existing and conceiving.

"*Sapientia prima est stultitiâ caruisse.* Fully as well thus, *Stultitia prima est sapientia caruisse*: the case of all materialist metaphysicians, most utilitarians, moralists, and generally all negative philosophers, by whatever name they call themselves. It was God that said Yes. It is the devil that forever says No.

"Leibnitz and Descartes found all truth to rest on our seeing and believing in God. We English have found our seeing and believing in God to rest on all truth, and pretty work we have made of it.

"Is not political economy useful? and ought not Joseph Hume and Macculloch to be honored of all men? My cow is useful, and I keep her in the stable, and feed her with oil-cake and 'chaff and dregs' and esteem her truly. But shall she live in my parlor? No; by the Fates, she shall live in the stall.

"Virtue is its own reward, but in a very different sense than you suppose, Dr. Gowthrappe. The *pleasure* it brings! Had you ever a diseased liver? I will maintain and appeal to all competent judges, that no evil conscience with a good nervous system ever caused a tenth part of the misery that a bad nervous system, conjoined with the best conscience in nature, will always produce. What follows, then? Pay off your moralist, and hire two apothecaries and two cooks. Socrates is inferior to Captain Barclay; and the 'Enchiridion' of Epictetus must hide its head before Kitchener's 'Peptic Receipts.' Heed not the immortality of the soul so long as you have beefsteaks, porter and—blue pills. *Das hole der Teufel!* Virtue is its own reward, because it needs no reward.

"To prove the existence of God, as Paley has attempted to do, is like lighting a lantern to seek for the sun. If you look hard by your lantern, you may miss your search.

"An historian must write, so to speak, in *lines*; but every event is a *superficies*. Nay, if we search out its causes, a *solid*. Hence a primary and almost incurable defect in the art of narration, which only the very best can so much as approximately remedy. N.B. I understand this myself. I have known it for years, and have written it now with the purpose, perhaps, of writing it at large elsewhere.

"The courtesies of political life too often amount to little more than this: 'Sir, you

and I care not two brass farthings the one for the other. We have and can have no friendship for each other. Nevertheless, let us enact it if we cannot practise it. Do you tell so many lies and I shall tell so many; and depend on it, the result will be of great service to both. For is not this December weather very cold? And though our grates are full of ice, yet if you keep a picture of fire before yours, and I another before mine, will not this be next to a real coal and wood affair?'

"Goethe ('Dichtung und Wahrheit,' ii. 14) asserts that the sublime is natural to all young persons and peoples; but that daylight (of reason) destroys it unless it can unite itself with the Beautiful; in which case it remains indestructible—a fine observation."—*From Froude's "Life."*

DESIRABLE TREES TO PLANT.

(Continued from last issue.)

The ash-leaved maple, *Negundo faxine folium*. This tree known also as the Manitoba maple, Box Elder and ash-leaved Negundo, is not a true maple, but is very closely related to that genus. It is a very rapid growing tree, found native in many districts in the North-West, and is said by botanists to be found from Canada to Carolina. Professor Macoun in his recent "Catalogue of Canadian Plants," says a few trees of this species are found in the valley of the Humber near Toronto; also eleven miles up the Kaministiquia river, west of Lake Superior, and on an island in the Lake of the Woods. It is abundant in all the valleys of the tributaries of the Red River and of the Saskatchewan coming from the south; also abundant on the streams flowing into Lake Winnipegosis. There seems to be two varieties of this tree, a southern and a northern one, the southern form being a comparatively slow grower and tender, having the leaves of a yellowish tint and more or less convex on the upper side. The northern form is extremely hardy, of rapid growth, darker in foliage and has the upper side of the leaves concave. Those who wish to plant this tree should bear this fact in mind and procure their young trees or seeds from a northern source, for should they obtain the southern instead of the northern variety disappointment is sure to occur. This tree is very extensively cultivated in the North-West and is the principal variety planted on the streets in the towns there. It is not a large tree, seldom exceeding thirty feet in height, and is said to reach its full growth in from fifteen to twenty years. A specimen tree of the northern form planted by myself six years ago in a rather poor sandy soil now covers a space of more than twenty feet each way, is fifteen or sixteen feet in height and has a trunk about eight inches in diameter near the base. It is a very succu-

lent tree and in Manitoba is very liable to be attacked by green-plant lice, which secrete a sweet fluid on the foliage and this attracts large numbers of flies. I have not seen any instance of this in Ontario. From its rapid growth and low stature, and from the fact that if permitted it is low-branched, the branches almost covering the ground, it is well adapted for forming shelter belts often so important in protecting other more tender trees, crops, buildings, etc.

The Western Catalpa, *Catalpa speciosa*. This species of catalpa is a native of the low lands bordering the lower Ohio and the banks of the Mississippi in Missouri, Kentucky and Tennessee. It is a vigorous and rapid grower, producing large and handsome foliage and clusters of beautiful flowers early in June. As an ornamental tree it has few equals, and notwithstanding its rapid growth it produces timber which, though soft, is extremely durable, and of the greatest value for fence-posts and railway ties. It has not yet been extensively tested in Ontario, but wherever it has been tried it has thus far proved quite hardy. Having been selected by the directors of the Fruit Growers' Association of Ontario as one of the trees to be distributed among the members of the Association throughout the Province during the coming spring, it will thus be extensively tested within the next few years. On my own grounds, near London, it has stood the past three winters without the slightest injury, notwithstanding that on one occasion during that period the thermometer reached more than thirty degrees below zero.

The European Larch, *Larix Europea*. This tree, so highly valued in Europe, has not yet been grown to any considerable extent in our Province. A few have been planted here and there for ornament, and a clump of upwards of half an acre has been planted on the grounds of the Agricultural College in Guelph for the purpose of testing its comparative value for forest growth. Trees planted by myself have grown within five or six years from two feet to twelve or fourteen feet in height. In Europe the Larch attains in the course of fifty years a height of eighty feet or upwards. It will grow rapidly in almost any soil and in almost any situation, and the wood is very durable and valuable for many purposes. The tree is very ornamental in summer, when clothed with its beautiful pale green foliage, and since it will grow freely on very poor land it should be widely tested. A recent writer has well said, "There are thousands of acres in Canada which cannot be converted into arable land, but which, if judiciously planted with European Larch would soon become most valuable and add immensely to the wealth of the nation."—*R. W. Phipps in the Forestry Report.*

Educational Opinion.

WHAT MAY JUSTLY BE DEMANDED OF THE PUBLIC SCHOOLS.

S. T. DUTTON.

THE Public School System is one of the features of the nineteenth century. First planted in New England, it has here borne its ripest fruit. Sustained by the doctrine of Burke, that "Education is the cheap defence of nations," it has gradually vanquished its enemies. The abolition of the rate bill, the enforcement of a compulsory law, and the overthrow of the idea that a free school is in any sense a charity school have all been duly accomplished; and the burden of illiteracy thrust upon us by immigration has been kept within reasonable bounds.

Said C. F. Adams, of England, who made a critical study of our schools some years since, "Either the American system has produced a satisfactory result, or else a conspiracy on a grand scale has been entered into by travellers from all nations, including such observers as De Tocqueville and Fraser, to deceive the world as to the measure of intelligence and information in the United States." A system of education, now so universal and so firmly established, must be conducted upon principles more profound than those which control its mere organization. It must have an historical basis as well as an organic life. The so-called new education of to-day, which is infusing itself into our public system, claims to be the renaissance of all that was good in past systems. A glance at the theories which are becoming so popular will convince us that there is much in them that is neither accidental nor novel.

We are indebted to the ancient Greeks as much for what they achieved in education as to what they bequeathed to our language and literature. The close relationship of physical stamina to character, and the necessity of perfecting as far as possible the individual man, as conceived by the Greek mind, is one of the corner stones of educational science. Their ideas of manhood developed to physical and intellectual perfection were idealized in the gods of Mount Olympus, and those ideals found expression through the plastic arts for the instruction of all mankind. This system of education, so exacting and exclusive, was followed by that of the Romans, which was its counterpart in point of practical, every-day value. The Greeks sought a harmonious culture that would make men godlike; the Romans aimed at a severely practical training which would make men of the world, as orators, warriors and statesmen. I speak particularly of these two systems, as they suggest that conflict between the ideal and the practical which has stamped all educational history since the time of Christ. The

claims of both sides have been heard. To develop the individual, and at the same time to fit him to be useful, has been, and must be, the aim of every thoughtful educator.

With so great a contribution to modern education from the pagan world we can hardly expect to find in the Christian system of the Middle Ages anything more valuable. The dominant type of education was that of the monastery, and it was far more ecclesiastical than practical. The castle and the town provided some instruction, but the humanistic teaching of the schoolmen became the staple. It was the germ of modern classical training. Passing on to the theories of the realists, of whom Comenius was a leader, we find them to be in sharp contrast to what had gone before. The best teaching of to-day obeys many of their rules. To follow the order of nature, to teach one thing at a time, to avoid confusion, to learn little "by heart," to study things and processes first and then the rule—these and other principles come to us as a legacy from the sixteenth century. We find much to learn, also, from such writers as Ascham, Milton and Locke. They, with others who followed them, endeavored to found educational doctrine on psychology. They recognized the important fact that to train the intellect alone was to dwarf the man; that the physical and moral powers must not be left untrained. I can only allude to three other theorists of more recent times, whose teachings embody the best ideas of the old systems, and form a connecting link between them and those of the present time.

The first of these, Rousseau, not a teacher, but a thinker, saw in education the means of developing more broadly and strongly the powers of the child. He pleaded for the greatest possible freedom, and would have the youth become a perfect animal before being subjected to severe mental training. "Individual human worth" was to his mind the highest end.

Pestalozzi and Froebel, both teachers, men of large insight and sympathy, inspired by the startling theories of Rousseau, did much to place the art of teaching upon a sound practical basis. The study of things rather than of abstract ideas, the training of the eye and hand in a great variety of industrial and artistic occupations, to allow nothing to enter the school life which represses the natural interest and enthusiasm of the child or impairs his physical and moral powers, to make the end of education the generation of power rather than the acquisition of knowledge—these are some of the aims of the reformers which are exerting the most powerful influence upon primary teaching to-day.

I have, perhaps, said enough to establish the fact that education has a creed

based upon experience and tradition. Although less mature as a science than medicine, law, or theology, it promises much for the future. That those engaged in public education are the most zealous students of educational science to-day cannot be gainsaid. Admitting this, we may proceed to consider the conditions under which public schools exist and the difficulties they have to meet.

The graded school was organized as an economical device for educating large numbers of children together. The rapid growth of cities and towns, with the large accession of foreigners to our population, has compelled a too hasty extension of the system. In most cities the supply of buildings has been far behind the number of children to be educated. The pressure for room has often led to the erection of buildings which, in their sanitary appointments, were wholly unfit for the purpose. The schools being unable to resist the pressure for admission, instead of providing for thirty or forty pupils in a room, which should be the limit, are compelled in many cities to accommodate from fifty to seventy, to the detriment of life, liberty and happiness.

During all this period of phenomenal growth in population we have heard, on the one hand, the demand for universal and thorough education, and, on the other, the protests of the tax-payers against their increasing tax-bills; and how can taxes fail to increase when the ratio of non-tax-paying citizens with their swarms of children is constantly increasing? The standard for school architecture and all appointments pertaining to convenience and sanitation has been steadily raised during the past twenty-five years, but is it not strange that in the older cities buildings erected from twenty to fifty years ago fall far short of meeting the requirements which health officers and critics of the school system are now making? The number of cubic feet of space per child is too small. There are no suitable means of exchanging foul air for pure air. To say nothing of the injury wrought under such conditions, it is poor economy, for the working power of both teachers and pupils is greatly reduced.

The brains of children who are poorly fed and wretchedly clad get too little nourishment without being flushed by blood which is literally poisoned by bad air. The fevered face and the heavy eye tell in too many school-rooms that the air is being breathed over and over again. There can be no rebound of spirits or responsiveness to either precept or example under such circumstances. If the body is sick, the mind and heart are sick also. Instead of ambition and energy we see a morbid dread of exertion. It is intermittent, to be sure, lasting only while the hours of school last; when the boy is in the open air he is himself again, and feels the glow of life in his every part. The school system will be sorely handicapped until the pub-

lic purse is large enough to remedy this evil.

Other crudities, as, for example, over-organization, and too rigid discipline, may be regarded as incidental to the youth of the system. The stage of reaction and criticism through which the schools are at present passing will do much to insure relief at these points. Another source of trial to the teacher is the heterogeneous mass of children which flocks into the school. Compulsory education in a land which has become the world's asylum and poor house presents some striking features. It is true, the public schools are generally recognized as the best, and our school-rooms are brightened by the faces of children from the most refined homes. But every country in Europe is represented there, and several nationalities of Asia and Africa. Some of these children have behind them several generations of ignorance, drunkenness, and crime. The same tendencies which make loafers, strikers, and dynamiters of the parents are branded upon the constitutions of the children by merciless hereditary law. Nor is this all. They live at home in the presence of brutality and of hatred to God and man. Even before the age arrives when they can be admitted to the school, they have been already educated in the home and upon the street, and that other law, which is twin brother to hereditary—the law of habit—no less potent for evil than for good, has so taken possession of the child as to defy both the art and the patience of the teacher.

Nor is this the only barrier in the way of those who would make moral training the first aim. We must observe also the tendency to secularize the school and make religious teaching either of secondary account or a forbidden thing. The various arts practised to allure children to cheap places of amusement reeking with immorality, books and papers which literally teach vulgarity and lawlessness, skilful tricks employed to entice the young from their homes to the skating-rink, the pool-room, and the saloon—all these must be considered as forces in active hostility to the best aims in public education. Add to these things the indifference of many parents, and the unreasonableness of some, and a fair estimate may be made of the trials which beset the teacher.

But opposed to all this there is another side, brighter and more encouraging. Educational literature of a high order is being freely circulated, so that the valuable theories to which I have already alluded are becoming current knowledge. Not only have some of the best German works been translated for the use of English and American teachers, but since the adoption in England of a thorough system of inspection, and the establishment of colleges of training and chairs of pedagogy, several works have been produced on the art and science of teaching which are

destined to invest the subject with a new interest and lift it to a higher plane. The works of Herbert Spencer, R. H. Quick, William B. Carpenter, Edward Thring, Alexander Bain, Joseph Payne, J. G. Fitch, and Oscar Browning, most of which are comparatively recent, are being read widely in this country, and are doing much to elevate the standard of teaching. American books on education are not so sound or helpful, but the fifty or more periodicals published either weekly or monthly are of no little value. Then I will mention the Normal Schools, of which every State in the Union has one or more, by means of which the schools are provided with the most important of all things, *trained teachers*. The average grade of ability of principals and supervisors, to whom is usually intrusted the direction of school work, compares favorably with that in other professions. In this, as in other fields, the standard of talent is determined by the temper of communities expressed in the amount of appreciation and compensation rendered for service given.

The fact that the public schools, instead of being patronized as formerly mainly by the poor, have at length come to include the children of the most intelligent and cultivated gives them an increasing opportunity for usefulness, and entails additional responsibility upon their management. For the democratic spirit which leads the majority of parents to look to them as furnishing the best training for citizenship in a republic operates to secure a generous provision for their support.

It is universally true that any public institution will give back to a community a benefit commensurate with the support and the sympathy which it receives from that community. Now, as communities differ very much in their ideas of what education is worth, and how much of it the masses should receive at public expense, so there are the greatest possible differentials in the benefits conferred. To avoid misunderstanding, and to keep the discussion within sufficiently narrow limits, I shall now speak of the obligations resting upon schools where the support is ample and hearty, and where teachers and supervisors are allowed reasonable freedom in their work.

The first and most just demand upon the school is that it lay the foundations of character, quicken the moral sense, and help the child to become an honorable citizen. That "the brain is not all of the man" should be remembered and acted upon by every teacher.

In answer to the question, How can morals be taught? I would say that the personal character and example of the teacher are of first consequence. He must have insight with somewhat of the missionary spirit. Character begets character, and nothing else will do it. The force of habit, which is fundamental in all action, whether mental, moral, or physical, must

be thoughtfully recognized. Things rightly done and repeatedly done lead to the automatic doing, and help to lay the foundations of good conduct. This is the only true method of training the will, and is a most economic element in civilized culture. The cardinal lessons of punctuality, promptness, cleanliness, silence, industry, self-control, attention, and application are what a good school should make habitual in every individual child. It is fair to demand that the teacher seek these desirable ends, not for the sake of a perfect system, but for the sake of a perfect character. Thus there may be rhythm and harmony without weariness and drudgery. Right motives must be encouraged. Ambition, energy, and hope, if they are to be potent in after life, must be zealously fostered in school. The way in which a few teachers crush out these most promising tokens of future strength deserves constant and vigorous protest.

The marking system, a relic and reminder of ancient methods, is gradually yielding to better incentives to study. What a pupil is forced to do, or is hired to do, adds little to his self-reliant character. To build up and strengthen the forces *within the child* is the highest art in moral training.

Abstract and itinerant gossip about right and wrong in the school-room creates a distaste for morality. Moral lessons clothed in concrete form may be given in such a way as to interest and impress the child. For this purpose studies of character as illustrated in the lives of eminent statesmen, warriors, and authors, are most useful. Such lessons, while opening the richest stores of historical knowledge, quicken the moral instincts of the pupil, kindle his patriotism, and fire him with noble ambition. The lives of such men as Washington, Franklin, Lafayette, Lincoln, and Garfield, afford limitless opportunity to impress lessons of honor, fidelity and heroism. The study of noble sentiments, significant events, and the results of human experience embalmed in masterpieces of literature is another means of shaping character. To memorize selections which embody noble Christian sentiment is to plant good seed in the mind and heart. In all such studies the higher strata of thought are awakened, purity of expression, and literary taste are cultivated. What is done with manifest pleasure and profit in so many schools should, by popular demand, be made a universal practice. But there should be no exclusiveness in moral training. The whole school life should be moral in tone and tendency. Reverence to God and respect for man, frankness and truthfulness, accuracy of speech and courtesy of manner, should be diligently sought by the teacher. The necessity of the times demands that children be fortified against the prevailing national vices.—*From the Andover Review for May.*

(To be continued.)

TORONTO:

THURSDAY, MAY 7, 1885.

HOW TO READ.

WITH the mass of matter that has been written upon reading, much of it from those who knew best how truly to read, it may seem presumptuous to attempt, in a short article, even to suggest hints on such a subject. But this mass of matter is scattered through the works of many authors, and it is not possible to gather from it, in any short space of time, a coherent theory of how best to make use of a good book. We shall endeavor here to lay down a few practical rules for the guidance of those who devote their spare hours to the reading of great authors, and who desire to derive from that reading the greatest possible amount of benefit.

It may be laid down as a general law that all great authors have been great readers. De Quincey certainly lays it down as his firm belief that Kant "never read a book." This must be taken with qualification. Indeed, De Quincey explains that Kant must have been familiar with many authors, and, if he did not deeply study them, he at least comprehended the general principles of their systems. Be it so, this does not vitiate our general law that all great authors have been great readers.

This being so, it would be extremely instructive to note *how* great authors read. We have given, on another page, an extract from Carlyle's diary, showing admirably how he pursued his course of reading. We see that it was accompanied by deep and critical thought. He read, apparently with Bacon's maxim ever before his mind: "Read not to contradict and confute, nor to believe and take for granted, nor to find talk and discourse, but to weigh and consider."

Coleridge, as many of his friends who have written of him have informed us (especially Charles Lamb) was in the habit of annotating any book he was perusing. Macaulay read well nigh all day long, beginning with the papers before he rose. Shelley was accustomed to read even while walking; and it is well known that when drowned a volume of Keats and another of Æschylus were found on his body. Of many other authors we might speak in the same strain.

It is plain then that these great producers of thought themselves sought to make themselves acquainted with the thoughts of

other men. Here then is one lesson learned. Unless one possesses an astonishing originality, and what Archbishop Thomson has called the "suggestive faculty" to a degree rivalling, let us say, a Kant, or a Newton, books will be to us of inestimable advantage.

To teachers especially so, and chiefly to teachers of senior classes. To interest their pupils, to really instruct them, something more is wanted than merely to expound the text-book. They should have their own thoughts on what they are teaching, and by these thoughts embellish and enhance the value of the matters under consideration. Pupils admire and relish keenly this mode of teaching. Anything suggested by the master which is not in the book they are reading, and which has not entered into their own minds, is to them always a source of pleasure, and a source of pleasure which helps greatly to fix in the memory all that is caught.

To do this properly one must read carefully and thoughtfully. Let us examine how best thus to read.

"Writing an Analysis, Table of Contents, Index, or Notes, to any book," says Archbishop Whately, "is very important for the study, properly so called, of any subject." This is indisputable. To put down on paper in accurate language the gist or pith of what we are reading is a wonderful help to memory, and also is valuable if ever we wish to refer to the subject if afterwards the book itself is not at hand or unobtainable. A good plan is to put aside with each author or work we intend to read a separate note book in which to jot down all that we may learn from the work itself and also from articles, reviews, commentaries, essays, annotations, criticisms, etc.

Again, Ruskin has somewhere a splendid sentence to the effect that the man who has truly read one good book is better educated than is he who has glanced through a library. This is a sweeping assertion, but is true if taken in its widest interpretation. To thoroughly understand one great work of any great author what would it not be necessary to know?—science, art, history, politics, philosophy, ethics—it is impossible to enumerate the subjects. But apart from this, there is another meaning to Mr. Ruskin's dictum. It is this: It is better to study a small amount thoroughly, methodically, accurately, analytically, minutely, than to study

a large amount carelessly and in a slovenly or perfunctory way. "We believe," says Archbishop Thomson, "that if a set of rules as free from technicalities of form and expression as is consistent with complete accuracy, be sedulously applied to the examination of the books we read, more especially to the history and theory of some particular science, the mind will receive great and signal benefit, and the creative powers will be increased, as well as the judgment strengthened."

Here then is another lesson learned. "The entire difference," we quote again from Mr. Ruskin, "between education and non-education (as regards the merely intellectual part of it), consists in . . . accuracy. A well educated gentleman may not know many languages,—may not be able to speak any but his own,—may have read very few books. But whatever language he knows, he knows precisely; whatever word he pronounces he pronounces rightly. . . . But an uneducated person may know by memory any number of languages, and talk them all, and yet truly know not a word of any,—not a word even of his own." To arrive at this accuracy the only possible way is while we are reading one book to use others to help us to understand it. We do not say this should be done on the first reading of the book, (every good book deserves two, three, or more, readings,) it might blind us to the beauties of style, to the perfection of the treatment of the subject, and might hinder us from obtaining a grasp of the whole matter. But on reading the book a second time, we should have frequent recourse to dictionaries, histories, books of science, geographies, and indeed to anything that will enable us thoroughly to comprehend every sentence, every word of the author. Every great author deserves to be so read.

On these two points only we shall for the present insist; first, that to read a book properly we should have beside us a book in which to write down something—however little—of what we have learned from that book or of what that book teaches; second, that no good book should be read without consulting other books by which to explain all that we cannot understand.

BOOKS RECEIVED.

Dewart, Rev. E. H., D.D.: *University Federation Considered in its Relation to the Educational Interests of the Methodist Church.* Toronto: *Christian Guardian* Office.

Table Talk.

A STATUE to Poe, with the inscription written by William Winter, has been finished in Italy by the order of a number of actors and literary people, and will shortly be erected in New York.

IT is said of *The Wide, Wide World* and *Queechy*, by Susan Warner, who recently died, that they are the only American novels published one-third of a century ago that have a continued sale.

A NEW edition of Swedenborg's works has lately been brought out in good shape from the press of J. B. Lippincott & Co. Divers tracts of the New Church have likewise been printed by the same house.

ENGLISH publishers complain because Froude's "Life of Carlyle" and Yates' "Reminiscences," which are published in England at sums over twenty dollars are sold in the United States for twenty-five cents.

A PORTFOLIO of good wood cuts is frequently quite as interesting and artistic as ordinary collections of pictures of a higher class. Good taste may be developed in children by placing in their hands the right kind of pictures.

AN old clergyman once said, at his own tea-table, that the greatest poet that had lived in modern times was Isaac Watts. After supper his guest examined the good old man's library and found no poems in the small collection except Watts' Hymns.

AT the Berlin Opera there will occur during the season three interesting jubilee performances—viz., the 500th production at that institution of Weber's *Der Freischuetz*, the 200th of Meyerbeer's *Prophet*, and the 100th of Spohr's *Jessonda*.

THE diary of Lieutenant Lockwood, one of the victims of the Greely expedition, who reached the point nearest the North Pole, was written in shorthand, and is now being transcribed by Mary S. MacCalla, of Philadelphia, who is the only one who understands his system.

SOME (not many) of the American colleges are seeking to draw students by giving them, younger as well as older, an almost unlimited choice of subjects through all the years of their course. This, in my opinion, is a fundamental mistake.—*President McCosh, in Education.*

SINCE 1870 women have been admitted to universities in Sweden, Norway, Russia, Switzerland, Italy, Spain, and France. At St. Petersburg in 1882 ninety-nine young women were given degrees in the literary and historical department and sixty-four in the scientific department.

TENNYSON'S poems are to be edited with brief notes assigning to them their original motives. The poet has, doubtless, taken warning from the fate of so many of his predecessors at the hands of the commentators. Mr. Browning should certainly follow his example.—*The Current.*

IN speaking of the need of industrial schools for colored people, *The National Baptist* says: "It is a strange thing; if a colored man wants to study Latin, Greek, Hebrew, astronomy, metaphysics, theology, he has the best facilities which the world affords, and perhaps has all free; but if he wants to learn how to make a boot there is no opening."

"Mark Twain" says the *Saturday Review*, "has a lower kind of Sidney Smith's wonderful airy high spirits which lift him buoyantly into a kind of Laputa, a place whence he sees all the mad humors of men. He has, when he likes, tenderness and melancholy, and an extraordinary sense of human limitations and contradictions."

SWINBURNE will publish next month a dramatic poem entitled *Mairno Faliero*, descriptive of Venetian life in the Twelfth Century. As Tennyson, Browning and Swinburne are the three greatest English poets, and as each has given a new volume to English literature within the past few months, the present year will be regarded as important for its literary product however little the remaining months may produce.

THE appointment of Prof. Rasmus B. Anderson to the Denmark mission by President Cleveland, has been described as eminently fitting. He has achieved such high rank as a Scandinavian literator, his works being regarded as of the highest authority by scholars generally, and he has attained such conspicuous rank as an educator, being now a member of the faculty of the Wisconsin State University, that he will go to his new post most admirably equipped to meet his duties.

JOHN RUSKIN "impresses those who hear him most," says the Rev. Amory H. Bradford in the *Christian Union*, "as a man sometimes captious, sometimes cynical, sometimes grotesque, but always earnest, always intent on making things better than they are; a man who may make those near him uncomfortable because of his infirmities, but who will leave the world better than he found it because of his sincerity, his appreciation of the beautiful and his power of putting into deathless words the visions which he has seen."

THE American boy pianist, Ernest Schelling, gave a concert in Paris recently at the Salle Pleyel-Wolff, when he played the following programme: Chopin—*Première Concerto, mi mineur*; *Première Polonaise*; *Etude, op. 25—7*; Liszt—*Rhapsodie Hongroise, No. 2*; Henselt—*Etude No. 6*; Mathias—*Scherzo de Sonata, op. 20*. *Gull-giant's Messenger*, in announcing the concert pronounces "Ernest Schelling the musical wonder of the day. He is a lad of but nine years of age, yet so skilled in his art as to command the highest praises from musical critics. His repertoire consists of the compositions of Beethoven, Weber, Chopin, Mozart, Mendelssohn, Hummel, Liszt, etc. He plays by heart and even blindfolded. His manner of playing is simple, natural and modest. He is a child of genius, and all who attend his concerts cannot fail to be charmed by his brilliant execution."

"CARDINAL NEWMAN," says *The World* (London), "has just celebrated his eighty-fourth birthday at the Birmingham Oratory. His Eminence, who is enjoying a second youth rather than a second childhood, shows an amount of vitality quite surprising to those who some little time ago were anxious about his health. He said Mass at 7 o'clock on the morning of his birthday, and later received visits from a number of his friends. With one of these, Mr. Wilfrid Ward, a son of his old friend, the Cardinal was able to talk for an hour and a half, although a few months ago his doctors told him that half an hour was to be the extent of his conversations; and whereas they then warned him against entering the pulpit, a series of sermons by the old man eloquent, whom George Eliot

thought of journeying to Birmingham to hear, are now in course of preparation."

WE doubt if any public man ever received such a tribute as Prince Bismarck received from the German people on the occasion of his seventieth birthday. No form of congratulation seems to have been neglected, and no sign of gratitude and admiration seems to have been wanting. The substantial part of the testimonial was something which was probably the most welcome to him that could have been conceived, being the title deeds of the old castle and estate of Schoenhausen, which was the *Stammsschloss*, or original seat of his family. The completeness with which, on this occasion, all his shortcomings as a politician seem to have been forgotten, shows how passionate and deep-seated the German love of us was. The people are evidently willing to forgive everything to a man who in this one thing gratified the longing of many generations for a true German nationality.—*The Nation.*

THE poetical genius of Mr. Lowell, said Mr. Chadwick, of the Second Unitarian church, Brooklyn, in a lecture recently, is more comprehensive than that of Longfellow, Bryant, Whittier, Holmes or Emerson. His wit and humor are better than Holmes'; he loves nature as well as Bryant; hardly is Emerson more thoughtful than Lowell when Lowell takes the thoughtful line. But in his total manifestation Lowell is the least popular of all except Emerson, although some of his poems have a wide popularity. In the second series of "Biglow Papers" there is something better than wit and sarcasm; there is the spirit of the most exalted poetry. But the "Biglow Papers" have long since reached their highest popularity and are tending downward. But they brought gladness to men's eyes and strengthening to men's hearts. The "Fable for Critics" was hardly more than a "skit." In "The Present Crisis" the poet poured out the resounding stream of his indignation. As a national poet he has been best known for the last 23 years.

A CORRESPONDENT from New York writes to *The Toronto World* anent the proposed Canadian Club in New York as follows:—

Our Canadian Club, of which I sent you the first notice, is moving along encouragingly. On Wednesday we hold a meeting to organize at the Hotel Brunswick, and, judging from the number of replies to our circular, we look for a couple of hundred men. We have had many requests to extend the club to all British colonists, and some to all British subjects; and we shall discuss these at the meeting, of which I shall send you a report. Erastus Wiman, Sir Roderick Cameron, Lucius S. Huntington, etc., are highly in favor of the club, and promise substantial support. Mr. Griffith, of Newark, is most enthusiastic about it. Probably Sir R. Cameron will be president. Mr. Girzelli, from Montreal, now steward of the New York Athletic Club, offers to take a house on 42nd Street, overlooking the Reservoir Park, and open a first-class cafe on the ground floor, renting the club the two floors above, and giving us eating and drinking at a considerable reduction. Here we should have Canadian papers on file, and make it Canadian Headquarters. The cost under this arrangement will be small, and we can have all the benefits of a club. Most of the Canadians, of whom there are estimated to be 8,000 in New York and vicinity—most who have resided or seen us—are from the Maritime Provinces. They seem not unwilling to reap the benefits of being Canadians down here.

We shall be glad to see you when we are started, and fancy all Canadians coming to New York will be able to find much information and pleasant communion at our club.

Special Papers.

ENGLISH LITERATURE FOR EN- TRANCE TO HIGH SCHOOLS.

V.

"AUTUMN WOODS."

THE proper appreciation of a poem depends more than is generally supposed upon the state of the reader's mind. "The Bridge" and "The Brook" are suited to different moods. How often it happens that a poem read and re-read without affording much enjoyment becomes "quick and powerful" after some crisis in our life—that has changed our nature! This dependence of appreciation upon fitness of mind, is the reason that the second reading of a poet's words is, frequently, so much more pleasurable than the first, which has served principally to kindle in us the emotions needed for a sympathetic consideration of the sentiment. More than this; true poets find themselves unable to express all their feeling, for

"Dwells within the soul of every artist
More than all his effort can express;
And he knows the best remains unuttered,
Sighing at what we call his success.

"Things of Time have voices: speak and perish.
Art and Love speak, but their words must be
Like sighings of illimitable forests,
And waves of an unfathomable sea."

Further still; the poet does not always endeavor to express to the full his soul's passion; he is often content to set in motion wheels of thought and feeling that will in their revolution create in us the warmth of his own enthusiasm. The greatest poem is that of which the effect begins and does not end with its concluding words.

"Nothing resting in its own completeness
Can have worth or beauty: but alone
Because it leads and tends to further sweetness,
Fuller, higher, deeper than its own."

How great then is the necessity for the teacher to get both himself and his class in the proper mood! No matter what poet is to be studied, this preliminary preparation is required, and the greater the poet the greater the preparation. The general public may, and does, decide to go to as little trouble as possible, and is content with a Longfellow; but the teacher must be willing to give greater care and attention, and place himself in a position where he can appreciate a Tennyson.

In thus preparing himself for the teaching of "Autumn Woods" it may be wise, after some meditation concerning the woods, to read the extract. This done, a longer and more earnest effort to picture the beautiful trees with their foliage of crimson and gold will be profitable. If it should unfortunately happen that the woods in their beauty have never stirred the heart with delight, it will be well (after a resolve has been made

to be more observant in future) to read the words of others that have entered deeply into sympathy with nature. For instance:—

"Nor is the grass the whole of earth's primary vest. Within it and above it are a thousand white-hued flowers*—

'a colored fantasy of embroidery on the green robe; while over all these tower tall trees with their wealth of foliage, varied into infinitude of appeal to the fancy of man.'[†]

Manifold and multiform indeed are the beauties of trees! Here we see

'fragility and force, softness and strength, in all degrees and aspects, unerring uprightness, as of temple pillars, or undivided wandering of feeble tendrils on the ground; mighty resistance of rigid arm and limb to the storms of ages, or warings to and fro with faintest pulse of summer streamlet. Roots cleaving the strength of rock, or binding the transience of sand; crests basking in sunshine of the desert, or hiding by dripping spring and lightless cave; foliage far-tossing,—clothing with variegated, everlasting films the peaks of the trackless mountains, or ministering at cottage doors to every gentlest passion and simplest joy of humanity.'[‡]

Or:—

"The groves were God's first temples ere man learned
To hew the shaft, and lay the architrave,
And spread the roof above them,—ere he framed
The lofty vault, to gather and roll back
The sound of anthems; in the darkling wood,
Amidst the cool and silence, he knelt down
And offered to the Mightiest, solemn thanks
And supplication. For his simple heart
Might not resist the sacred influences,
Which from the stilly twilight of the place,
And from the gray old trunks that high in heaven
Mingled their mossy boughs, and from the sound
Of the invisible breath that swayed at once
All their green tops, stole over him, and bowed
His spirit with the thought of boundless power
And inaccessible majesty."[§]

"No fantastic carvings show
The boast of our vain race to change the form
Of thy fair works. But thou art here—thou fill'st
The solitude. Thou art in the soft winds,
That run along the summits of these trees
In music.

"This mighty oak
By whose immovable stem I stand and seem
Almost annihilated—not a prince
In all that proud old world beyond the deep,
E'er wore his crown as loftily as he
Wears the green coronal of leaves with which
Thy hand has graced him."

"Stranger, if thou hast learned a truth which needs
No school of long experience, that the world
Is full of guilt and misery, and hast seen
Enough of all its sorrows, crimes, and cares,
To tire thee of it, enter this wild wood
And view the haunts of Nature. The calm shade
Shall bring a kindred calm, and the sweet breeze
That makes the green leaves dance, shall waft a
balm
To thy sick heart."

* *The Teaching of the Sublime and Beautiful*, Rawlins.

† *Modern Painters*, Ruskin.

‡ *Modern Painters*, Ruskin.

§ *Forest Hymns*, William Cullen Bryant.

¶ *Inscription for the Entrance to a Wood*, W. C. Bryant.

Lack of space forbids further selection from Bryant, or indeed from any of his greater brethren. The school Readers contain many beautiful allusions in such pieces as "The Maple," "Indian Summer," "The Backwoodsman," "The Western Hunter," and "The Voice of Spring." These may be studied as well as others the teacher may be able to discover elsewhere. The result of such study will at least be the recognition of a tree's fitness for poetical treatment.

With awakened mind it is easy to arouse your pupils, and numberless ways will suggest themselves. It might be well for a short time to consider a little more fully the difference between *prose* and *verse*. The difference in subject would be a good study. The class might be asked to open books at first page of index, where the titles of poetical selections are printed in italics, and are thus easily distinguishable. Let some clear-voiced student read the list. Ask if any one can see any difference in the character of what the subjects in prose and those in verse. To help them "Ship-building in New Brunswick" might be compared with "The Ship-builders," and "Death of Montcalm" with "Lines on the Death of Wolfe." It will not be long before they will see that *prose* generally tells them facts, sometimes dry, while *poetry* deals with what is beautiful. Now ask them once more to refer to the *Table of Contents*, and their ability to notice the difference in the character of the subjects of the selections in verse and of those in prose will be found to have increased. It may be further strengthened by such questions as "Is a cloud suited to poetry?" "A dewdrop?" "A pitchfork?" "A star?" "A wheelbarrow?" "Autumn Woods?" Reasons should be expected for each answer, and the last subject mentioned would suggest such questions as, Are woods beautiful? Of what are they composed? Which is more beautiful, a solitary tree or a group? Are woods beautiful in Spring? In Summer? In Autumn? In Winter? What particular beauty have they in Autumn? Describe it.

It is now time to read the extract, and to study its meaning. In such study it will be profitable to pay some attention to *synonyms* and perhaps to *homonyms*. For instance a synonym of the word *glory* might be asked for, inserted in its place, and the class requested to decide as to its effect. The history of and in some of the words may give a better idea of their meaning. A little attention to *Kings*, *companion*, *autumn*, *gentle*, *passions*, and similar words will, in this connection prove interesting. The contraction of such phrases and clauses, as, *that unfold, where the mingled splendors glow*, is a good exercise; as is also the expansion of an epithet like *colored* in *colored landscape*.

When the piece has been gone over in this way its construction or development might

be considered. The class should be taught to find out that time, place, and circumstances are, in a general way, denoted by the first stanza, that in the second and third the scene is more fully elaborated and a person introduced who in the fourth has a sympathetic companion sent by a friendly power described in the fifth, and that in the sixth a natural question arises which is stated in stanza six, and answered beautifully in seven and eight.

The class is now prepared for an examination of the stanzas separately. In considering them, questions like the following might arise:

I. Why is the *northern gale* mentioned? When are beautiful things most prized? When we expect to lose them.

II. *Unfold*. Some editions have *infol*, which is better. Why? Any peculiarity in versification of third verse? Why is anything said about *enchantment*?

III. *Look down*. Is there any stanza in extract in which inanimate things are not regarded as animate? What is the effect?

IV. *Flies*. A good word. Can you hear the wind playing in the leaves as you read vv. 2 and 3 of this stanza? For similar thought of companionship, compare "*Backwoodsman*," *Fourth Reader*, stanza six.

V. How does the sun send the gale?

VII. What suggests the question?

IX. *Makes men mad*. Give other examples of alliteration in this poem. What is its effect?

The metre of this extract is worthy of attention; suited as it is to the tone of subdued and mingled joy and sadness, that pervades the piece and renders it so beautiful and affecting. Any ordinary class will easily be taught to see its appropriateness.

W. P. Houston

The High School.

TABLE OF COMMON MISUSAGES IMPURITIES, IMPROPRIETIES, AND INELEGANCIES.

G. F. QUACKENBOS, LL.D.
(Concluded from last issue.)

Hanged is preferred to *hung*, when suspension by the neck is implied; as, "The murderer was *hanged*".

How should never be substituted for *that*. "I have heard *how* [that] in Switzerland Americans are charged the highest price for every thing".

Ill is used by many for the adverb *ill*: there is no such word.

In must not be used for *into* after verbs denoting entrance. "Come *into* (not *in*) the parlor". After having gone *into* the parlor, we are *in*.

In is erroneously substituted for *for* in the following sentence: "I have not seen him *in* six weeks".

In our midst for *in the midst of us* is severely criticised.

Avoid the common error of placing a past infinitive after a verb in a past tense, when that infinitive is intended to express an action or state contemporary with the time of the first verb. "I meant *to have done it*" should be "I meant to do it".

It is inelegant to separate *to*, the sign of the infinitive mood, from the verbal root, by an adverb; as, "To *rightly* judge", for "to judge *rightly*", "To *then* ascend the stairs", etc. This error has become exceedingly prevalent.

Is being done is a comparatively new form which critics object to on the ground that it is unnecessary, and that there is "no passive form in English corresponding to the progressive form in the active voice, except where it is made by the particle *ing* in a passive sense." It is both more elegant and more idiomatic to say "the house is *building*", "preparations are *making*", "the train is *preparing*", than "the house is *being built*", etc.

Less should be used where quantity is referred to, *fewer* when number is considered. "There is *less* than a ton of coal in the bin", but "There were not *fewer* than two hundred persons in the hall".

Mutual means *reciprocal*. Mutual love is love reciprocally given and received. *Mutual* is not a synonym of *common*; to speak of a *mutual* friend is grossly erroneous.

Never is improperly supposed by some to be more emphatic than *not*. *Never* cannot be applied to events which, from the nature of things, could have happened but *once*. "Washington was *never* born in New York" is manifestly absurd.

Nice (from the Latin, *nescius*, ignorant) was in Chaucer's time applied to a harmless fool. It afterward came to mean *foolishly particular*, *precise*. In which latter sense it is still correctly used. But *nice* should not be employed as synonymous with *pleasant*, *agreeable*: as, "a *nice* day", "a *nice* carriage", &c. In "a *nice* distinction", "a *nice* point", the word is correctly used.

Nicely, *thanks*, is a vulgar solecism. "How have you been since I last saw you?" "*Nicely*, *thanks*." *Nicely* is not equivalent to *well*; moreover, if one lacks either time or inclination to say "Thank you", it is considered more polite to make no allusion to *thanks*.

Now, *then*, *sometime*, etc., if used as adjectives, give rise to solecism; as, "Nathanael Greene was born at Warwick, in the *then* colony (*now* State) of Rhode Island". "The *sometime* Governor of New York".

When a noun is used as an adjective, it must always be in the singular number, even when limited by words signifying plurality; as, *twenty-five foot* horse (not *feet*); *tooth-ache* (not *teeth-ache*), *calves-foot* jelly (not *feet*), *twenty-horse* power, *ten-dollar* bill.

Ought and *should* both imply obligation; *ought* is stronger. "You should go the lecture this evening"; but "You ought to have more respect for your father".

A noun or pronoun which is made to modify a participle must be put in the *possessive* case; as, "I was surprised at the *pupil's* (not the *pupil*) studying so diligently". "I have no objection to *his* becoming a merchant".

Party and *individual* are sometimes incorrectly substituted for *man*, *woman*, or *person*. "Are you the *party* who called yesterday?" This is by no means a modern vulgarism.

Perfect and *universal* do not admit of comparison; *more universal*, *most perfect*, are every-day solecisms.

Plenty is colloquially used as an adjective; say *plentiful*. "Berries are *plentiful* this season" (not *plenty*).

Post is not a synonym of *inform*; as, in "a *well-posted* man".

Appropriate prepositions must follow certain words. In the following sentence, *to* should be changed to *from*, after the adjective *different*. "This account is very *different to* what I told you".

A preposition may be introduced after a transitive verb, to govern a substantive which is really the object of the latter. "Covet earnestly for the best gifts"; *covet* being a transitive verb, *for* should be omitted. So, to accept *of* a present, to consider *of* a matter, are equally incorrect.

It is inelegant to connect a transitive verb and a preposition, or two different prepositions, with the same object; as, "We confide in and respect the good";—"I called on, and had a conversation with him". It is better, in such cases, either to supply an object for each of the governing words, or to omit one of the latter if it can be done without injury to the sense: thus, "We confide in the good, and respect them";—"I called, and had a conversation with him".

Scarcely relates to *quantity*; *hardly* should be used in all other cases: "Scarcely a bushel"; but, "I shall *hardly* reach home to-night".

Seldom or *never* is inelegant; say, *seldom if ever*. So is preferable to *as* after a negative. "It is not nearly so cold as it was".

Spoonfuls is preferable to *spoonsful*; *basketfuls* to *basketsful*, etc.

Stop is sometimes improperly used in the sense of *stay*; as, "Mr. Jones is *stopping* at the Bates House". *Stop* means *to cease to go forward*, and implies a brief arrest of motion, a momentary act; as, "This train *stops* fifteen minutes at Springfield".

Such is an adjective pronoun, and is not correctly used in the sentence, "Did you ever see *such* a beautiful vine?" where it has the force of the adverb *so*. Say, *so beautiful* a vine.

These kind and *those sort* are common solecisms, arising from the presence of a plural noun after *kind* and *sort*, as, "These *kind* of gloves".

Though means *notwithstanding*, as in the sentence, "Though I should die with thee, yet will I not deny thee". It is incorrectly used for *if* in expressions like the following: "I feel as *though* I were going to be sick". "It seems as *though* it would rain".

Transpire means *to become known*, not *to happen*. "It has not yet *transpired* who was nominated" is correct.

Try should be followed by a verb in the infinitive; "Try *to exert* yourself". Avoid the vulgarisms, "Try *and* do it", "Come *and see* me".

Whether should be followed by *not*; "I wish you to say *whether or not* I may expect you". *Whether or no* would be ungrammatical.—From the latest edition of "*Composition and Rhetoric*," by G. P. Quackenbos, LL.D.

The Public School.

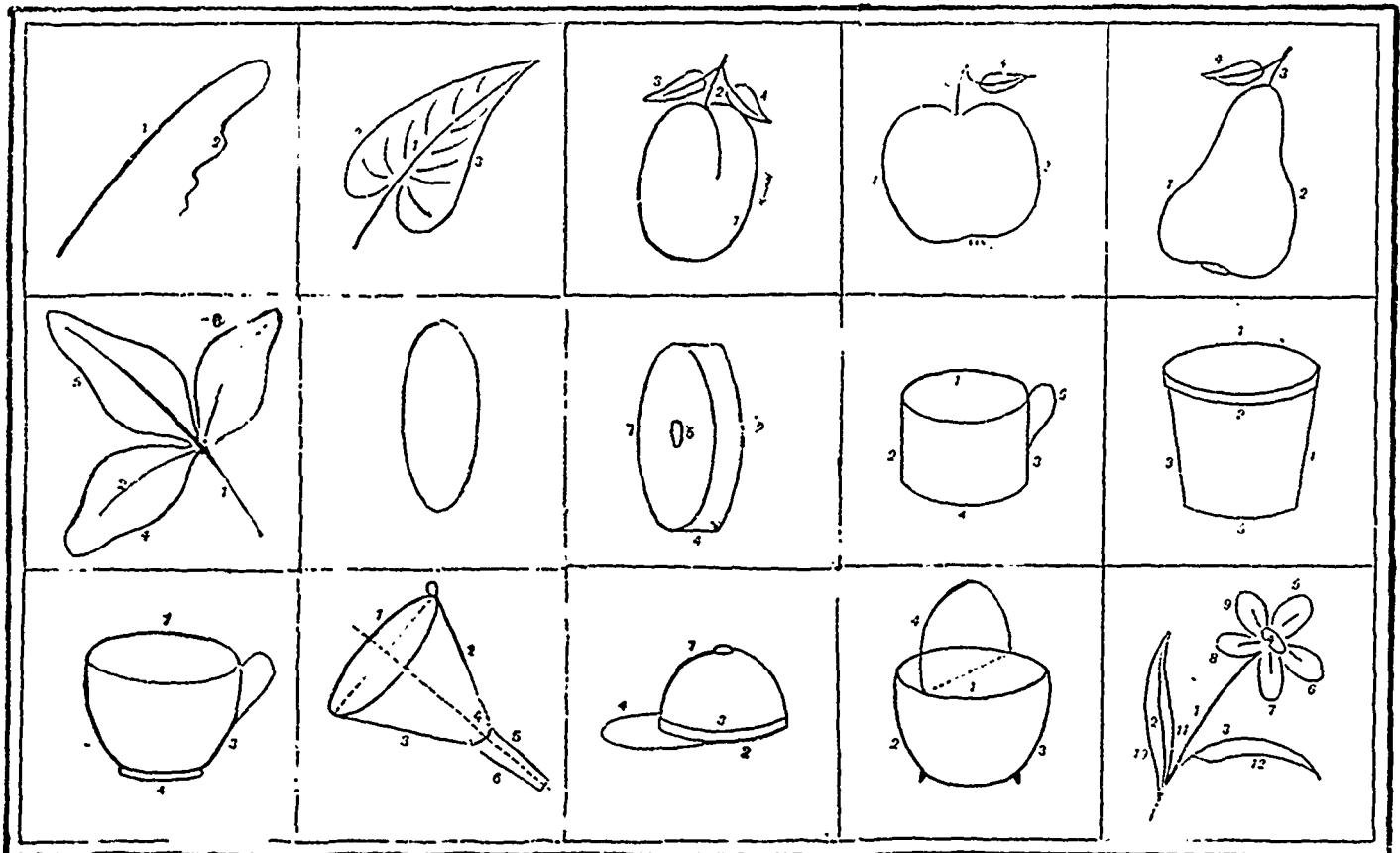
ELEMENTARY DRAWING.

Now that the study of drawing is being introduced into the public schools, no doubt many teachers find themselves face to face with a difficulty in teaching a subject of which they have, perhaps, only a slight knowledge. Unlike most other subjects, it requires not only mental ability, but manual dexterity on the part of the teacher; for more can be taught by example than precept. Instruction as to the method of working must be supplemented by suitable copies, either printed, or drawn on the blackboard—the latter plan being to the teacher a decided

The series of drawing books now in use, do away, to a great extent, with blackboard exercises, but in spite of this it would be well to introduce such exercises occasionally. A good plan is to take some common object, draw it on the board, and let the class copy it; then to place the object itself in a proper position and show why the lines in the drawing are used to represent it.

In order to reap the advantages to be derived from the study of the subject it will be necessary to keep up the interest of the children in it, and it will be found that a course of object-drawing, whether from copy or from nature, will be far more interesting to school children than one of purely orna-

A child will take an interest in its work and persevere in it, just so far as its efforts are rewarded by a measure, at least, of success, and the forms with which it is most likely to succeed are natural ones. This is true, I presume, because on account of the great diversity of natural forms they do not require a rigid accuracy of line in their representation. A few irregular lines may suggest a leaf, an apple, a plum, or a pear, as shown in the accompanying figures, but they may not represent any particular leaf, apple, plum or pear. A child's own instinct is the surest guide to a teacher in respect of the objects which the child should be encouraged to draw. I remember, when I made my first artistic efforts, a good many years ago,



advantage, as it not only shows how the work is done, but it also (what is a more important thing) proves that he can do it himself. He cannot hope for very marked success if his pupils have any reason to doubt his competency to instruct them. This is one reason why I always recommend that drawings be placed on the blackboard, not privately, but in the presence of the class. The respect of a child for his teacher depends to a large extent upon the manifest superiority of the one over the other; the teacher's ability to do what the pupil cannot; and it would be wisdom in the teacher to give his pupils no opportunity of suspecting why drawings are not placed on the board.

mental forms. This is a difficulty that decreases as their ages increase, so that for the junior classes a method of instruction that will keep the children interested in their work, is better than one that has for its sole purpose, teaching them freedom of movement, accuracy of representation, and beauty of line. These may be introduced in the senior classes, but they would be out of place with small children.

Commencing with the assumption that a child should be taught to draw almost as soon as its fingers can hold a pencil, I propose to offer a few practical suggestions that may be helpful to teachers generally, but more especially to those in charge of junior classes.

that they were confined exclusively to triangular men, houses, trees, etc. What I did then, most children do now. Not one in a hundred will try to draw an ornament, but their pictures are all pictures of natural objects.

Acting on this hint then, I have selected a few simple suggestive forms, which, though they are simple, represent the objects which they are intended to represent. As a proof of this I may say that my critic has looked over them, and without hesitation, has told me the correct name of each—he is not quite five years old. So, commencing with these pictures, which any little child can understand, I will gradually introduce more and more difficult ones, requiring greater ex-

perthness and closer observation. Of course it must be remembered that these are only suggestions, and that where I have used one, a teacher may think of a dozen forms. Great care should be exercised to introduce difficulties gradually, and not until the children are prepared for them.

About the simplest line that a child can be asked to draw is one slightly curved, such as that marked 1 in figure 1, drawn by an upward movement of the hand and fingers. By using this as a basis, other lines can be added to it, building up forms of objects that are at once recognized; thus, by adding an irregular, wavy line, as 2 in figure 1, a whip is produced; by adding such lines as 2 and 3 in figure 2, a leaf is produced—the veins may be drawn or not as the teacher sees fit. In figure 3 the line marked 1 is calculated to prepare the pupil for drawing the ellipse in figure 7. There is nothing conventional about it, and this is the reason that it can be drawn so easily. Leave a child at liberty to draw its curves from right to left, or from left to right, according as it finds the one method easier than the other; it will find out for itself, soon enough, aided by a hint now and then from the teacher, the best and easiest way of drawing the lines. Let the teacher draw them in his way, on the board, and the imitative faculty will lead a child to draw them in the same way. In drawing a leaf, always begin with the central line or mid-

rib, and arrange the other lines on each side of it. The ellipse, figure 7, need not present any great difficulty; let it be drawn with one stroke of the pencil and in different positions. By using an iron ring or a hoop as an illustration, it can be shown that this is the form of the circle when viewed obliquely. The two curves are shown in figure 13, where 1 is circular, and 2, 3 and 4 are elliptical. The circle will be found a great deal more difficult to draw than the ellipse, and for this reason it would be better not to take up forms introducing a whole circle. In drawing such forms as 8, 9, 10, 11, 12, 13 and 14, it must be remembered that in every case and in every position the long diameter of the ellipse is perpendicular to the axis of the object. This axis is shown in figure 12 by the dotted line drawn through the centre of the funnel. At first let both ellipses in such forms as 8, 9, 10 and 11 be drawn, join the extremities by straight lines, and erase the

portions that are invisible. This will ensure making the curve of the second ellipse properly. The tendency is to make it not sufficiently curved.

The figures in the illustrations will indicate the order in which the lines are to be drawn.

I think it would be advisable in a class of children who had not commenced the study of geometry, to avoid everything approaching to technicality. It is questionable whether it would be wise even to introduce such words as *angle*, *circle*, *ellipse*, *axis*, *oval*, etc., until they had been explained, and if the children failed to understand the explanation, use such words as *arc* understood, as *corner*, for *angle*, *ring* for *circle*, *egg* for *oval*, and so on. Take nothing for granted; lay your own foundation, using only what facts are thoroughly understood by the children, and as

GL, draw lines to CV; with *c* as a centre, radius *ch*, draw a quadrant to *k* and join *kRMP*. The circle representing the base of the cylinder, and the square enclosing it, can now be drawn. In order to show the top of the cylinder, a vertical line must be drawn from *k*, and a measurement of 3' taken on it; from this draw a line to RMP and cut it by perpendiculars from the near left hand, and far right hand corners of the square. The upper surface of the block containing the cylinder must be completed, and perpendiculars from *n*, *v* and *s* drawn to give *p*, *w* and *t* on the front edge of it. Draw lines from these points towards CV to cut the diagonals of the top square, draw its diameters and the points through which to draw the ellipse will be obtained. Join the extreme right and left hand portions of the two ellipses by straight lines.

To place the cube in position on the top of the cylinder, measure on each side of *a*, 2' to the points so marked, draw lines from these towards CV, to *o* and *x*, to find points *z'* to the right and left of *v*, then erect perpendiculars to find corresponding points, *y* and *r*, on front edge of top square, and draw lines from these to cut the diagonal from *z'* to RMP. Two corners of the base of the cube will thus be obtained. The measurement for the height is most easily taken on the perpendicular from *k*, 4' above the point *z'*. I trust no explanation of the

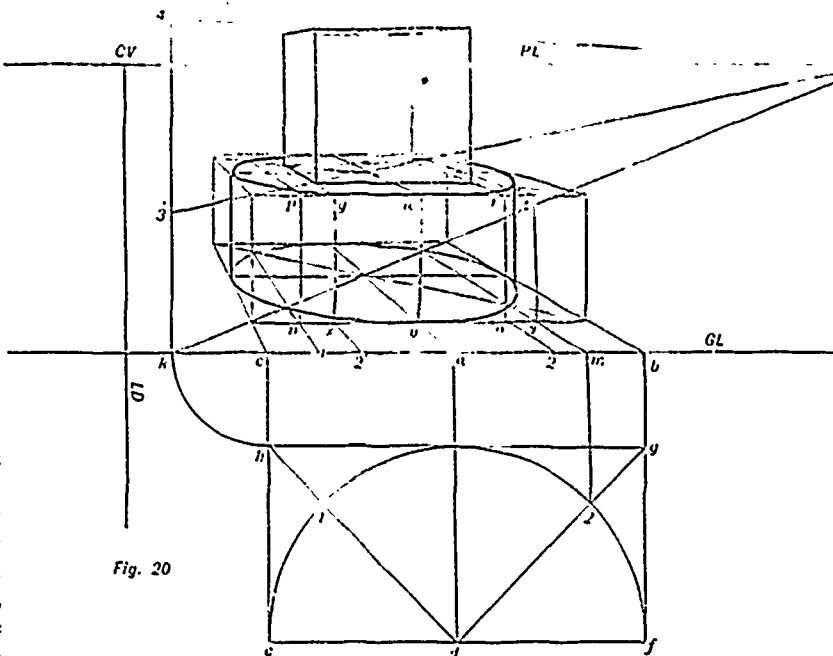


Fig. 20

the work advances be sure that each new fact is comprehended before it is passed by.

ARTHUR J. READING.

Practical Art.

PERSPECTIVE.

TENTH PAPER.

Is working problem 37, given in last paper, the point *a* (Fig. 20) must first be found, 7' to the right, and the line *ad* drawn, equal in length to the distance of the centre of the cylinder away from the PP—*G*; then with *d* as a centre and a radius equal to the radius of the base of the cylinder—4'—draw a semi-circle; enclose it in a half-square, find the points *r* and *s* by means of the half diagonals of the square containing the circle, and draw vertical lines from *h*, *r*, *s* and *g* to GL, giving *c*, *l*, *m* and *b*; from these five points on

rest of the work is needed.

Arthur J. Reading

SUPR. McLEOD has issued an earnest circular to school officers, calling their attention to some duties often neglected. Among other things, he urges that the twelve trees required by law be planted on all school-grounds where needed.

THE attendance at the Woodstock high school has increased from 60 to 130 within the last three months. At a recent meeting of the Board a fourth master was added to the staff, so that the school now possesses four masters and a specialist—Miss Harrison, who undertakes the teaching of drawing.

A new illustrated astronomical work, "in the interest of religion," entitled "Celestial Empires," by the author of "Ecce Caelum," will be published in April by the American Tract Society. A complete set of the works of this author has been applied for from Japan, for the use of the Theological School in Tokio.

Mathematics.

PAPERS IN FACTORING.

XII.

Factor :

1. $x^6 + y^6$.
2. $a^6 + b^6$.
3. $a^6 + 1$.
4. $x^6 + 32$.
5. $a^{10} + b^{10}$.
6. $x^{10} + 243$.
7. $32 + x^6 y^6$.
8. $a^{15} + b^{15}$.
9. $a^{20} + b^{20}$.
10. $x^6 - y^6$.
11. $a^6 - b^6$.
12. $1 - b^6$.
13. $32 - a^6$.
14. $a^3 b^3 - x^{10}$.
15. $x^{10} - y^{10}$.
16. $x^{15} - y^{15}$.
17. $a^{10} - b^{10}$.
18. $1 - 243a^3$.
19. $x^7 + y^7$.
20. $a^7 + 1$.
21. $a^{14} + b^{14}$.
22. $a^{21} + b^{21}$.
23. $a^{49} + b^{49}$.
24. $x^7 - y^7$.
25. $a^7 - 1$.
26. $a^{14} - b^{14}$.

XIII.

EXAMPLE.

Factor $x^3 - x^2 y + x y^2 - x^2 y^2 + x y^3 - y^3$.
 Since $(x+y)(x^2 - x^2 y + x^2 y^2 - x^2 y^2 + x y^4 - y^5)$
 $= x^6 - y^6$
 $= (x^3 + y^3)(x^3 - y^3)$
 $= (x+y)(x^2 - xy + y^2)(x-y)(x^2 + xy + y^2)$;
 $\therefore x^3 - x^2 y + x^2 y^2 - x^2 y^2 + x y^3 - y^3$
 $= (x^2 - xy + y^2)(x-y)(x^2 + xy + y^2)$
 $= (x-y)(x^2 - xy + y^2)(x^2 + xy + y^2)$.

Factor :

1. $x^2 + x^2 y + xy^2 + y^2$.
2. $x^3 - x^2 + x - 1$.
3. $x^6 - x^4 + x^3 - x^2 + x - 1$.
4. $a^7 + a^6 b + a^5 b^2 + a^4 b^3 + a^3 b^4 + a^2 b^5 + a b^6 + b^7$.
5. $x^7 + x^6 + x^5 + x^4 + x^3 + x^2 + x + 1$.
6. $x^7 - x^6 y + x^5 y^2 - x^4 y^3 + x^3 y^4 - x^2 y^5 + x y^6 - y^7$.
7. $a^7 - a^6 + a^5 - a^4 + a^3 - a^2 + a - 1$.
8. $a^6 + 2a^4 + 4a^2 + 8a^2 + 16a + 32$.
9. $a^8 + a^7 b + a^6 b^2 + a^5 b^3 + a^4 b^4 + a^3 b^5 + a^2 b^6 + a b^7 + b^8$.
10. $x^7 + x^7 + x^6 + x^5 + x^4 + x^3 + x^2 + x + 1$.
11. $x^9 + x^8 y + x^7 y^2 + x^6 y^3 + x^5 y^4 + x^4 y^5 + x^3 y^6 + x^2 y^7 + x y^8 + y^9$.
12. $a^9 - a^8 b + a^7 b^2 - a^6 b^3 + a^5 b^4 - a^4 b^5 + a^3 b^6 - a^2 b^7 + a b^8 - b^9$.
13. $x^9 + x^8 + x^7 + x^6 + x^5 + x^4 + x^3 + x^2 + x + 1$.
14. $x^9 - x^8 + x^7 - x^6 + x^5 - x^4 + x^3 - x^2 + x - 1$.
15. $a^{13} - a^{12} + a^{11} - a^{10} + a^9 - a^8 + a^7 - a^6 + a^5 - a^4 + a^3 - a^2 + a - 1$.
16. $a^{12} + a^{12} + \dots + a^2 + a + 1$.
17. $1 - a + a^2 - a^2 + a^4 - \dots + a^{15} - a^{15}$.
18. $a^4 + a^{22} + a^{22} + \dots + a^2 + a + 1$.

Educational Intelligence.

The free school is growing in favor in Berlin. In the last ten years the number of pupils attending has doubled.

ANN ARBOR High School has a library of 2,200 volumes, which is much used and appreciated by the members of the school.

THE Columbia College juniors selected "Paradise Lost" for class reading in preference to "The Faerie Queene."

ST. ANDREWS University has conferred the degree of LL.D. upon Andrew Lang, the young English poet and translator.

PROF. JOHN FISK is delivering, in New York, a course of thirteen lectures on "The Story of the American Revolution."

PROFESSOR BOYSEN, at a recent meeting of the Modern Language Association at Columbia College, offered a resolution to the effect that an acquaintance with the German and French languages should be considered equivalent to the knowledge of Greek necessary for admission to college, but it was rejected. It would not be at all surprising if this action of the Association should be regarded as very curious half a century hence.

In the April number of The Andover Review, the editorial discussion of the crusade against the common schools, is continued in an article entitled "School or Scholar." Dr. Newman Smyth begins a short series of sermons on the Labor Problem, recently preached to workmen, which in their delivery, attracted much attention. Other timely and interesting articles are on "Bach and Handel," on "Co-operative Creation," and on "The Moral Purpose of the Later American Novel."

In some parts of England public-school teachers are paid according to the standing of the pupils on examination day. The result is not all good, for some of the pupils are over-driven by the teacher. The teacher is thus much like the Chicago cabman whose wages are greater the more he whips his horse. As many would rather walk home than ride to the music of a whip, so one would better let the children pick up a small education of one or two years than have them driven along many years so as to justify the salary of the driver. In Greece, paidagog means a gentle child-leader; in England it means a child-driver.—The Current.

Correspondence.

SUGGESTIONS.

To the Editor of the EDUCATIONAL WEEKLY.

I SEE in your "Notes and Comments" column this week a paragraph from the New York School Journal, in which the publishers of that paper request teachers to write, for publication, brief accounts of any ideas or suggestions which may occur to them in connection with their work. Taking it for granted that you endorse the sentiments expressed in the paragraph referred to, from the fact that you reprinted the same, I have taken the liberty to send a short communication which I have "written out" and endeavored to "make crisp, pointed and applicable."

1. A few weeks ago your paper contained an article written by a lady teacher in Ohio, in which she gave her method of teaching Subtraction. Her method I heartily approve of, in fact it is sub-

stantially the same as I use in my own school. I think with her it is more easily explained to children and more readily understood by them than any other. She is, however, decidedly wrong in her estimate of the other method of procedure when the figure in the subtrahend is of greater value than the one immediately above it—the method commonly called the "Borrowing (?) Method." I would take the greatest pleasure imaginable in explaining this latter method to my Buckeye friend if she has any desire to become familiar with the same; as said method is quite as rational as the one she uses, though, as I stated before, not so easily mastered by the average pupil.

2. The Hon. Minister of Education, in his recent circular which you publish this week, states that it will be optional with teachers henceforth whether they contribute to the Superannuation Fund, also that those who have paid may recover, if they so wish, one half the amount paid in. This is all right so far as it goes. I do not see what right the Government has to one half more than the other of my money without giving some value in return. However, it is worth something to have the nuisance removed, which will or ought at least to partially console those teachers who desire to withdraw from the list.

3. The subject of written Promotion Examinations has also been agitating my mind of late. Theoretically these examinations are all right, I believe, and the object for which they are held is a good one without doubt; but in actual practice are they the best and fairest test of a pupil's fitness for promotion? After three years' experience with those examinations I am of the opinion that they are not. Take an instance: A boy makes a very fair percentage in all the subjects but one—say geography—in that one he fails to make the required one third. He must needs remain in the same class for six months longer, while his seat-mate, who is not perhaps nearly his equal in general proficiency, and who perhaps did not take as many marks in the aggregate, is promoted. This is I think a manifest injustice, as the first boy may have the best of reasons for his deficiency in geography, having perhaps been absent at the time during which that particular map or point in geography was taken up. Again, some pupils (not always the best scholars either) have a better faculty for expressing their thoughts in writing, and are less liable to become confused than others, and for this reason succeed better. Such a case came under my notice less than one month ago in my own school. A girl succeeded in taking the required number of marks in each subject and also of the aggregate, while a boy who had done vastly better work during the winter, and who was, to my thinking, a great deal fitter for promotion, failed in one subject, although he had more than the number required in the aggregate. I intend to promote the boy on my own responsibility. In this county pupils are examined in writing, not from specimens written on the day of the examination, but from their books which have been written during the six months previous. That I consider is the right idea, and all the other subjects should be treated in the same manner.

Let a simple scheme or system of marking be devised and introduced into the schools, and let the pupils be promoted on the ground of the work of the whole term. No teacher ought to grumble at any extra work if a more satisfactory result is obtained, though I do not think there would be any extra work. Such a system would render unnecessary a considerable amount of the cramming which is so universally deplored. Some may think that the system I propose would give teachers a chance to be dishonest, which objection I consider of no importance, as a teacher, or any one else for that matter, can be dishonest under almost any circumstances if he chooses. There is no doubt that the teacher himself is the best judge of the fitness of a child for promotion, and if teachers would remain longer in the same school and be furnished with a uniform plan of marking, the expense and trouble of Promotion Examinations with their concomitant cramming would be rendered unnecessary.

OLIVER.

Promotion Examinations.

NORTH WELLINGTON PROMOTION EXAMINATIONS.

ENTRANCE TO FIFTH CLASS.

(Concluded from a previous issue.)

GEOGRAPHY—TIME, ONE HOUR AND A QUARTER.

1. Explain the terms:—Tide, Prime Meridian, Confluence, Eclipse, Plateau, Iceberg, Water-parting, Afluent, Delta, Steppes.
2. The sun is said to be farther from the earth in our summer than in our winter. (a) Explain how this can be. (b) Why is it warmer in summer notwithstanding?
3. What is a Colony? Name the British Colonies in North America, South America and Europe.
4. Name the three chief Canals of Ontario; tell where they are situated and the places at their ends.
5. Trace the rivers Nile, Amazon, St. Lawrence, Rhine.
6. Define a Limited Monarchy. Describe the form of Government in Russia, India, Egypt, Belgium, Brazil, Cuba, Ontario.
7. Draw a map of the Dominion and mark the boundaries of the Provinces and Territories.
Values, 1, 10; 2, 12; 3, 8; 4, 8; 5, 8; 6, 12; 7, 14. Total, 72.

COMPOSITION.—TIME, ONE-HALF HOUR.

1. Combine the following into a simple sentence:—
In America the railways are frequently single lines. The railways are formed to carry a limited commerce.
Sidings are provided at convenient stations.
2. Paraphrase the following passage:—
The river of their hope at length is drawing nigh—
Their snow-blind way they grope, and reach its banks to die;
Thank God, brave Franklin's place was empty in that hand;
He closed his well-run race not on the iron strand.
3. Write a composition of not less than twenty-five lines on any of the following subjects:—Wreck of Hesperus; Alfred and the Cakes; a Snow-Storm; Punctuality.
Values, 1, 10; 2, 30; 3, 32. Total, 72.

ENGLISH HISTORY.—TIME, ONE HOUR AND A QUARTER.

1. Write a brief sketch of the history of the Saxon rule in England, stating what you know of their settlement, of Egbert, Alfred, Athelstan, Ethelred the unready.
2. Explain the Feudal System, and state what you know about its introduction into England.
3. What led to the Wars of the Roses, through what reigns were they carried on, and what was their effect?
4. Write short notes on the following:—Bill of Rights, Act of settlement, Peninsular War, Reform Bill.
5. Who were Wat Tyler, Wycliffe, Caxton, Wolsey, Knox, Shakespeare, Strafford?
Values, 14, 12, 12, 20, 14.

GRAMMAR.—TIME, ONE HOUR AND A QUARTER.

1. Define Common Noun, Number, Case and Voice.
2. Give the feminine of milter, foal, mayor, fox, czar; the plural of madame, axis, hanger-on, formula and genus.
3. Give examples showing how the predicate of a sentence may be modified, (a) by a word; (b) by a phrase; (c) by a subordinate sentence.
4. Analyze:—
He gave his counsel to the wind,
While Malcolm did, unheeding hind,
Round dirk and pouch and broad sword rolled,
His ample plaid in tightened fold,
And stripped his limbs to such array,
As best might suit the watery way.
5. Parse unheeding, pouch, plaid, as, best, rolled, round and hind.
6. Correct and give reasons:—
(a) Have either of you got my slate?
(b) Neither him nor me intends to go.
(c) Was you home yesterday?
(d) I am not going, I don't think.
(e) Where did you buy them chimneys?
(f) John's brother is taller than him.
(g) He has went to school quite regular.
Values, 10, 10, 9, 14, 16, 21. Total, 80. For time allowed each subject, follow the time table.

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. Not being over-confident of the peaceful disposition of the intended prey, our hero took up his position in a tree over-hanging the path.
 2. For the convenience of traders, and the protection of goods, it was resolved to excavate wet docks.
 3. The moss-grown gate, ill-poised upon its creaking hinges, crippled and decayed, swags to and fro before its glass, like some fantastic dowager.
 4. Happily for herself, instead of being a feeble district, despised and over-shadowed by her overwhelming neighbor, she has assumed her share in a glorious inheritance.
 5. Opposite this magnificent array, the good old king marshalled his three native columns.
 6. Past market-gardens, rows of houses, villas, crescents, terraces and squares.
 7. The unrestrained freedom of such a life, he fully appreciates.
 8. The advantages of the situation brought swarms of adventurers and desperadoes to the spot.
 9. How he economizes his physical powers, resting a moment at each gain he cuts!
 10. He immediately endeavored to delineate the infant's portrait with a pen and ink.
 11. A fierce yell greeted my evolution, and the wolves, slipping on their haunches, sailed onward, presenting a perfect picture of helplessness and baffled rage.
 12. Denizens, interstices, hazardous, demeanor, legislative, confinement, incredible, fantastic, intricacy, recommending, stupendous, conveyed.
Value, 100; 5 marks to be deducted for each mistake.
This paper is not to be seen by any candidate.

ARITHMETIC.—TIME, TWO HOURS.

1. Define Proportion, Commission, Stock, Principal, Days of grace.
 2. Name and give examples of the different kinds of Vulgar Fractions. Simplify
$$\frac{2\frac{1}{2}}{2\frac{2}{3}} \frac{2\frac{1}{2} + 5\frac{1}{2}}{3\frac{1}{2} + 9\frac{1}{2}} + \frac{1}{3} + \frac{1}{4}$$
 of $\frac{3}{10}$.
 3. Divide 500 by .25, the quotient by .025, the second quotient by 50; what is the result?
 4. A room 31 ft. 4 in. in length requires 54 sq. yds. 7 sq. ft. 72 sq. in. of carpet to cover its floor; what is its breadth?
 5. The population of a certain city increases $\frac{1}{8}$ each year; its present population is 34,560. Find the difference between what its population was two years ago, and what it will be one year hence.
 6. A rectangular farm containing 50 acres is 220 yards wide. How long will a person take to walk around it at the rate of 4 miles an hour?
 7. A and B run a race of 200 yards, and A wins by 3 yards; A and C run over the same course and C wins by 2 yards. What start can C afford to give B in a 200 yards race.
 8. If 20 men do as much as 48 boys in a day, how many days will it take 72 boys to finish a work, one-third of which has been done by 30 men in 24 days?
 9. A horse is sold for \$133, at a gain of 5 per cent; what selling price would give a gain of 25 per cent?
 10. The quotient is 7469, the divisor 728, and the remainder 19; if the dividend remain unchanged, what divisor would give a quotient of 2419, having for remainder 1958?
 11. A debt of \$5,680 is due A, B and C. C is allowed 1.25 per cent for collecting the debt. Of what is left A receives .35, B .28, and C the balance. How much money does each receive?
 12. A vessel has two supply pipes and one waste pipe. The supply pipe will fill the vessel with water in 6 and 8 minutes respectively, the waste pipe will empty it in 12 minutes. The vessel is empty when the 3 pipes are opened; in what time will it be filled?
Values, 5, 10, 8, 10, 12, 12, 14, 10, 10, 10, 12, 12. Total value, 125, but 100 marks are to count a full paper.
- READING.
- PROMOTION TO THIRD CLASS.
Second Book, page 106.—“Ingenious Device.”
Ten or twelve lines of this lesson.
- PROMOTION TO FOURTH CLASS.
Third Book, page 241.—“With loud cheers”
* * * “on the main reinforcement.”
- PROMOTION TO FIFTH CLASS.
Fourth Book, page 106.—“The calm, high-bred” * * * “outside barbarians.”
- NOTE.—This paper is not to be seen by candidates. Examiners are required to give careful attention to the marking of the reading. Consider expression, fluency, and correct pronunciation. Examiner will fill in the reading marks in list of candidates.
Value, 50 marks for each class.
- WRITING.
Writing will be judged from Dictation Paper.
Value, 40 marks.

Examination Papers.

ADMISSION TO HIGH SCHOOLS.

[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.]

ARITHMETIC.

DECEMBER, 1882.

1. From 935 take 846, explaining clearly the reason for each step.

The difference between \$2610 and the product of two numbers is seventy million three hundred thousand. One of the numbers is 9402; find the other.

2. Find the amount of the following bill: -36 lbs. 8 oz. beef at 16c., 16 lbs. 10 oz. mutton at 14c., 7 lbs. 12 oz. pork chops at 12c., 15 lbs. 6 oz. turkey at 18c., 4 lbs. 10 oz. suet at 16c.

3. Find the L. C. M. of 11, 14, 28, 22, 7, 56, 42, 81; and the G. C. M. of 40545, 124083.

4. Prove that $\frac{2}{3}$ of $1 - \frac{1}{4}$ of $\frac{3}{4}$.

Simplify :-

$$\frac{\frac{1}{4} - \frac{2}{3} \text{ of } \frac{1}{2}}{\frac{1}{2} + \frac{1}{2} \text{ of } 3\frac{1}{2} - (\frac{1}{3} \text{ of } \frac{2}{3} \text{ of } \frac{1}{2})} \div \frac{\frac{1}{2} \text{ of } \frac{1}{2} + \frac{1}{2} \text{ of } 5}{9\frac{1}{2} - 1\frac{1}{3}}$$

5. Prove that $1.025 \div .05 = 20.5$.

Find the cost of .0625 of 112 lbs. sugar, when 1 lb. costs .0703125 of 16s.

6. Reduce 45740108 square inches to acres.

7. The bottom of a cistern is 7 ft. 6 in. by 3 ft. 2 in. How deep must it be to contain 3,750 lbs. of water, a cubic ft. of water weighing 1,000 ozs.?

S. A runs a mile race with B and loses; had his speed been a third greater he would have won by 22 yards. Find the ratio of A's speed to B's.

A does $\frac{2}{3}$ of a piece of work in 6 hours, B does $\frac{1}{2}$ of what remains in 2 hours, and C finishes the remainder of the work in 30 minutes. In what time would all working together do the work?

10. By selling tea at 60c. per lb. a grocer loses 20 per cent; what should he sell it at to gain 20 per cent?

JUNE, 1883.

1. What is the object of Division? Write down the relation connecting the Divisor, Dividend, Quotient and Remainder.

Divide one hundred and eight billion, four hundred and nineteen million, seven hundred and sixteen thousand and one, by eighteen million, seven hundred and forty-eight thousand and five.

2. Find by "casting out nines," whether the following is correct: - $349751 \times 28637 = 10015819397$.

Find the weight of 500,000 bricks at 4 lbs. 2 oz. each, and the cost—in dollars and cents—at 27s. 6d each, allowing 4s. 2d to make a dollar.

3. A merchant receives from England the following invoice in sterling:

- 375 tons iron plates, at £8 15s. 6d.
- 107½ tons bar iron, at £11 14s.
- 10 tons bull iron, at £10 10s.
- 17 tons T iron, at £15 10s.
- 48 tons steel, at £18 7s 6d.
- 15 tons rivets, at £11 1s.

Find the amount of this invoice in Canadian currency, allowing the shilling sterling to be equal to 24½ cents.

4. At \$1.75 per rod, what will it cost to fence a piece of land 63.5 rods long and 27.75 rods wide.

5. Simplify :-

$$1 - \frac{1}{3} + \frac{1}{24} - \frac{61}{5040} + \frac{277}{72576}$$

$$\frac{4\frac{1}{2} + 5.8\dot{1} - 2.5}{4\frac{1}{2} \text{ of } 32 \text{ of } .45}$$

6 Gunpowder is composed of nitre, charcoal, and sulphur, in the proportion of 15, 3 and 2. A certain quantity of gunpowder is known to contain 20 cwt. of charcoal: find its weight, and also the weight of nitre and of sulphur it contains.

7. Bought 360 gallons of wine at \$2.60 a gallon; paid for carriage \$17.20, and for duties \$86.50. If $\frac{2}{3}$ of it be lost by leakage, at what price must the remainder be sold to gain \$50 on the whole transaction?

8. Find the interest on a note for \$257.81, dated January 3rd, 1883, and paid April 6th, 1883, at 8 per cent per annum.

9. The length of a seconds pendulum is 39.37079 inches; if 64 French metres are equal to 70 yds., by what decimal of an inch will the length of a seconds pendulum differ from one metre?

10. At what time between 4 and 5 o'clock are the hands of a clock (1) coincident, (2) at right angles?

DECEMBER, 1883.

1. Multiply the sum of fifty-nine thousand four hundred and four, and forty-seven thousand six hundred and seventy-five by their difference, and divide the product by $7 \times 13 \times 19$.

2. Bought oranges at the rate of 10 cents the dozen, and sold them at the rate of 5 oranges for 11 cents. How much did I gain on 11 boxes, each containing 20 dozen?

3. A man bought a rectangular field 40 rods long by 25 rods wide, paying therefor at the rate of \$300 per acre, and then had it fenced at the rate of \$1.50 per rod. Prove that the land cost him exactly ten times as much as the fence.

4. Divide \$1,200 among A, B, and C, so that A may have \$70 more than B, and twice as much as C.

5. Divide the sum of $\frac{1}{2}$ of $8\frac{1}{2}$ and $2\frac{1}{2}$ of $5\frac{1}{2}$ by the difference between $\frac{2}{3}$ of $3\frac{1}{2}$ and $\frac{1}{2}$ of $\frac{1}{2}$ of $2\frac{1}{2}$.

6. Add together 1.302, 3.2589, and 40.93. Multiply the sum by .00297 and divide the product 90.09. (Decimals, not vulgar fractions, to be used in doing the work, otherwise no marks to be allowed.)

7. A farmer sold a load of hay at \$16.25 per ton; the whole weight of waggon and hay was 2875 lbs.; the waggon alone was found to weigh 1083 lbs. How much did the farmer receive for his hay?

8. A can run a mile in 5 minutes, B can run it in 6 minutes. How many yards start should A allow B in order to make their chances equal?

9. Three men can dig a certain drain in 8 days. They work at it for 5 days, when one of them falls ill, and the other two finish the work in 5 days more. How much of the work did the first man do before he fell ill?

10. Find the interest on \$275.80 for 91 days at 7 per cent per annum.

JUNE, 1884.

1. The quotient is 12434, for the remainder 2763, and the dividend eighty-seven millions nine hundred and eleven thousand one hundred and twenty three. Find the divisor.

2. Find the L.C.M. of 11, 7, 21, 28, 22, 27, 81, 243, 216; and the G.C.M. of 94605 and 96509.

3. A sidereal day is 23 hours 56 minutes, and the mean solar day is 24 hours. Reduce the difference between the two to the decimal of a sidereal day.

4. Simplify :-

$$(1) \frac{(3\frac{1}{2} - \frac{1}{2}) \text{ of } 6\frac{1}{2}}{1\frac{1}{2} - \frac{1}{2} \text{ of } 12\frac{1}{2}} \div (6\frac{1}{2} - 1\frac{1}{2})$$

$$(2) \frac{\frac{1}{2} \text{ of a guinea} - \frac{1}{2} \text{ of a } \text{£}}{\text{Ss. } 10\frac{1}{2} \text{d.}}$$

5. A grain dealer bought 64 bags of oats, weighing (including bags) 3616 lbs. The bags averaged 1 lb. 12 oz. each. The dealer paid 34 cents a bushel for the oats, and sold them at 42½ cents a bushel. How much was his gain?

6. A plate of metal $\frac{1}{2}$ inch thick was burnished on one side for 11s. 6½d., at 2¼d. per square inch. Find the weight of the plate, supposing a cubic foot of the metal to weigh 62½ lbs.

7. A, B, and C do a work in twelve hours; A and B can do it in 16 hours, and A and C in 18 hours. In what time can each do it separately?

8. An army in its first engagement lost 1 in 10 in killed and wounded, and in its second engagement 3 in 25 of the remainder; there were then 3960 men left. How many men went into the first engagement?

9. Find the duty on 8 hogsheads of sugar, each weighing 1200 lbs. gross, at 1½ cents per lb., 16% being allowed for tare.

10. (1) Find the interest on \$225.40 for 16 months at 8% per annum.

(2) The amount of a certain principal was \$307.20 for 3½ years, and \$312 for 3¼ years. Find the principal and the rate.

DECEMBER, 1884.

1. Of what number is 8967 both divisor and quotient?

2. Find the greatest number that will divide 11067 and 35602, leaving as remainders respectively 17 and 21.

3. Find the amount of the following bill: -12½ yds. cassimere at \$2.75 per yd.; 18½ yds. silk at \$1.17; 23¼ yds. flannel at 37½c.; 112 yds. print at 9½c.; 55 yds. shirting at 17½c.; 37½ yds. tweed at \$1.12½.

4. Simplify :-

$$(a) \frac{5\frac{1}{2} + 2\frac{1}{2} \div 11\frac{1}{2} \times 7\frac{1}{2} + \frac{\$18.64}{\$1.16\frac{1}{2}}}{\frac{1}{2} \times \frac{1}{2} \times 0.02 \times 0.456} \div \left\{ \frac{1}{2} \text{ of } \frac{3}{4} \right\}$$

5. The cost of carpeting a room 15 feet long with carpet 27 in. wide costing 90c. a yd., is \$22.50. What is the width of the room?

6. A boy can do a piece of work in 4½ days, and a man can do the same in $\frac{2}{3}$ of the time. How many days will both working together require, to do five times the amount of work?

7. How much water must be added to 92 gallons of brandy worth \$4.60 a gallon, in order that the mixture may be worth only \$3.60 a gallon?

8. Find the simple interest on \$275.60 from 18th July, 1883, till 13th Sept., 1884, at 6% per annum.

9. At what time are the hands of a clock two minute spaces apart between four and five o'clock?

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PRESS NOTICES.

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Its introduction into this country will be the literary event of the year.—*Ohio State Journal*, Columbus.

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The first point that strikes the examiner of Stormonth's is the good-sized and extremely legible type. This is a great comfort for persons whose sight is defective. The dictionary seems to be specially rich in provincial, obscure, and obsolete words, such as one encounters in rare old English books or hears from the mouths of rustics in the nooks and corners of England. The definitions are, as a rule, brief; but long and minute in the case of the more important words. Much judgment is shown in the proportions of space assigned for the purpose. The "sound-symbols," giving the pronunciation, are as clear as could be desired.—*N.Y. Journal of Commerce*.

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