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ADDRESS—

EDUCATIONAL WEEKLY,

GRIP OFFICE, TORONTO.

TORONTO, FEBRUARY 11, 1886.

"TEACHERS need great caution against the danger of making the aim and uses of instruction bend to [artificial] arrangements and examination in such way as to injure both themselves and their pupils." This is the gist and moral of some admirable remarks made by Superintendent Higbee, quoted in another column.

At the present day especially it would be difficult to lay too much stress upon this remark of the Pennsylvania superintendent. With the state taking upon itself the supervision of the education of the younger members of the community; with the consequent accumulation of "artificial arrangements" of every conceivable kind—authorized text-books, government-appointed inspectors and examiners, strictly defined courses of study, and stringent rules regulating the methods of education generally—no wonder that the teacher's attention is often distracted from the true aim of teaching and turned towards the means he is enjoined to employ to attain that aim. Many extraneous influences

also tend to enhance this distraction. There is the rivalry between the school to which he is attached and every other school of the same standing, as to which shall succeed in passing the greater number of pupils at the forthcoming examination. There is the consternation of the parent at any likelihood of his son or daughter failing in the said examination. There is the watchful eye of the head master jealous of the success of each of his classes in all artificial arrangements for testing their knowledge. And, not least, there is the regularly recurring visit of the inspector. None of these need necessarily be hindrances to the free development of educational processes. On the whole, doubtless, they are quite the reverse—they aid and push forward that development. Otherwise such arrangements would not exist.

We are not inculcating radicalism in the method and aim of teaching. Far from it. The value of artificial arrangements is incalculable. They are the outcome of the best thought of the best educators of the community. Without them education would be without form and void. It would cease to be a system, and would lose all the advantages which accrue from the adoption of systematic methods. But what we do inculcate is that these artificial arrangements are not to be considered the be-all and end-all of instruction; they are not the goal, but merely the landmarks of tuition; they are not the resting-place, they are merely the finger-posts; they mark the course, they do not form the winning-post. To sacrifice everything to prescribed arrangements would be equivalent to admitting that these were the ultimate aims of all teaching, and the teacher who adopted this course would resemble a gardener whose sole object it was to load his master's table, careless whether the fruit were ripe or unripe.

AN excessive regard for such arrangements it is which forms one of the chief defects of the general education of the present time. Evidences of it are seen on every side, more, perhaps, in England

than in our own land. It is the cradle of cram; it eliminates individuality; tends to level intellectual differences; and prevents the varying capabilities of different orders of intelligences from expanding in their natural and healthy directions. As Mr. Higbee well puts it, "there must be teleology in teaching." And what he wishes to show is, that the true teleology of teaching is not "artificial arrangements." How to avoid the false teleology and adopt the true, that is the difficulty. In attempting to answer this question the writer takes a refreshingly high stand. But unfortunately it is so high that it almost becomes valueless as a practical guide. True, "the teacher must be sure that he is turning the glance of his pupil toward *knowledge* . . . and not toward arranged limitations of grade." But it is also true that in probably the majority of cases the glance is best directed toward knowledge by means of arranged limitations. Perhaps all that can be said is that teachers must adapt themselves to varying circumstances and to the different proclivities of their pupils. The great lesson Mr. Higbee is trying to teach is that unwavering obedience must not be paid to artificial arrangements. And this is no easy lesson to learn. The parent, the head master, the inspector—each has his rights; but let the teacher remember that, above all, the pupil too has his rights. This is the great fact, and it is a fact too often lost sight of. That teacher who does his utmost to develop the powers and store the minds of his pupils with a single eye to their intellectual and moral progress, irrespective, it need be, of all artificial arrangements, will be of more benefit to the state, in the highest sense of the word, than the teacher who by dint of punctilious attention to set forms succeeds in distancing all his rivals in the number of pupils he contrives to "pass" through prescribed examinations.

ARTIFICIAL arrangements may be described as the scaffolding of an educational system. He would be a poor bricklayer who adjusted his building to suit the scaffold rather than the scaffold to suit the building.

Contemporary Thought.

THE historian of Cyrus the Elder says of him, by way of compliment, that "he knew how to govern and how to be governed." Both of these qualifications are necessary to the successful teacher, and in being governed to know how to be self-governed. The teacher who governs himself will successfully govern others. Not only those who give directions in scholastic pursuits in the school-room but all who "cause others to know," are teachers and educators.—*G. H. Laughlin, in The Current.*

CHILDREN at first learn to sing entirely by imitation. It is, therefore, of the utmost importance that the pattern should be good. Observe the following rules: 1. *Never sing with the pupils.* Let them listen quietly to your pattern, and imitate. (In cases where the teacher cannot sing at all, a few of the more musical of the children may be called upon to sing the pattern.) 2. Let the pattern be short enough to be easily remembered. 3. The pattern must be *soft and distinct.* 4. Repeat the pattern until you get a soft, clear response from the class.—*Daniel Batchelor.*

I DENY that the utilitarian view of primary education is ignoble. The present system is truly ignoble, for it sends the working-man into the world in gross ignorance of everything he is to do in it. The utilitarian system is noble, in so far as it treats him as an intelligent being, who ought to understand the nature of his occupation and the principles involved in it. The great advantage of directing education towards the pursuits and occupations of the people, instead of wasting it on dismal verbalism, is that, while it elevates the individual it at the same time gives security for the future prosperity of the nation.—*From "Sketch of Sir Lyon Playfair," in Popular Science Monthly.*

SOME of the evils of irregular attendance at school are: 1. An hour lost is lost forever; present duties crowd the present, the past cannot be recalled. 2. One lesson depends on another; every missed lesson weakens the foundation on which others rest. 3. Irregularity in boys becomes the same in men; bad habits stay. 4. The teacher's explanations are invaluable; he has no time to spare for needless repetitions. 5. The presence of the irregular attender checks the progress of the class and the enthusiasm of both class and teacher. 6. The one day out by a pupil is lost; he does not know next day's lessons and consequently loses nearly two days by one day's absence. 7. Irregularity causes a pupil to lose interest; the teacher is not much interested in those who feel no interest.—*London Advertiser.*

AT last the Senate of Toronto University has adopted a scheme providing for local examinations. These may be held wherever there are not less than five students desirous of taking any one or more of the subjects for matriculation. The fee is \$2; an additional \$5 is charged for registration as an undergraduate of the university. Every teacher ought to know all about this scheme and set about taking advantage of it. If we are not mistaken the boon now conferred on the student and teacher is a product of, or at least has been

hastened by, the light thrown on university questions by the discussions on confederation. The adoption and further carrying out of this liberal policy will do much towards making Toronto University truly the university of the Province.—*London Advertiser.*

WITH children attention is the key to success. The teacher who can secure and hold the attention of children ought to make elementary teaching his life-work. With older students, such as college students and those in the technical schools, the ability to fasten the attention upon a given subject, and to keep it there, is the *sine qua non* of success. Newton once said: "The difference between myself and other men consists chiefly in the habit I have acquired of more completely concentrating my attention, and holding it longer upon a subject, than most men. Because I have acquired the power of intense and prolonged attention I am able to accomplish what others fail to do." To inspire and direct, and to be the guiding architect in building up a noble character, is the work, the privilege, and the pleasure of the teacher.—*G. H. Laughlin, in The Current.*

It is impossible to over-rate the influence of real tunes in developing the musical faculty of the child; and, as this development is to go on, even after the sight-singing course is begun, we receive here a hint as to the nature of the technical exercises to be employed while we teach music-reading. These also should be tuneful and natural both in melodic flow and rhythmic form. It need not disturb us if we find the children "catching" them easily; if there is anything in an exercise which appeals to the musical nature of the child he cannot help remembering it. To confine children to studies full of awkward, unmelodious tone arrangements, of limping and unsymmetrical time, rests in the most unexpected places, with no regular close but a sudden "pull-up," may hold them to a sort of dry attention for the time being. But such exercises, which nobody can remember, and which no musical person would ever try to remember, leave no valuable impression on the child's mind. They cannot be highly regarded as means of culture; for the teacher can never afford to substitute a meretricious skill in deciphering musical characters for a true musical growth.—*School Music Journal.*

THE purpose of the college is to do for the mind and character what the gymnasium does for the physical powers; to build up the man all round. If the student "hates mathematics," it is probably because his mind is naturally weak on the side of abstract reasoning, and the hated study is therefore the very study he needs. If he has a lofty disdain of literature, it is very likely only an evidence of some lack of that side of culture somewhere in his ancestry. There is nothing sacred about a "bent." So far from being an indication of Providence, it is apt to be a mere indication of hereditary defect. If we look at it from the side of its being a predisposition to weakness in some particular directions, a bent away from certain lines of study (the form in which it chiefly shows itself in college), we can see that the sooner it is repaired by a generous mental diet, the better for the man and for the race to whose ideal perfection he and his posterity are to contribute. Per-

haps the greatest danger to which the higher education is at present exposed is that of spreading before the student a vast number of miscellaneous subjects, all recommended as equally valuable, and inviting him to choose according to his bent. The result naturally is that the average boy follows that universal bent of human nature toward the course that offers him the easiest time. If this course happens to include strong studies, easy only because he is specially interested in them, the harm is not so great; but if it consists chiefly of light studies, introduced into the curriculum only because somebody was there to teach them, and somebody else wanted them taught (and perhaps a little, too, because each counts one in a catalogue), then the harm is enormous.—*E. R. Sill, in the Atlantic Monthly.*

It takes half my time to read the "poems" sent me by young people of both sexes. They would be more shy of doing it if they knew that I recognize a tendency to rhyming as a common form of mental weakness, and the publication of a thin volume of verse as *prima facie* evidence of ambitious mediocrity, if not inferiority. Of course there are exceptions to this rule of judgment, but I maintain that the presumption is always against the rhymester as compared with the less pretentious persons about him or her, busy with some useful calling—too busy to be tagging rhymed commonplaces together. Just now there seems to be an epidemic of rhyming as bad as the dancing mania, or the sweating sickness. After reading a certain amount of manuscript verse one is disposed to anathematize the inventor of homophonous syllabification. This, that is, rhyming, must have been found out very early—

"Where are you, Adam?"
"Here am I, Madam";

but it can never have been habitually practised until after the Fall. The intrusion of tintinnabulating terminations into the conversational intercourse of men and angels would have spoiled Paradise itself. Milton would not have them even in "Paradise Lost," you remember. For my own part, I wish certain rhymes could be declared contraband of written or printed language. We have rhyming dictionaries—let us have one from which all rhymes are rigorously excluded. The sight of a poor creature grubbing for rhymes to fill up his sonnet, or to cram one of those voracious, rhyme-swallowing rigmatoles which some of our drudging poetical operatives have been exhausting themselves of late to satiate with jingles, makes my head ache and my stomach rebel. Work, work of some kind, is the business of men and women, not the making of jingles! No—no—no! I want to see the young people in our schools and academics and colleges, and the graduates of these institutions, lifted up out of the little Dismal Swamp of self-contemplating and self-indulging and self-commiserating emotionalism which is surfeiting the land with those literary sandwiches—thin slices of tinkling sentimentality between two covers looking like hard-baked gilt gingerbread. But what faces these young folks make at my good advice! They get tipsy on their rhymes. Nothing intoxicates one like his—or her—own verses, and they hold on to their metre-balladmongering as the fellows that inhale nitrous oxide hold on to the gas-bag.—*O. W. Holmes' New Portfolio, in December Atlantic.*

Notes and Comments.

COL. PARKER has been ere this introduced to our readers. A description of a visit to his schools will be found in another column.

MR. O'HAGAN continues in this issue his papers on practical elocution. The broad standpoint from which he views the subject will doubtless be much appreciated.

A TYPOGRAPHICAL error occurred in our issue of January 20. The name of the recently appointed science master at the Belleville High School is Charles H. Waldron.

A SIGN of the times is seen in the proposal, which was made at the last meeting of the Toronto Separate School Board, to procure a type-writing machine for the pupils of De La Salle.

THERE is reason to believe that the public has not yet come to the end of the discussion on the "Bible in schools"—no small sign being the fact that the Toronto Public School Board has resolved that the authorized selections of Bible readings be ignored, and that the Bible be read in the schools as formerly. It is, perhaps, impossible to expect this question to be approached with anything like a freedom from bias. Hence we may conclude we have not heard the last of it.

THE British Association for the Advancement of Science have placed £50 sterling at the disposal of the committee appointed for the purpose of investigating and publishing reports on the physical characters, languages, industrial and social condition of the Northwestern tribes of the Dominion of Canada. The rebellion in the North-West last summer delayed operations. The members of the committee are Dr. E. B. Tylor, Dr. G. M. Dawson, General Sir J. H. Lefroy, Dr. Daniel Wilson, Mr. Horatio Hale, Mr. R. G. Haliburton, and Mr. George W. Bloxam (Secretary).

TEACHERS conversant with the recent stirring events which have taken place in English politics might most instructively make many of them subjects of interesting conversations with their senior pupils. The changes of ministry; the formation of cabinets; the opening of Parliament; the speech from the throne; the summoning of the Commons to attend in the Upper House on the election of a Speaker; England's general relationship to Ireland; the two religions to be found in that island;—such topics as these, discussed in connexion with any analogous events touched on in the history that the class may be studying, will tend much to make interesting the study of such history.

PROFESSOR J. W. WRIGHT, whose treatise on the adjustment of observations with applications to geodetic work is reviewed in another column, is a Canadian. He graduated at the University of Toronto, was after-

wards mathematical master at the Collegiate Institute, Galt, and subsequently assistant engineer in the United States Survey. At present he holds the professorial chair in mathematics in Union University, New York. His work has been already most favorably received in the United States. J. W. Wright is one more name added to the now rapidly increasing number of Canadians who are distinguishing themselves across the border. It is a pleasure to think their talents are appreciated.

UNIVERSITY COLLEGE has, in the new Oriental tutor, Dr. McCurdy, a valuable addition to the college staff. He bears a high character both as an experienced teacher and scholar. He studied at Göttingen and Leipzig, and was greatly valued as Professor of Oriental Languages at Princeton, New Jersey. Professor Green, the Chairman of the Old Testament Revision Committee, and one of the foremost authorities on this continent in the department of Oriental learning, writes in the very highest terms of Dr. McCurdy's "very unusual attainments in philology; and especially his wide acquaintance with the Semitic languages." He is also a good Sanskrit scholar; and has published a valuable work on that language.

THE public lectures at Trinity College are much appreciated. On the 6th the Rev. G. Haslam lectured on "Animal Intelligence"; on the 13th the Rev. W. Clark is to lecture on Cowper; on the Saturday following the Rev. Principal Grant takes up Burns; and on the last Saturday of the month Professor Hutton is to speak on "Heathen Virtues and Theories of Life"—a subject most congenial to his tastes. One of the most pleasing of the features of this course of lectures is the fact that the lecturers are not chosen from any one particular sect or creed. To see the names of Principal Grant and Professor Hutton on a Trinity College lecture programme is an excellent sign. This course of public lectures delivered in Toronto might be taken as a good example to be followed in the provinces. Is there anything in the way of high school and public school masters occupying their spare hours in a similar manner?

THE piece of poetry which heads the "Literature and Science" columns is taken from Lord Tennyson's new book—"Tiresias and other Poems." This last work of the Poet Laureate's has as yet fallen into the hands of so few readers upon this side of the Atlantic, that no apologies are needed for quoting from it one of its brightest gems. When a man at seventy-six years of age writes a book; when that book is a book of poems; and when its writer has already earned immortal fame, it is safe to think that the book will contain nothing but that which its author, possessed of the calm judgment of the septuagenarian, believes to be of real worth to his readers. He will not allow his book to contain, it is

rational to suppose, a single line that smacks in the smallest degree of the frivolous or the ephemeral. Detractors of Tennyson will probably object to this. But that at all events the quotation we have made is of real worth even these will admit. It deserves several readings and much thought; and in the days of Huxley, Tyndall, Gregg, Spencer and Frederick Harrison, it may give light to many who have been groping in the darkness of positivism or agnosticism.

By the death of Frederick William Barron, M.A., some time head master of Upper Canada College, Canada loses one to whom many of her youth owe much. Men of the stamp of the late Mr. Barron are a powerful influence for good to the community at large, and of this class of men Mr. Barron was a brilliant type. Fond of boys, taking a keen interest in all their sports—often joining in them as heartily as themselves, he united to this rare characteristic that of the soundest scholarship. The boys that grew up to manhood under his care were one and all thoroughly "grounded," and this thorough "grounding" evinced itself very plainly in all their after studies and occupations. Mr. Barron was an enthusiast in education. His active mind was ceaselessly occupying itself in the subjects he was teaching and in the methods he was adopting. Such traits of character could not but command the respect and obedience of his pupils, and this they did to the fullest extent. And, as always is the case with such men, he was ever looked upon by his "old boys" with feelings of respect and admiration. Canada does not possess too many men like the late Mr. Barron. His death is a severe loss to the country. The following are the chief particulars of his life: He was born in England; educated at a public school, after leaving which he was entered at Cambridge. In 1834 he came to Canada, and was soon afterwards appointed to a mastership at Upper Canada College, of which college he ultimately became principal, a position he held for thirteen years. In 1859 he moved to Cobourg, where he assumed control of the Grammar School. This he resigned a few years later and opened a private school in the same town. After this he removed to Gore's Landing, upon Rice Lake, where he continued to teach till some three years ago. At this time Mr. Barron was already advanced in years and his health was failing. He died on February 2, in the 76th year of his age. He married twice. His first wife was Eleanor Thompson, daughter of the late William Thompson, who sailed for Canada on the same vessel as Mr. Barron. By her he had several children, three of whom only are living. His second marriage was to Mrs. Gore, of Gore's Landing, who survives him. He was a prominent Mason, and was buried with Masonic honors.

Literature and Science.

THE ANCIENT SAGE.

ALFRED, LORD TENNYSON.

If thou would'st hear the Nameless, and wilt dive
Into the Temple-cave of thine own self,
There, brooding by the central altar, thou
May'st haply learn *the Nameless hath a voice,*
By which thou wilt abide, if thou be wise,
As if thou knewest, tho' thou canst not know:
For Knowledge is the swallow on the lake
That sees and stirs the surface-shallow there
But never yet hath dipt into the abyss,
The Abyss of all Abysses, beneath, within
The blue of sky and sea, the green of earth,
And in the million-millionth of a grain
Which cleft and cleft again for evermore,
And ever vanishing, never vanishes,
To me, my son, more mystic than myself,
Or even than the Nameless is to me.

And when thou sendest thy free soul thro'
heaven,
Nor understandest bound nor boundlessness,
Thou seest the Nameless of the hundred names.
And if the Nameless should withdraw from all
Thy frailty counts most real, all thy world
Might vanish like thy shadow in the dark.

Thou canst not prove the Nameless, O my son,
Nor canst thou prove the world thou movest in,
Thou canst not prove that thou art body alone,
Nor canst thou prove that thou art spirit alone,
Nor canst thou prove that thou art both in one:
Thou canst not prove thou art immortal, no
Nor yet that thou art mortal—nay, my son,
Thou canst not prove that I, who speak with thee,
Am not thyself in converse with thyself,
For nothing worthy proving can be proven,
Nor yet disproven: wherefore thou be wise,
Cleave ever to the sunnier side of doubt,
And cling to Faith beyond the forms of Faith!
She reels not in the storm of warring words,
She brightens at the clash of "Yes" and "No,"
She sees the Best that glimmers thro' the Worst,
She feels the sun is hid but for a night,
She spies the summer through the winter bud,
She tastes the fruit before the blossom falls,
She hears the lark within the songless egg,
She finds the fountain where they wait'd "Mirage"!

[Of this poem and the quotation we have made from it the *Athenæum* thus writes:—

"The Ancient Sage" is a ratiocinative dialogue based on one of the aphoristic sayings of Laoutze, the founder of Taouism, that most remarkable religious system, which in its relation to Buddhism we have more than once had occasion to glance at in these columns. This saying, "The name that can be named is not the enduring and unchanging name," seems to cover the entire philosophy of the Unconditioned—seems to say all that can be said as to the nescience of the human mind confronted by the Absolute—all that can be said as to the futility of finite enquiries into the Infinite. Lord Tennyson's ancient sage (whom let us take to be Laoutze himself) had retired from the city to pursue his meditations, when a poet of the pessimistic species presented him with a scroll of verses:—

How far thro' all the bloom and break
That nightingale is heard!
What power but the bird's could make
This music in the bird?
How summer-bright are yonder skies,
And earth as fair in hue!
And yet what sign of aught that lies
Behind the green and blue?

But man to-day is fancy's fool
As man hath ever been.
The nameless Power, or Powers, that rule
Were never heard or seen.

The sage's reply is in Lord Tennyson's best and weightiest manner. If the reader doubts the concentrated strength of the foregoing passage, let him try to express in plain prose as briefly and succinctly as the poet has expressed in melodious verse the idea of the infinite divisibility of matter."]

THOUGHT AND ACT.

FROM THE GERMAN OF LERNAU.

THE forest gloom, the lake,
The crags so stern and steep,
A silent picture make
Of earnest thought and deep.

Through yonder mountain rift
The deep-voiced cataract
That leaps so strong and swift,
Pictures the daring act.

Thy purpose ponder long
In earnest thought and deep;
In act be swift and strong
As yonder torrent's leap.

Albert W. Gould, in the University.

THE DETECTION OF FIRE-DAMP.

[THE following paragraph taken from the *Current* contains many interesting facts not beyond the comprehension of many classes learning chemistry and physics in high schools and collegiate institutes. A great variety of topics, which he might discuss with his class, will be suggested by it to the teacher.]

THE *Scientific American* of last Saturday contains complete illustrations of the device invented by Henry Guy Carleton, of New York City, for indicating the presence of fire-damp in mines. This description has been freely copied, with accompanying diagrams, by several great daily papers, among them the *Chicago Tribune* of equal date, and there is little doubt that Mr. Carleton's invention will be at once brought to the attention of every mine-owner of America and the English-speaking nations, if not to the rest of the world. The inflow of fire-damp is not only signalled by the device of Mr. Carleton, but its percentage to the atmosphere, and its persistence, or its subsequent diffusion into a harmless element of the air are shown with precision to the electrician in the mine-office. By putting a certain ingenious balance in the mine, its action is at all times duplicated on a similar balance in the mine-office, through electric connections. Each balance has a sealed glass bulb holding 300 cubic inches of hydrogen gas. This bulb is balanced by the necessary weight. A change in the quality of the atmosphere will cause an oscillation. Right and left riders on the beam of the office-balance indicate the difference in the quality of the air above and below the ground, and the instruments are put in exact equilibrium through the manipulation of the riders of the office-balance. Now,

if the barometer rise with no fire-damp, the bulb-ends of the balance will rise, and a stronger current of electricity will restore the equilibrium of both; if the barometer fall, the bulbs will fall, and equilibrium of both may be restored from another current at hand; if the barometer rise, with fire-damp, the operator will find that in applying the restoring current the balance in the mine has come to an equilibrium (announced by the bell) sooner than his own balance, therefore he must move the rider on the beam of his balance to make it tally. The reading on this beam measures the percentage of fire-damp; if the barometer fall, with fire-damp, the same or a similar process, carried out on the other side of the beam, will restore the equilibrium and measure the amount of the poisonous gas. With an indifference to personal gain characteristic of the man, Mr. Carleton has waived his patent right in the premises, and all scientists and operators are free to apply the invention to the humane purpose for which it is intended. It is said that one of the latest testings for fire-damp with safety-lamps resulted in the death of thirteen miners. The *Scientific American*, beside giving this invention the place of honor in its journal, speaks of it editorially in terms of the warmest praise, and bespeaks for it a wide use and an unending opportunity for doing good. The cost is said to be trifling, yet it would be something, and the instrument would require the constant attention of an intelligent and skilful electrician. Mr. Carleton is the author of the tragedy of "Memnon," a literary work which will live far off beyond these times, of "Victor Durand," and of the "Thompson Street Poker Club." His attainments are remarkable, and he has had the advantage of comradeship with some of the most eminent scientists of the day, such, for example as Professor R. Ogden Doremus, and his son, Professor C. A. Doremus. Medicine and electricity have both been pet studies with the author and inventor.—*The Current.*

MANY Mound Builder weapons and ornaments composed of copper are beautifully fashioned. Some of their axes have the appearance of having been cast in a mould. Their stone weapons are admirably made. No ancient people excelled them in the art of working flint. The cabinet of almost any antiquarian will show exquisite specimens of their handiwork. The Mound Builders lived in a region where coal is now found abundantly; but it would seem that no traces have ever been discovered indicating that they made use of it, or knew of its inflammable nature. With dense forests to draw upon for fuel, what need had they of it? In a territory where now a great population draws wealth from the earth in the shape of coal, iron ore, copper, galena and limestone, they discovered and utilized copper only, with perhaps a very limited amount of galena from what is now Illinois.—*H. D. Mason, in the Current.*

Educational Opinion.

METHOD IN STUDY.

EDUCATIONALISTS have long tried to give a clear and complete definition of the difference that lies between school and college training. In clearness of expression we may say they have not been wanting; complete they have not been, perhaps because it is impossible to reduce so delicate a difference without writing volumes. School training in its higher branches includes Horace, Virgil and Homer. So does college education. Some of the work read at our high schools and collegiate institutes is also read at our Provincial University.

Difference in work done does not, then, constitute the difference between school and university. Neither, altogether, does difference in the teaching, or rather the fact that we are *taught* in the one, and *learn* in the other. For at school there is a system of rewards and punishments that practically compels the most obstinate and refractory student to submit to the sway of authority, and some facts taught him are bound to enter his brain and remain there—always supposing that he has any. At college we learn that the major part of the effort must come from ourselves.

This leads us to see a little in what lies the main difference between pupil and undergraduate; it arises from the different way in which they are regarded. The schoolboy is looked upon as being more or less a machine. So many lines of Virgil, so many problems in Euclid, so many pages of English history. No chance is left him. So much he must learn, or it will not be well for him. The college student is a different being. His freedom is apt at first to bewilder him. Set before him lie the paths of pass and honors, and then honors in so many different departments. Lectures he is at liberty to attend or "cut," as he pleases.

It is at a time like this that the college student asks himself the question that occurs probably not to one out of every ten schoolboys—the great question, "Why am I here?" Not referring to the great world and the problems of life—that question too has to be answered some day, but "Why am I at the university at all?" It is then that the revelation dawns upon him that study at the university is not for facts—some of them may indeed prove useful, but most have little bearing upon life—but study is to develop a good method of working. A fact is single, isolated, but the way we arrive at a single fact is like a broad path that leads to many single facts. To grasp the principle involved in any study, that is the great aim.

How does this method show itself? Perhaps we may the better judge the effects of it by marking what comes from want of it. Slipshod, half-hearted knowledge—power-

lessness to learn quickly—helplessness in the face of intellectual difficulties. The man of method may learn few things, but depend upon it, he will know thoroughly that which he knows at all. The man of method will learn quickly, for he will give his whole mind to the subject before him. The man of method will, like the trained and ready athlete, grapple with each difficulty that presents itself, and what mental difficulties can stand in the way of success when the mind at work upon them is well-trained?

Method then, we maintain, is the secret of success—not only in college life, but in the great world beyond. He who cultivates method in his college life need fear little in the battle that follows the calm of literary training.

J. H. BOWES.

A WORD TO TEACHERS.

(From the Fifty-first Annual Report of E. E. Higbet, Superintendent of Public Instruction of the State of Pennsylvania.)

BECAUSE various artificial arrangements become necessary in the management of school work, and well defined courses of study are demanded to render graded schools possible, accompanied as these must be with examinations to condition transitions from one grade to another, teachers need great caution against the danger of making the aim and uses of instruction bend to these arrangements and examination in such way as to injure both themselves and their pupils. Children must be taught to read, for example: but the aim here, upon the part of the teacher, must be something higher than the successful passage of the pupil from one reader to another through the monotonous text-book march of grade to grade. The end in view is to enable the child clearly to grasp the world of reason that confronts him in the visible forms of his mother-tongue. At some stage of the process, therefore, the mere act of learning to read must pass over into reading for the sake of gathering wisdom from the word-embodied experience and thought of mankind, awakening in such transition a greater thirst for knowledge than the narrowing ambition to pass an examination on pauses, inflections, emphasis, tones, etc., which are but the scaffoldings of expression. These are good in their place, and may require some attention in the process. But the process in no sense is toward them, but toward the substance and grandeur of literature. Schools need well-selected libraries, to which teachers and pupils may have free and frequent access, that the prescribed course of the school, going through six readers it may be, shall not fetter both alike in the great work begun.

In every elementary study, in fact, the teacher should have a clear vision of the

end toward which it moves, and direct the awakening mind of the child thitherward with no uncertain or vacillating step. There must be teleology in teaching. The end must be seen in the beginning, and serve as a directive and inspiring motive throughout the whole advance. To plant a walnut simply as a seed, without reference to what is legitimately involved in its growth and development, is but to stick it at random in the ground, near the building it may be, to thrust its branches against the windows which are to admit light, or at the very edge of the walk to impede exit and entrance, and endanger its own preservation. To start upon any given course of study without knowing the end toward which it logically directs itself, is to start at random and with unsteady gait. Children demand a proper guidance in this regard. They are not things—they are living souls. Already in rudimentary form the various sciences are enveloped in them, from the very fact that they have an understanding which may be interfused with an inner rational light, and come under the sway of truth. The teacher must be able to make full account of this, and in his most primary instruction be sure that he is turning the glance of the pupil toward *knowledge* toward *truth*, a recipient form for which the intellect is—and not toward arranged limitations of grade—that his orienting is not false, and the whole process not cramped and fettered either by his own too narrow vision or by the necessary machinery of his school. The most advanced and noblest scholar will find that he can take the soft hand of his youngest pupil, and soon realize how eagerly his own slightest onward leading will be followed by the child, for mind delights to marry mind, and science is but the truth of the world in forms of reason, which reason seeks, and without which, it cannot be satisfied. At times—no one can fix these in way of prescriptions, for mental regeneration is a mystery only less profound than that of the spirit—at times he will challenge the child's tender eyes, already filled with wonder-mist, to a still higher vision seen as yet in but dim, shadowy outline, as by no legerdemain but with a master's power he removes one fold of the curtain and shows him the glory of the worlds beyond.

The power of the teacher is in his own far seeing, not directed to examinations and transitions from prescribed grade to grade, but to the vast expanse which is involved in the infinite possibilities of the souls with which he has to do. His office in this light is truly great, and its responsibility most solemn. It involves deep reverence for the most advanced scholarship, and an awe-inspiring sense of the destiny of man as transcending all knowledge, and capable at present of being seen but dimly and in enigma.—*Pennsylvania School Journal*.

A DAY IN COL. PARKER'S NORMAL SCHOOL.

S. S. FARR, PRIN. OF PAUW NORMAL SCHOOL.

THE writer recently enjoyed a day's visit to the Cook County (Illinois) Normal School, at Normal Park, a suburb of Chicago, of which Col. Francis W. Parker is principal.

The first exercise seen was that of the opening exercises for the teachers' class, held in the hall of the school building. Col. Parker read a few paragraphs from the Sermon on the Mount. There was singing. Earnestness was the characteristic of the whole exercise. The music was good—a statement seldom possible of opening-exercise music. Every one entered into the spirit of what was done. After reading and singing, Col. Parker addressed a few words to the students on the subject of their purpose. The principal thought was that each one would find what she was looking for. If formal results, or immediate returns were looked for in their own and the children's minds, these things would be found. If growth, substantial development, on the other hand, were sought, it would be found.

Opening exercises over, visits were made to all the classes and rooms, for the sake of getting a general idea of the plan of the school and of the nature of the work. Interest and attention marked all the exercises. Teachers were at white heat. No listless pupils were noticed. Freedom of action presented itself as one of the marks of all the work. Col. Parker knows every chick and child about the premises, and was greeted with the smiles and the enthusiasm that belongs to the class of magnetic personalities of which he is one. Not only does he know each child's face and name, but its mental peculiarities, and as he passed round spoke to this one about a defect in pronunciation, which was being overcome, to another about some peculiarity of memory, etc.

The moral to all this is a fact entirely overlooked by many who have essayed to criticise favorably or unfavorably, viz., that Col. Parker is not merely a man with a theory, but one who has the closest kind of a mastery of details—a condition antecedent to all success.

One would of course fail to mention an important feature, if he did not say something of the "learning to do by doing" that has had so much said about it by all visitors and critics. An effort, more or less successful, is made to carry it out in all the work done. Thus in geometry, in the high school, the pupils develop the theorems without the demonstrations usually given beforehand, which really amount to the same thing as the key amounts to in algebra. In geography, clay and sand-modelling and the construction of relief maps furnish the doing when learning the features of surface. Other parts of the subject have their special modes

of applying the idea. The primary schools use the principle wherever practicable. Shops which furnish certain kinds of mechanical work afford an opportunity for its use on the side of mechanical production.

Space and the want of acquaintance with names prevents notice of the classes and teachers seriatim. Suffice it to say that all are teachers of the highest skill. Col. Parker advocates and practises perfect freedom in the selection of teachers, with a view to securing the best. He also advocates, we believe, freedom on the part of the teacher in her work. She is given freedom and held responsible for results. Although his teachers work under the limitations of practical freedom, they seem to be, as said before, working at white heat, a condition of effort that leads to an intense strain upon the energies.

The pupils of the normal school proper recite in their scholastic work in the forenoon and engage in practice-teaching in the afternoon. Col. Parker seems to have come nearer the true solution of practice-teaching for the pupils of the normal school than any one else with whom we are acquainted. His plan allows a larger amount of teaching than other plans, and at the same time removes many of the serious objections to pupil-teaching. Each training-school is in charge of its regular teacher for all practice work. She is responsible for all that is done. The pupil-teachers are divided into groups of three or four or more, according to the number of groups of pupils in the practice-schools. Each practice-school is, we believe, divided into four practice-groups. This division would form groups of pupils of from seven to twelve children. A group of pupil-teachers is assigned to each group of children. One of these pupil-teachers is made the "head" for a day. She teaches the group of children. The other pupil-teachers of the group sit with the children and take part in the work as pupils, but they do not play children. They give aid to the "head" whenever it may be necessary.

Afterwards the work done comes up for discussion and criticism. All the groups take part in this under the direction of the methods-teacher.

We saw a class of pupil-teachers in methods in primary number. The work was of the most practical character. Each member of the class brought a set of original, concrete problems designed for, say, third-grade pupils. These were examined and discussed one by one. The principles which should govern the construction of such problems were stated and applied. All problems not conforming to these principles were rejected. The problems were concrete. Each pupil was required to take objects and illustrate the special problem in hand. Thus, if the problem were, "Two boys start 12 miles apart to travel toward each other, one

at the rate of a mile per hour, the other at the rate of two miles per hour; when will they meet?" the pupil-teachers illustrated it. They made the 12 miles out of inch-long sticks. Then they moved sticks along to represent the two boys, describing their positions every hour. Finally, they met and the point of meeting is fixed and represented. One can see great value in such concrete work. The mind of the pupil must *do* it to get over the illustrative process.—*From the Indiana School Journal.*

UNDER THE DOMINION OF HABIT.

WE remember to have noticed, many years ago, when he was superintendent of schools in one of the largest cities in the West, and at the time lived such distance from his office as to make it necessary to use the street cars as a means of conveyance, that the author of "Speculative Philosophy," in making these daily trips, invariably carried with him for use on the journey an abundance of the best of reading matter. At this day no well informed person will question the right of Dr. Wm. T. Harris to stand at the head of the teacher's profession in the United States. As a reader of Pedagogical Literature, Psychology, Metaphysics in all forms, in his own and other tongues, Mr. Harris was completely under the *dominion of habit*. For this reason he always found time to read. Knowing the thoughts of others on these important subjects he had a foundation upon which to build a structure of his own. *He found time to read.* The pursuit of knowledge is desirable as a means to make men rich, wise and happy, yet how few, comparatively, profit by it. So many say *they have no time to read.* It is difficult to account for this on any other rational theory than to assume that man is a creature of *habit* and that the mind is as much under the dominion of habit as the appetites. When the early cravings of the mind are fed, and the desires for knowledge cultivated, a *habit* is formed which admits of no denial. Reading may become a habit, and study may become a habit, just as indolence and listlessness may become habits. There are individuals, and not a few, who never read a book through, from the beginning of the year to its end. Many of these individuals know how to read, and are not to be counted as positively ignorant, though the amount of knowledge which they possess is very small. Many of them possess more than ordinary intellect, and if they were under the dominion of the *habit* of reading, so as to take advantage of the precepts and experience of others, might easily attain to eminence in their respective callings. It is wonderful how easy it is to get under the dominion of the *habit* of indolence and listlessness, and to say, "I have no time to read."—*Indiana Educational Weekly.*

THE REAL DEFECT.

TWENTY boys averaging fifteen years in age, and all graduates of Boston grammar and high schools, were examined in that city the other day to see which was best qualified to fill a position as general clerk in an insurance office. The requirements were moderate, demanding only fair penmanship, good spelling, correctness at figures, and the use of good English, but out of the twenty not one came up to the required standard. The Boston paper which mentions the occurrence gives various reasons for this lamentable failure, but reaches the root of the matter, probably, when it points out as a defect of the school system that pupils are not made to depend upon themselves, but that the teachers do the work and give so much oral instruction that the children, though entertained and somewhat enlightened, do not get the permanent benefit to be derived from laborious study, and leave the schoolroom with a confused jumbling of facts and no firm foundation of learning fixed in their minds. It is a popular notion that children now-a-days study too much and too hard; but there is reason to believe those among them who cannot endure the school work are bewildered more from the multiplicity of subjects which demand their attention than from close application to their books. At all events, it is a fact not to be denied, that boys and girls of a former generation, whose entire schooling was comprised in half a dozen three months' terms, learned to spell, and write, and "cipher" with an ease and accuracy which many children do not now attain after a ten years' course in the schools.—*Indianapolis Sunday Journal.*

UNANSWERABLE QUESTIONS.

QUESTIONS are frequently asked us of this description:—"How can I stop my pupils dropping pencils on the floor?" "How can I stop whispering?" "How can I make my scholars love arithmetic?" "How can I make a programme?" "How much time shall I give to spelling in my school?" These questions are asked by honest teachers in a spirit of sincere enquiry. They insist on knowing these things, and cannot tell where to find the answers they want. But it is a fact that there are many unanswerable questions in all branches of work. How certain things are to be done cannot be told. Take an illustration. Spencer's lenses are known to all microscopists. They were made by a man who could never teach his art. Others took the same kind of glass, pursued the same course, but did not make the same quality of lenses. No one could tell why. When the lens came from Spencer's hands it was valuable; when it came from others' hands it had little value. He could not transmit his skill any more than Michael Angelo, or Rubens, or

Daniel Webster, or Shakespeare could. Go into a good school, watch all the teacher's movements, take down her language, and then go into your school, go through with the same motions, use the same words, and you fail. Why? You can't get her spirit. She has something that a school course has improved, but has never given her. Why can we not have ten thousand like Horace Mann, David Page, or Dr. Arnold? Because *schools* don't make such men. They are born, and all the school work in the world could not manufacture them. There are some who never can become eminent teachers. They may learn to do *good* work, but never excellent. There are certain things in all the arts and trades that cannot be communicated, and how to make a fitting programme, or exactly how to regulate noise, or how to govern boys and girls, or when to teach percentage, are among them.—*New York School Journal.*

ITEMS FROM A SUPERINTENDENT'S NOTE-BOOK.

J. M. REED.

FROM notes taken during my visits to schools last winter, I take the following concerning teachers, which are placed to their credit:—

1. Going to school each day in good time.
2. Having a programme prepared which gives proper time for preparing and reciting each lesson; also a sufficient number of recitations for small and large pupils during each session.
3. Keeping the schoolroom neat and clean and having the stove nicely polished.
4. Making the schoolroom as attractive as possible by having suitable pictures and mottoes on the walls.
5. Having each day's work carefully prepared before coming to school so as to be able to hear recitations without a book in hand, and give the proper directions to the pupils when the lesson is assigned.
6. Studying not only the subject to be taught, but the disposition of pupils and the best methods of teaching them also.
7. Showing a spirit of improvement, by the enquiries made, the educational journals read, and by attending and taking part in educational meetings. Some teachers take, study, and use three or four educational papers, and some have attended as many as four local institutes in different places, without being allowed the time during the past winter.
8. Giving attention to each pupil in school, and giving such instruction as the disposition and wants of each demand.
9. Calling on the dull pupil to recite as frequently as the bright one, if not more frequently.
10. Speaking to pupils in a pleasant and friendly way, and *asking* them to do certain favors instead of *commanding* them to do so.

11. Teaching each subject so thoroughly that the pupil will not need to spend a large part of next term to get as far as he is at the close of the present term.

12. Considering the comfort and health of pupils by having the house properly heated and ventilated when it is possible to do so.

13. Calling and dismissing classes in an orderly way.

14. Neither talking too loud nor too much.

15. Leading pupils to *think* for themselves by putting subjects in such an order as to invite thought.

16. Giving plenty and a variety of employment to small pupils when they are not reciting—such employment as writing on slate or paper from copy on board; writing, reading and spelling lessons, names of objects in the schoolroom, names of objects of same color, same shape, etc. In some schools, teachers had small pupils writing descriptions of pictures and objects; and having them re-write stories which had been related or read in their hearing.

17. Giving a pupil a chance to be benefited by the corrections made on him by having him "try again" immediately after the correction has been made.

18. Having pupils *explain* their work instead of first *reading the figures*.

19. Training pupils to classify and arrange the subjects studied that they may be retained.

20. Having written reviews frequently—"What a person can write out, that he knows."

21. Giving each pupil a report of his work in the different subjects at the close of each month.

22. Assisting pupils when the lesson is assigned, that they will not need to go to the teacher, when she is hearing a class, to ask her "How do you pronounce this word?"

23. Keeping lessons fresh in mind by reviewing during each recitation.

24. Giving pupils directions which will assist them in learning *how to study*.

25. Giving attention to pupils at noon and recess, and not permitting the schoolroom to be used as a play-house.

26. Getting out of old tracks by using such new methods as are based on the true principles of teaching.

27. Keeping pupils evenly in their work; not having them ahead in one or two branches and almost, if not entirely, neglecting others.

28. Requiring pupils to do neat work at all times.

29. Making good use of blackboards, maps, charts, etc.

30. Keeping up the interest of school to the last day of the term.

31. Giving directions to the pupils in regard to how to increase their power of study.—*Teacher. Assistant.*

TORONTO:

THURSDAY, FEBRUARY 11, 1886.

THE STUDY OF LITERATURE.

I.

"SOME future historian will record of this present age that it witnessed the introduction into our schools—at least into some of them—of a careful study of our native tongue and the great works written in it." This was written some fourteen years ago by Mr. J. W. Hales, the well-known lecturer in English Literature at King's College School.

It required not the authority of so eminent a teacher and writer to convey to us the truth of this assertion. The present wide-spread study of English literature is a fact evident to anyone taking the most superficial glance at modern modes of education. Mr. Hales might have gone further, and said the future historian will point to this introduction as being the salient feature of the present age. True, the natural sciences, as they are called, also command now a respect never accorded them before. But the amount of time and thought spent upon literature as an object of study, marks out its introduction as the truly distinctive feature of the history of educational changes in the closing decades of the nineteenth century—as distinctive, it may be safely asserted, as the substitution of English for French as the teaching medium in the fourteenth century, or the study of Greek in the sixteenth.

Perhaps of all evidences of true progress, changes brought about gradually and in the face of conservative opposition are the best possible. If this be so, we may rest assured that education, both as regards the subjects taught and the methods adopted, is truly progressive, and progressive in the right direction. In Richard the Second's time the advantage of substituting English for French was hotly discussed. The introduction of Greek was still more strongly opposed. Both were effected; and both have borne excellent fruit. So, too, the large share of time recently devoted to literature and science has evoked much and strong criticism. This change, too, has been equally effectually brought about, and already has given so great evidence of many and various beneficial influences that the voice of hostile criticism has been all but silenced.

Many of us are as yet ignorant of the magnitude of this change. We see on all sides tangible evidences of the number and influence of those who take a deep and liberal interest in literature; we recognize the enormous strides which have been made in the methods of reading and elucidating the masters of English prose and verse; and we are not blind to the many extraneous aids—historical, philological, and other—which the knowledge and forethought of educators have used in their adoption of these methods. All this is apparent everywhere—seen in the multitude of text-books in English literature; in different manners of treatment of literary masterpieces; and not least in the great variety of opinions expressed on the subject of handling these masterpieces. But still many of us are not yet fully cognizant of the fact that this change in general education, brought about by the introduction of the study of English writers, has resulted in a change in the basis or groundwork of teaching. It is a fundamental change. It seems necessary that the various methods of expanding the child's mind should be built upon some definite foundation. This is the case in all the different branches of learning taught in our schools and colleges. What is the so-called "classical training" still so largely adopted in England, but a foundation from which all the superstructure takes its character? The impress which in former times this "classical training" formed upon the mind was abundantly evident. It stamped upon the youth of England a distinctive mark which is easily to be recognized in all that was built up from this basis. Teaching is an art. It does not and cannot be undertaken in haphazard fashion. It proceeds by scientific methods. Unless this is recognized, all our teaching will be worse than fruitless.

If, then, we are right in regarding tuition as a scientific process, and as a scientific process based on some definite foundation, it is our duty to give our most earnest attention to this fundamental change which has of late years come over our general system of education. The character of the superstructure will vary as the character of the foundation, and no teacher who wishes to develop the minds of those under his care by the only method in which those minds can be developed, namely, a scientific and orderly method, can avoid the necessity of carefully investigating the

significance of the changes which have been brought about by the preponderating share of the attention paid to works written in our own language. It is an investigation which no one engaged in the training of youth can avoid, from the professor in the university to the teacher in the school section. If by almost universal consent the advantages of one system over another are admitted, there lies upon each one of us the responsibility of discovering wherein lie those advantages, and how best we may apply them in every detail of schoolroom routine.

Nor will such investigation be of merely theoretical value. The changes brought about, though general, yet affect methods of teaching in their every particular. With the exception, it will hardly be an exaggeration to say, of the exact and natural sciences alone, the introduction of the study of literature has transmuted all our educational methods, from the schoolroom of the public school to the lecture-room of the university. The practical value of such investigation, if properly considered, it will be difficult to measure. This practical side of the subject we hope to discuss in the next issue; it is sufficient for the present to have pointed out its importance.

REVIEWS AND NOTICES OF BOOKS.

A Treatise on the Adjustment of Observations with Applications to Geodetic Work and Other Measures of Precision. By J. W. Wright, B.A., Civil Engineer, late Assistant Engineer U. S. Lake Survey. D. Van Nostrand, New York.

Astronomy and geodesy, as well as all other branches of physical science, depend for their greatest development upon precision of measurement.

It would be an interesting study to trace the progress of these sciences from the rude observations of the ancients to the refined processes of the present day, from the ingenious attempts of Eratosthenes and others to determine the figure of the earth, down to the wonderfully precise operations of the U. S. Coast Survey, the Ordnance Survey of India, and many other surveys, which have resulted in our knowledge of the figure and mass of the earth to within very small limits of error.

The source of this modern accuracy is to be found in the mechanical perfection to which instruments have been brought, especially during the present century.

It is a remarkable result, however, of this refinement of instruments, that it becomes, when we try to achieve the highest degree of accuracy, more and more impossible to obtain exact accordance of repeated measures of the same quantity.

Thus, if in measuring an angle we use a rough instrument such as a sextant graduated to quarter degrees, we should no doubt always obtain the same result, since the index would always fall on the same division of the graduated arc. But if we use a large theodolite reading to seconds or less, the different measures will differ very appreciably, frequently as much as several seconds from one another.

These differences arise from such not to be foreseen causes as unequal expansions of the metal of the instrument, irregularities of atmospheric refraction, uneven pressure of the observer's hand in the delicate manipulations, irregularities of the illumination of the instrument at night, tremors of the instrument caused by wind, and so on.

The object of the work before us is the solution of this problem: Given a number of results determined by observation, and more or less discordant on account of purely accidental or unknown errors such as the above, required from them to obtain the true result, or the best result possible.

The observations are first supposed to have been cleared from all errors which are known and can be calculated and allowed for, or eliminated by the method of observation. Examples of such errors are—in latitude observations with the zenith telescope, the effect of refraction is eliminated by taking stars north and south of the zenith—in prime vertical transits for determination of the latitude, the collimation error is corrected by reversal of the axis of the telescope—in measurement of a horizontal angle, constant errors of graduation and centring of the instrument are eliminated by reading the angle on different parts of the circle, and so on.

These constant errors having been got rid of, there remain only the accidental errors, such as those mentioned above, and the results must be some greater and some less than the true value of the unknown quantity.

Accordingly the following assumptions are made:—

1. In a large series of observations made with the utmost care, any result is equally likely to be greater or less than the truth.
2. The chance of occurrence of a small error is greater than that of a large one.
3. In the case of observations of equal weight, the arithmetic mean of the quantities either directly observed or involved in linear equations of condition, is the most probable result.

From these postulates follows by rigid mathematical reasoning, the whole subject of "least squares" as it is called, by which any series of observations can be adjusted. This important part of the subject is handled in a very clear manner.

One of the most interesting results obtained is the curve of error, a peculiar curve which represents in any series of observations the relative frequency of errors of all magnitudes. This curve has been tested by comparison with the actual results of observations and the agreement of theory and observation is remarkably close, thus showing that the fundamental assumptions above, upon which the mathematical reasoning rests, are perfectly warranted.

The fundamental propositions thus established, the author proceeds to apply them to the practical computations of triangulations, levelling, etc. The treatment of this part of the subject is very good. Numerous examples, taken from the author's actual practice on the Lake Survey, and from the records of the U. S. Coast Survey, etc., are fully worked out, and practical hints to the computer for the saving of labor and securing of accuracy in the often tedious and intricate calculations are given.

His remarks on the various criteria usually given for the rejection of observations widely different from the others of the series, merit attention, as well as his caution as to the inapplicability of the law of error out of its own province.

The whole book is very concisely and lucidly written, and should be in the hands of every observer and computer. The surveyor or engineer who aims at achieving the highest accuracy for his work should carefully study it, not only for the theory which is the professed object of the book, but also for the numerous hints for the conducting of observations and the avoidance of errors in which not only the text-book but also the examples abound.

Of the many contributions to science to which we are indebted to the officers of U. S. Coast and Lake Surveys, this book is not the least. It fills a want long felt by English students.

W. F. K.

The Leading Facts of English History. By D. H. Montgomery. Boston: Ginn & Company, 1886. 254 pp. \$1.10.

This little book is a very successful attempt to present in a readable form an account of the principal facts and causes which have contributed to the growth of the English nation. Though small and compact, it is a scholarly treatment, and though showing an appreciation of what has been done by its masters in history-writing, it has an individual flavor of its own. The titles to a few of the chapters will give the drift of the writer's method. For example, Chapters VII., VIII., IX. and X., are "The Self-destruction of Feudalism"; "The Absolutism of the Crown—the Reformation—the Renaissance"; "The Divine Right of Kings vs. the Divine Right of the People"; "The American Revolution—the House of Commons the Paramount Power—the Era of Reform." The development of the constitution, the growth of liberal principles, the democratization of the government, are all carefully described; and the student who has not time for such works as even Green and Joswell-Langmead, will find in this small volume a very adequate, though brief treatment of all essentials. There are many chronological and other tables, a number of valuable statistics, and a full index. The work comes down to a very recent date; e.g., an account of the late Franchise Bill (1885) is given.

Longmans' New Readers. First Primer, 32 pp.; 4d. Second Primer, 32 pp.; 4d. Infant Reader, 64 pp.; 6d. Standard I., 128 pp.; 9d. Standard II., 128 pp.; 10d. Standard III., 176 pp.; 1s.

That which first strikes one in glancing through these books, published though they are by one of the strongest and ablest of London firms, is the plentiful "borrowing" from American books

which has been done. Engravings which are familiar to us in the beautiful Readers of A. S. Barnes & Co., of New York, and E. H. Butler & Co., of Philadelphia, here meet us at almost every page—a tribute to American superiority in school-book making that we were quite unprepared to look for. There are many other engravings, but these have not, all of them at least, that exquisite finish and artistic beauty which are so characteristic of the most popular American Readers. For the rest the paper is excellent, far superior to that of our Canadian Readers, for example, and the typography perfect. The numbering of the paragraphs gives to the whole, however, a "school-bookish" look quite unnecessary.

In the First Primer the alphabetic method is retained, though in connection with the so-called "look and say" method. In the first lesson the letters *a, c, i, t, s*, are to be taught *first*, then such expressions and sentences as "a cat," "it is a cat," "it is the cat," etc. This is a concession to English conservatism which no doubt the editor had to make, but to us it seems quite unphilosophic. The second lesson takes up *r, m, y* and *f*, which are to be taught alphabetically in the same way. The third lesson is in word-building, *b-at, h-at, c-at, f-at, m-at, r-at, s-at, p-at*. The next lesson, the spelling of these words—but alphabetic, not phonic, spelling. Throughout the book there is a great deal of drill in word-building; but the reading lessons are somewhat scant. In our opinion the excess should have been the other way. We believe that children learn to recognize words best by *reading* them and *writing* them; that is, by using them in sentences which express thoughts which they feel and utter as *their own* thoughts. The oral spelling of words is of very little value—what is of value is the power to recognize words and to use them in speaking and in writing, and this is obtained not in the study of individual words, but of complete sentences which express intelligible and apprehensible thought.

The remaining books, all excellent in their way, and well and strongly manufactured, call for no special comment.

A NEW and most elegant edition of Shelley's poems, with notes and a memoir by William Michael Rossetti, has just been published by Estes & Lauriat, Boston. The name William Michael Rossetti is sufficient to guarantee the matter, and the name of the publishing firm the form, of this new edition of so favorite a poet.

GINN & COMPANY, Publishers, Boston, propose publishing "Hans Andersen's Fairy Tales," edited for home and school use by J. H. Stickney, in three series; supplementary to the Third, the Fourth and the Fifth Readers. It is to be illustrated with the original Pedesen pictures. There has hitherto been no edition adapted to the wants of the varied readers to whose capacities the stories were addressed. This embarrassment is avoided by the grading of the present edition and its publication in three series. Equal care has been taken to winnow out everything unsuitable and to preserve the full life of the original. Little needed amendment, for both in language and spirit the stories are models. The text is based upon a careful comparison of the four or five translations current in England and America. The first series is to be ready on February 15th.

Methods and Illustrations

EXAMINATIONS FOR SECOND AND THIRD CLASS TEACHERS.

For the EDUCATIONAL WEEKLY.

COLERIDGE'S "ODE TO THE DEPARTING YEAR."

I.

"SPIRIT" (*spiro*, I breathe), or Breath, or Life, how appropriate! The great Life-breath of the Universe sweeps across the æolian harp of time and wakes the music of History.

"Sweepest"—the touch of a Master-hand.

"Wild"—why wild?

"Harp"—a poetical term. Quote other passages in Coleridge, and in other poets, in which this same figure is employed. Why more poetical than piano? Flute, organ, violin, piano, guitar, etc.—discuss their place in poetry, and their adaptation to simile and metaphor. Which is most poetical? Why?

"Dark inwoven harmonies"—are the beauty and integrity of the figure still borne out?

What is the nature of the image that you have unconsciously formed in your mind in reading the first three lines? Must you change it in continuing the reading of the verse? Is it a strong or weak point in poetry, in this verse, to have to change the imagery frequently?

"Inward stillness"—perfect quietness of body and soul.

"Bowed mind"—epithet transferred from the bowed head, characteristic of reverence and sadness. How do you harmonize the "bowed mind" with "mine eye fixed on Heaven's unchanging clime"? The awful stillness of l. 6 is a premonition and is in harmony with remaining lines.

"Its folds"—to what does "its" refer?

"Silent sadness"—see line 6.

What would be "unholy madness"?

"The *impetuous* song"—as though the song forced itself through the silent sadness of the enraptured gazer, and the inner nobler nature triumphed over the more selfish nature.

Is the figure of the *train* faithfully carried out? Is it poetical? Is it appropriate?

II.

The mourning, the convicted, the suffering, the poverty-stricken, the newly-wedded and the hopeful, happy parents—all are summoned from their woes and young-eyed joys.

"Perplexed"—perhaps referring to the mingling of all classes.

Why are joys "young-eyed"? Prefix an appropriate adjective to woes.

"Indefatigable"—meaning and force?

"Fateful"—because the music of the harp is the foretelling of history, the revealing of fates.

"Sleep"—the songs are waked from sleep, suggestive of life.

"A louder voice"—louder than what?

"Still"—give with references various meanings of word "still." Which here?

Whither, for what purpose, at whose summons are all the world commanded to advance?

How does this verse harmonize with the preceding? Is there any connection?

"Private bower," "domestic hearth," "saintly jubilee"—are these adjectives appropriate?

Is "Liberty" connected with "the hand" of l. 23 in any way?

III.

Explain the references in "Ambition," "Mailed Monarch," "Northern Conquerors," "Death," "the insatiate hag," "Warsaw's plain," "Ismail's tower."

Give meaning of "twice mortal," "conquest's glutton's hour."

What punctuation mark should be used after l. 44?

Discuss the force and appropriateness of the expressions "lurid face," "women's shrieks," "infants' screams," "misty train," "exterminating fiend."

"Prophetic song"—what is the double meaning of prophetic? Discuss the exact use of this word. See "Encyclopædia Britannica" or other work on meaning and history of word "prophet."

Are the last ten lines appropriate to the history or character of the person referred to?

Point out the lines in this verse where sound and sense harmonize most clearly. What distinguishing characteristic of Coleridge's writings is manifested in this changing of metre?

IV.

Discuss the metaphors of this verse. Are they in keeping with the metaphors of verse I.? Is the grouping of figures in this verse harmonious, *i.e.*, can you form a clear and intelligible mental picture of the "Departing Year," "Memory," "Silence," etc.? Why are such pictures likely to be dim and misty? Is Coleridge usually clear in his metaphors, or does he often confuse? Compare these examples with others. What writers are clearest in their metaphors and similes? Discuss at length Coleridge's ability in handling metaphors and similes and the use he makes of them.

V.

"Blissful throng"—what throng?

"Harp," "Lampads"—give reference.

Give force of "mystic words," "sergent Spirit," "stormy blackness," "uncreated Light," "insensate laugh," "thankless Island," "uncertain cloud."

What are meant by "Arm of might," "Afric's wrongs," "deaf Synod."

"God of Nature"—give the other references in this poem. Discuss the force of each appellation.

What is figure in ll. 94, 95? Is it vigorous?

VI.

This is a powerful portrayal of human feeling in its bodily expression, one of the most perfect passages in the poem. The change in subject is assisted by the change of metre, and the change affords relief to the reader, calling into play a new class of emotions. The sleep of death is so naturally portrayed, the gentle subsidence of vitality broken only by the sudden "starting." The whole is epitomized in the ll. 119, 120:—

"See! the starting wretch's head
Lies pillowed on a brother's corse!"

What is the meaning of "stranger"? The beauty and the vivid sadness of the verse are intensified by continued perusal.

VII.

"O Albion! O my mother Isle!"

The feelings soften; grief has overcome the selfish system, sorrow has melted the resisting frigidity of soul, and in this verse the tender filial love is awakened. What man, what child, cannot understand the meaning of these lines? What beauty and emotion are expressed in the metaphors! Mother and child—they explain themselves.

VIII.

The child rebukes the mother in loud, clear, clarion notes. What a vigor there is in the ring and rhythm of those first four lines! Picture still the child and mother, and then perhaps you can conceive somewhat the stern necessity that prompts the warning and rebuke; even filial affection must give way to duty.

Were these warnings fulfilled?

"Strange-eyed"—give other adjectives formed with the word "eyed," with force of each.

Explain ll. 139-141; also ll. 147, 8.

Duty is done, and the soul is satisfied; approving conscience restores quietness of mind, and the soul recentres

"In the deep Sabbath of meek self-content,
Cleansed from the vaporous passions that bedim
God's image, sister of the Seraphim."

Is the ending not natural? Coleridge had certainly felt in his own experience that contentment is the reward of duty done, or, as some one has said, "the soul quietly and peacefully basks at the hearthstone of duty."

Of Coleridge Lowell has said, that "even the most decrepit vocables in the language throw away their crutches to dance at his piping"—how well illustrated in many of these lines! for instance, in line 152.

Explain line 161.

Is the poem as a whole clear? Are the obscurities of the poet's making, or are they incident to the subject? What is to be

learned from the reading of the ode. Is there any moral, any lesson?

What is true poetry? Wherein does this poem deserve to be classed as poetry? How does it compare with Coleridge's other writings?

C. C. JAMES.

COMMON FAULTS IN OBJECT LESSONS.

(Continued from page 45.)

I SHALL now make some remarks on LANGUAGE.

In this I have only noticed one common fault; it is (if I may use such a term) bookishness. The opposite and worse fault, slang, I have rarely heard within the walls of a school. Our vocabulary is said to contain a hundred thousand words, but much of this vast wealth is like much of the gold in the Bank of England—ready for use in case of need but seldom needed. The myriad-minded Shakespeare employs only 15,000, and the learned Milton only 8,000. It is estimated that an educated man finds about 4,000 sufficient for all his purposes; and that an ignorant peasant manages to go through life with about a tenth of that number. It is only after years of experience that we fully realize how circumscribed are the limits of a child's vocabulary, especially when the child comes (as many of those in elementary schools do) from an illiterate home.

I have sometimes heard lessons given in good English which would have been understood nearly as well by the little ones had they been given in a foreign tongue. All the upright lines were perpendicular, and all the slanting lines oblique; nobody came or went but everybody arrived or departed; there were no beginnings or ends, but only commencements and terminations; in short, all the spades were agricultural implements. A long word should never be used in teaching when a short one, or even half-a-dozen short ones will serve. I am aware that some writers on School Management advise the conscious introduction of new words in order to enlarge the children's vocabulary. Whether the advice be good or bad I will not stay to discuss, but I will venture to assert that it should not be followed during an oral lesson. If we use new words and do not explain them we are unintelligible; if we stop to explain them we are wandering away from the main purpose of the lesson, and giving words instead of things—stones instead of bread. We should never forget that if our hearers have to think about our language they cannot be thinking about our ideas.

I shall next mention faults in QUESTIONING.

To make a child remember is useful, but to make him think is essential. Of all the

means that we can use for making children think, questioning is the most important. Of course, it is easier to tell than to teach, but when I find a person telling much, I conclude that he is either indolent, inexperienced, or incompetent. Jacotot maintained that a teacher should tell nothing; but he carried a good principle too far. He would have been more practical if he had said a teacher should tell nothing which his pupils can be made to find out for themselves.

When attention has been called to one fact many facts dependent upon it can often be elicited. When a teacher, for instance, has shown the situation of the British Islands, he can elicit why the west coasts are indented; why east winds are dry and cold, and the southwest winds wet and warm; why more rain falls in Ireland than in England, and in Westmoreland than in Norfolk; why our position fits us for commerce; why Liverpool is the chief port for the American trade, and Lancashire the seat of the cotton manufacture. In lessons on animals, again, the same process can be carried on to a great extent. The food of cats and horses can be deduced from their teeth; the digestive organs of a hen from its want of teeth; the teeth of a rat from its capacity for gnawing through boards; the speed of a greyhound from the animal's broad chest and long, sinewy limbs; the aquatic habits of a duck from its webbed feet; the short legs of a swallow from its long wings.

When so much can be done by judicious questioning, it need hardly be said that it is a grave fault to have few questions. The other faults I have noticed are chiefly in wording. Questions are sometimes vague. Many answers will satisfy them, and the answers which the teacher refuses may be as correct as the one which he finally accepts—the fact being that the children were replying to the question which he asked, while he wanted a reply to the question which he intended to ask. Questions, too, are sometimes hard to follow, because long or expressed in difficult language. The children are discouraged in trying to understand them, and discouraged children never answer well. Questions are sometimes so worded as to invite guessing. If I ask, "Is that metal hard or soft?" or, "Did Richard follow the advice of his father?" there are but two possible answers, and one of them is, on the theory of chances, as likely to be right as the other. There is little incentive for children to think when the probability of their being wrong if they do not, is so small. Besides when the wrong answer has been rejected the right one can be given without thought.

The teacher should pay some attention to the wording of the answers as well as of the questions. An ungrammatical answer should never be accepted. Correctness of speech

is much more a matter of habit than of rules. The children of educated parents speak correctly before having ever heard of grammar, whereas it is not uncommon to hear persons speaking incorrectly who have made a painful study of it. Every opportunity for assisting in the formation of a good habit should therefore be seized and the giving of an ungrammatical answer is, perhaps, the opportunity which occurs ofteneast. Suppose such an answer as "They was too old" to be accurate in all except form. The teacher should point out that as far as facts are concerned the answer is right, but that there is a mistake in the wording. The child would, perhaps, detect the error. If he failed the teacher might proceed, "You said, 'They was too old'; what should you have said?" There would have been no mention of grammar, and yet a valuable little lesson on grammar would have been given, for, as Roger Ascham says, "A child shall take more profit of two faults gently warned of than of four things rightly hit." The upper standards could be made to understand why the wording of an answer was wrong, but the teacher should not be tempted into digressions. He might make a note of the error and use it as the text of the next grammar lesson.

A statement with an ellipsis is sometimes a useful form of question. When we make a direct interrogation we require a child to walk alone, but when we only ask him to finish a sentence which we have begun we seem to be leading him by the hand. The ellipsis, however, requires skilful treatment. There should be no possibility of filling up the blank except in one way, nor of filling it up without thought. "Wheat grows in —," and "The motion of the earth on its axis causes day and —," are equally bad examples of ellipsis—the first because the best informed would hesitate about supplying the omission, the second because the most ignorant could not hesitate about it.

The last topic on which I shall touch is PROPORTION.

One sometimes sees a teacher dwelling for a considerable time on some of the less important parts of his lesson and passing quickly over the rest, but one more commonly sees what I may call an unaccented lesson. The fundamental facts are not emphasised; essentials and accidents are treated alike. The result is that the children form no idea of the lesson as a whole; they will probably remember an illustration and forget what principle it was intended to make clear. The process of making sugar candy is, to a thoughtful teacher, very suggestive. A strong syrup or saturated solution of sugar is made and allowed to evaporate; threads are suspended in the evaporated substance, and the large crystals so dear to children are formed around the threads. In every lesson there should be *threads*. In a

lesson on Winds, for instance, unless the children can be made fully to realize the fact that heated air rises they will gain nothing. When the teacher has by explanation, illustration, and recapitulation made the fact clear in all its bearings, till it has become a part of the children's working knowledge, he can proceed to show the application of it in the production of wind. Then, whatever may be forgotten, the leading principle will be remembered, and the children will be able to group the rest of the lesson round it. That principle will be thread on which the information crystallises.—*The Teachers' Aid* (London, Eng.).

PRACTICAL ELOCUTION.

III.

It should ever be remembered that the mere *theory* of elocution will never produce good readers and speakers. Take, for instance, singers. The theory of vocal music with them counts for little unless it be accompanied by the voice. I must confess that I have always marvelled how attempts at reading have been made by young men and women who had never given a thought to the cultivation of the voice, and who knew as little of the *orotund voice*, the *pure* and the *impure voice*, as they did about the *chromatic scale*—*knowing of course nothing of the latter*.

I attach great importance to the element of voice—a gift which testifies to the immortality that has been breathed upon us. There is in my opinion no truer index—no truer key to character than voice. If the voice be unstable the man is unstable. If the voice have a manly ring there is a manly element in the character whence it proceeds. If you should deny that there is character in the voice, listen, I pray you, to the innocent prattle of childhood—sinless and pure as the faltering snowflakes that crown each cot and mansion and shroud each dark long street at Yuletide.

It is because of this character in voice that we should make a thorough analysis of the language in a passage before we attempt to read it. And why should we analyse the language? That we may correctly reach the thought. The moment the reader has within him the thought to be expressed, the voice will at once take on the color of the sentiment—provided of course the mechanism of the voice has been properly developed. In order that the reader may reach the more readily the thought in a passage, he should answer for himself such questions as the following:

What is the prevailing thought in the passage? What are the subordinate thoughts and how are they related to the prevailing thought? Is any part of the sentence merely incidental to the main sentence, and how near and distant is the relation? What was

the probable state of the author's mind when he expressed the thought? What were the circumstances which called it forth? How should *you* feel and how would *you* have expressed the same sentiment had the same circumstances moved you? After having made himself master of the thought and at the same time familiarized himself with the language with which it is clothed, the reader is prepared to give expression to the sentiment contained in the passage. He is prepared to breathe upon his hearers not only the *intellectual significance* of his reading, as contained in the author's mind when the passage was written, but also the *impression* each sentiment has made upon his own mind while giving voice to its interpretation. This latter is the true test of good reading.

Now I hold that no reading that is not an outcome of the whole physical man subordinated to the commerce of mind and soul, can or does possess this essential character. That subtle coloring—that electrifying influence which leads captive the heart, is the work of the inner spirit of oratory, as truly as each tint in the masterpiece of a Michael Angelo had first conception in the artist's glorious mind! To comprehend a passage we require intellectual labor; to paint its sentiment in glowing color we need the graces of the heart; to communicate in language with the soul we need the greatness of the soul!

T. O'HAGAN.

TEACHING PRIMARY READING.

I.

EDWARD BROOKS, LL.D.

(Continued from page 77.)

THE Teacher should aim to become a good reader in order that he may present a good model for his pupils to imitate. He should be especially careful to avoid all mannerisms that may vitiate their style or interfere with natural expression. His manner should be so natural that no one could perceive his own style in that of his pupils, unless it were the extreme naturalness of both. It is a serious defect in an instructor when he leaves his marks on his pupils to such an extent that you can discover the teacher in the reading of the pupil. On the other hand, a teacher whose cultured and refined expression is reflected in the conversation and reading of his pupils, is worthy of the highest commendation. Let it be remembered, also, that a teacher who reads well, and is interested in the subject, will usually have much more interest in his reading classes than one who is a poor reader. I emphasize this matter of imitation for two reasons; first, because I regard it as a correct principle, and secondly, because it is not only ignored, but actually condemned by some teachers of elocution. This, I think, is on account of its frequent abuse and mis-

application by thoughtless or ignorant teachers. It is not the abuse but the intelligent use of the principle that I advocate; and I urge teachers, as a primary condition of successful instruction in the art, to endeavor to become good readers themselves.

3. *Correcting Errors*.—A third principle that the teacher should employ in his instructions is that of *correcting the errors* of his pupils. He must not only rely on natural expression and imitation, but he must carefully notice the errors of his pupils, and endeavor to correct them. These errors will be both general and personal, and both are to be observed and corrected. All violations of natural expression are to be criticised, and individual idiosyncrasies of voice or manner are to be eradicated as far as possible. This is a point of great importance in teaching any art. How often a public speaker might have improved his delivery if some judicious friend of good taste had called his attention to some personal habit of which he was entirely unconscious, and which not only marred his speaking but detracted from his influence.

In correcting errors it will not be sufficient merely to call attention to mistakes and faults; but the pupils will need to be trained in their correction until the old habit is overcome and a new one substituted in its place. This will often be found tedious and perplexing; but it is only by constant and persistent drill that the force of habit can be overcome, and the voice and manner be trained to new and artistic forms of expression.

It will be well, sometimes, to *imitate the mistake* of the pupil, that he may see more clearly just what the defect is, and, appreciating its gravity, be ready to try to avoid or correct it. This, of course, must be done in a kindly spirit, and with the manifest desire of the pupil's improvement rather than his mortification. Sometimes other pupils may be called on to imitate or criticise the error when it can be done without giving offence or wounding the feelings. If the defect arises from the neglect of any of the conditions presented under the three elements, as will be seen in what follows, it can be corrected by calling attention to the proper condition.

4. *Principles*.—There are certain general *principles of elocution* that may be used with advantage in giving instruction in the art of reading. By a principle is here meant some general law which shows the relation of expression to the thought or sentiment expressed. These principles are quite different from the so-called "rules of reading." No one can learn to read by rule, and the attempt to teach a pupil to read by rule is deserving of all the criticism which it has received. A principle is much more general and flexible than a rule, and, while indicat-

ing the expression, allows the reader to exercise his own taste and judgment in its application. In a higher course of instruction in the art of delivery such principles are regarded as indispensable, and a few simple principles will be found of real value in the course in the common school, especially with the more advanced classes in reading.

All these principles are based upon, and express the natural relation, between sentiment and the mode of expressing it. These may be stated with such simplicity that they will be readily understood and applied by the pupil. Thus, there will be seen that there is a natural relation between the amount of voice, called *force*, and the sentiment to be expressed; and principles similar to the following will be readily understood and applied:

1. The standard force is determined by the general nature of the sentiment.
2. Unemotional sentiment requires moderate force.
3. Bold, noble, dignified sentiment requires loud force.
4. Grave, subdued, pathetic sentiment requires soft force.

A few such simple principles will lead the pupils to the idea that the method of expression should be determined by the nature of the sentiment; and they will tend to create thoughtful, intelligent, and natural readers and speakers. We commend, therefore, to teachers of reading the use of a few general principles of reading, simply and concisely stated, to aid in giving instruction in this beautiful and interesting art.

To recapitulate what has been said, it is suggested that in teaching reading in our public schools the teacher should depend mainly on four things, viz.: Natural Expression, Imitation, Correcting Errors, and Principles of Reading. The judicious use of these four principles of instruction will add much interest to his work, and contribute largely to its success.

In this article I have shown the *three elements* embraced in the art of reading and the *principles* that should guide the teacher in his instruction; in the following article I shall indicate the use of the Mental Element in reading, and the teacher's work in relation to this element.—*Pennsylvania School Journal*.

SINGING IN SCHOOLS.

CHARLES NORTHERN.

VOCAL music has already assumed a somewhat exalted position in some schools, and yet in scarcely any have its merits been fully estimated. It is, indeed, less than two score years since schoolroom songs were a great novelty; and we can well remember that those who first favored their introduction were strongly censured by parents and others. It was regarded by many as a monstrous

innovation. For children to go to school, term after term, and sit, *aching*, on wretched seats, in still more wretched schoolhouses, caused no regret, because such penance seemed to be an essential part of school life; but for schoolboys and schoolgirls to *sing*—who ever heard the like? It was a great waste of time; and, moreover, it caused the little ones to be happy, and for a brief time to forget their aches, which, it was thought, would be a perversion of the object of schools. Such was the feeling very generally. But a pleasant change has come "over all the land"; and now the joyous songs of merry pupils may be heard in a very large number of our best schools, alike promoting their happiness and cheering them on in the performance of the less agreeable duties of the schoolroom, and meeting the approval of all kind and intelligent people.

Though we cannot sing—our school days having been passed all too early for receiving any instruction in singing—we would strongly advocate the teaching of music in all our schools. It is a good disciplinary exercise, and its indulgence always tends to give an air of cheerfulness to the schoolroom. But we would have the songs, and the sentiments of the songs, of a truly pure and elevating character. We have no partiality for the practice—now, we feel, quite too common—of having lessons and recitations set to music. This we think a perversion of the object. We fully agree with that veteran of song, Lowell Mason, whose name has become so intimately connected with the music of our land, who says: "Music's highest and best influence is of a moral nature; and the introduction into schools of such songs as tend to mere levity, frolic, or idle mirth, or such as are low, coarse, or vulgar, in thought or in language, or such as contain equivocal or ambiguous expressions, is most deeply to be regretted."

The following remarks on the "Power of Music" I take from the *Indiana School Journal*. The little incident named is certainly full of interest:—

"In looking over an old 'newspaper,' printed several years ago, I came across this beautiful piece, which struck me as being true to nature.

"Leaning idly over a fence, a few days since, we noticed a little four-year-old 'lord of creation,' amusing himself in the grass, by watching the frolicsome flight of birds, which were playing around him. At length a beautiful bobolink perched on a bough of an apple tree, which extended within a few yards of the place where the urchin sat, and maintained his position, apparently unconscious of his close proximity to one whom birds usually consider a dangerous neighbor.

"The boy seemed astonished at his impudence, and after regarding him steadily for a

minute or two, obeying the instinct of his baser part, he picked up a stone lying at his feet, and was preparing to throw it, steadying himself for a good aim. The little arm was drawn backward without alarming the bird, and 'Bob' was 'within an ace' of danger, when lo! his throat swelled, and forth came nature's plea: 'a-link, a-link, a-link, bob-a-link, bob-a-link, a-no-weet! I know it, I know it, a-link, a-link, don't throw it, throw it, throw it,' etc. And he didn't. Slowly the little arm fell to its natural position, and the now despised stone dropped. The minstrel charmed the murderer! We heard the songster through, and watched his unharmed flight, as did the boy, with a sorrowful countenance. Anxious to hear an expression of the little fellow's feelings, we approached him and enquired, 'Why didn't you stone him, my boy? you might have killed him and carried him home.'

"The poor little fellow looked up doubtfully, as though he suspected our meaning, and with an expression half shame and half sorrow, he replied: 'Couldn't, cos he sung so!'

"Who will say that 'music hath no charms to soothe the savage breast,' or aver that God hath not made melody to move the purer fountains of our nature, to awaken those sympathies that are kindred to Heaven, the angels, and to God Himself? Let the sweet tones of music break upon the ears of the dull schoolboy, and he will awake with new life and energy. Pour the notes of melody into the ears of the wilful child, and you disarm him; the anger will fall from his heart, and he will become obedient and attentive. Let music be the first to break the silence of the schoolroom in the morning, and the chords of young hearts that are put in motion will continue to vibrate during the day. Happy will be the time when not only the tones of our school bells can be heard all over the land, but when the notes of our school children, in the morning, breaking upon the silent atmosphere along the Atlantic coast in the East, shall reverberate along the Gulf of Mexico, and the echo be heard in California."

Then, I would say, give some attention, daily, to vocal music. This may be done without any detriment to other branches. Indeed, I believe it will prove a pleasant auxiliary in all the work of the schoolroom. If your pupils are sad, or dull, or uneasy, or too playful, call upon them to sing one or two sweet songs, and the result will be highly salutary. All angry and dull feelings will at once be dispelled, and a spirit of cheerfulness will be produced throughout the school. You may safely introduce music, and devote some time to it daily, without any fear of encroaching upon other branches, for it will prove a help and not an injury.—*Pennsylvania School Journal*.

Correspondence.

SCOPE OF VERBAL CRITICISM.

To the Editor of the EDUCATIONAL WEEKLY.

SIR,—I very much regret having used the expression, "Education Department," as they so detestably call it." It is in bad taste, and conveys, moreover, a wrong impression. Whatever functions he may discharge, to that of a "jurist" one can certainly lay no claim, who is guilty of such a sentence as, "How we may best do our work, and what are its highest possibilities, is a question of great moment," or of such an amazing *dormital* as Jason for Absyrtus, or of the ambiguous "it" near the close. And I should be far from wishing the doubtful distinction.

Evidently you take that unfortunate remark to be meant as an objection to the adjectival use of substantives. This had not even occurred to me. The question of propriety in the use of such expressions as "Education Department" is almost as subjective as the quantitative distinction once urged between "quantity" and "quiddity." Indeed, I am not sure that "Education Department" is not the English phrase. It occurs in Herbert Spencer's "The New Toryism."

With regard to the expression, "Toronto University," it is surely as indefensible as gravely to call William Smith, Bill Smith. Such is no more its name than is "Paris University" that of the "University of Paris," or "Oxford University" that of the "University of Oxford," or, on the other hand, the "University of Harvard" that of "Harvard University."

By making that unhappy remark I fear I have almost destroyed a protest which I wished to urge very strongly against all criticism of this kind, in an educational way, on the ground that it only tends to lower the standing of the profession and to produce an evil educational effect.

We may leave out of the question any influence we are likely to exert on our authors. An educational publication is, at least, not the first thing to which they will turn for instruction or recreation. And we may admit, for the sake of argument, that such verbal and grammatical criticism has its place, though, to my mind, this is far from proven.

I have myself to acknowledge that in the appreciation and study of English literature I have derived an assistance from Latin and Greek which I cannot well over-estimate, and which I know not how else I could have obtained. The value of a knowledge of the Latin period is becoming year after year so increasingly evident to me, that I verily believe about the best guide to formal composition in English—in the matter of rhythm, in the arrangement of words and clauses, and their combination into paragraphs, is, odd as it may sound, Dr. Pott's "Hints to Latin Prose Composition."

Now, in the study of composition in Latin or in any foreign language, who has ever thought of looking for errors in his great models? And who would think of exhibiting them to his pupils as warnings. To point out such in Cicero or Livy to a boy studying their style, learning to compose, in the only way which will ever be devised—by composing—would, in my judgment, be the most pernicious method imaginable. But it would have

another evil result. It would belittle the author; and yet the greatness of his substance and the beauty of his style are sufficiently hard to bring out vividly.

Let us then grant, for the moment, that for this negative system of teaching there is a time. Compared with the higher duties of work how small a place must it occupy!

Those to whom it shall fall next summer to examine the pupils of this Province in the "literature" which they have studied, will probably see that, in the majority of cases, the most lasting impressions received of Macaulay's Essay, and the few poems of Coleridge, will be very much after the following type: Macaulay was a great writer, who once lived in India, and wrote essays for his living. His essay on Warren Hastings is the best of them all. In it we see that he never uses participles absolutely, or foreign words, or "only" in the wrong place, etc., etc. Coleridge was a great English poet, who drank a quart of laudanum each week. He ran away from Cambridge University and enlisted in a company of soldiers. He wrote the "Ancient Mariner," because he needed some money to visit the Valley of Stones. This poem is a very great one, containing some excellent rhymes but also some very bad ones, and many words which are now no longer used, etc., etc.

I trust I may be pardoned for putting this side uppermost. But in sober earnest do not our inverted methods of studying English literature show the same strange want of proportion?

W. S. MILNER.

P.S.—Having just taken up the New York *Nation* I find the most pitiable instance of this verbal, quibbling criticism that I have ever seen. It is, however, encouraging in one respect, for criticism can go no further in that direction. I refer to the communication of "W.H.B.," who is exercised over the "difference in meaning between the 'at all' pronounced as two words, and 'at-all' pronounced as one!"

W. S. M.

QUESTIONS AND ANSWERS.

[All communications for this department must be accompanied by the name and address of the writer, though not necessarily for publication. Correspondents are requested to confine their questions to educational and literary subjects. Following the example of "Notes and Queries," the "Lancet," and other periodicals, the greater number of questions will be printed without answers, correspondents being invited to communicate answers, to be inserted in following issues. Correspondents answering or referring to any question are requested to give the number of the question for convenience of reference.]

ANSWER TO Q. NO. 4:

I. 12 lbs. yarn are manufactured from $13\frac{3}{4}$ lbs. wool.

1 lb. yarn is manufactured from $\frac{1}{4}$ lbs. wool.

$\therefore B$ receives for spinning $\frac{1}{4}$ lbs. wool 11c.

$\therefore B$ receives for spinning 1 lb. wool $\frac{1}{4}$ of $1\frac{1}{2}$ = $\frac{1}{2}$ c.

\therefore Each lb. of wool B receives, pays for spinning $35 \div \frac{1}{2} = 70$ c.

Or B gets 1 lb. from $4\frac{1}{4}$ lbs. of wool, i.e., $1 \div 4\frac{1}{4} = \frac{1}{4\frac{1}{4}}$ of all wool, or $\frac{1}{4\frac{1}{4}}$ of 150 lb., = $32\frac{1}{4}$ lbs. of wool.

II. Hence B spins $150 - 32\frac{1}{4} = 117\frac{3}{4}$ lbs. of wool for A .

From $117\frac{3}{4}$ lbs. wool A gets $\frac{1}{4}$ of $117\frac{3}{4}$ = $102\frac{1}{4}$ lbs. of yarn.—W. S. R.

NOTE.—The question is shorter by algebra.
W. S. R.

No. 16. Q.—At what time between 4 and 5 o'clock is the minute-hand twice as many minutes past 12 as the hour-hand?—W. B.

No. 17. Q.—What would be considered a good time table for an "ungraded" school having all classes from First to Fifth, inclusive?—W. H. J.

Educational Intelligence.

MORE than sixty young men from Nova Scotia are this year studying in colleges or universities outside that province.

THE Vienna High School which was abolished by the Elgin Council of 1885, has been re-established by the council at its present session, and a grant of \$700 given towards its maintenance.

THE number of pupils on the Guelph Separate School rolls for the year ending 31st December, 1885, was 375. Average attendance, 218 $\frac{1}{2}$. Aggregate number of days pupils attended school, 19,174.

MR. GEORGE WARD, B.A., late principal of Brighton High School, also of Orillia High School, has been appointed classical master of Cobourg Collegiate Institute in succession to Mr. C. C. James, who has been appointed professor of chemistry in the Ontario Agricultural College, Guelph.

MITCHELL High School is in a flourishing condition though badly in need of more accommodation. At present there are two masters with 95 pupils. It has become necessary to make temporary seats and to utilize the private room of the head master, that the pupils attending may be seated.—*Mitchell Recorder*.

AT the last session of the Peterborough County Council, that part of the Finance Committee report recommending that no grant be given to either the Peterborough Collegiate Institute or the Norwood High School, was not amended. These two educational institutions will, therefore, receive no special assistance from the County.

THE following compose the teaching staff of the Barrie Model School for 1886: Principal, T. O. Steele. Assistants: Messrs. R. R. Jennison and George Henderson; and Misses L. D. Lee, E. King, E. Appelbe, E. Lee, E. C. Boys, A. Bird, A. Morris, L. Booth and J. Caldwell. The number of teachers in training last session of model school was 33, all of whom passed.

INSPECTOR MALLOCH, in his report, says of the teachers of Clinton Public and Model School: "Of the staff of teachers for the year, six of these were in the employ of your board during the year 1884, and all that I reported of them, relative to their efficiency and success, is equally applicable for the year 1885." He also speaks highly of Miss Simpson, Miss Helyer and Miss Leslie.—*Clinton New Era*.

Promotion Examinations.

LINDSAY PUBLIC SCHOOL.

JUNE, 1885.

LITERATURE AND HISTORY.

FOURTH CLASS JUNIOR.

Readers may be used.

The Coal Fields of Nova Scotia—Page 44.

1. Explain:—The mineral world, area, the sinews of commercial prosperity, Maritime Provinces, geologists, swamps, aquatic plants, alternately, petrified trunks, fossil vegetation.

2. Locate Chignecto Channel, Chili, Alabama, Magdalen Islands.

The River St. Lawrence—Page 90.

3. Explain:—Unique, inferior dimensions, unfathomable depths, phenomenon, physical geography, fantastic intricacy, emporium, colonies, verdurous islands, martyrdom.

4. Locate Long Sault, La Chine, Lake George.

5. For what were the following persons noted:—Cartier, Wolfe, Montcalm?

6. Name the different nations that have lived in Britain, and state about what time each is first met with.

7. Name the sovereigns of the Norman Line, and the date each began to reign.

8. Why were the Wars of the Roses so called? When did they begin? What was the result?

9. For what were the following persons remarkable:—Thomas à Becket, Stephen Langton, Perkin Warbeck, Edward the Black Prince, Wat Tyler?

LITERATURE AND HISTORY.

THIRD CLASS SENIOR.

Readers may be used.

Winter in Arctic Regions—Page 218.

1. Explain:—Esquimaux, perpetual sunlight, horizon, thermometer, zero.

Loss of the Lady Elgin—Page 222.

2. Explain:—Catastrophes, concussion, saloon, squall, zest, schooner, helm, hard a-port, heel her over, life-preserver, collision, parallel, hurricane deck, hurricane.

Bingen on the Rhine—Page 284.

3. Explain:—Vineyard, innocent, coquetry, echoing chorus.

4. Locate Algiers and Bingen.

5. When was Canada discovered, and by whom?

6. What were the most important acts of Cartier and Champlain?

7. Name the most important tribes of Indians, and state what part of Canada they occupied.

8. What do you mean by confederation?

LITERATURE.

THIRD CLASS INTERMEDIATE.

Readers may be used.

Adventure with an Elephant—Page 128.

1. Define:—Predicament, passage of artillery, recumbent position, mystery, crouching, rifle, muzzle, imminent jeopardy, proboscis.

2. Where is Lake Ngami?

Adventure with a Bear—Page 137.

3. Define:—Horrorified artist, panic-stricken, monster, eddy, melancholy plight, mortally wounded, hesitation.

The Bears and Bees—Page 141.

4. Define:—Luscious hoard, luxurious crew, vindictive, unequal combat, latent ill.

5. What do we learn from this fable?

LITERATURE.

THIRD CLASS JUNIOR.

Readers may be used.

The Wreck of the Hesperus—Page 38.

1. Define:—Skipper, helm, veering, flaw, hurricane, brine, frightened steed, cable's length, gale, spar, corpse, shrouds.

2. Locate Spanish main, Lake of Galilee.

3. Why is "Him" spelt with a capital? (Page 40.)

Joseph II. and the Grenadier—Page 48.

4. Define:—Disguised monarch, moustaches, breakfast, sourkraut, pheasant, grenadier, lieutenant.

5. Where is Austria? What is the capital? On what river?

Grace Darling—Page 72.

6. Where did Grace Darling live?

7. What did she do?

DECEMBER, 1885.

LITERATURE AND HISTORY.

FOURTH CLASS JUNIOR.

Readers may be used.

Questions 1 and 2 are not both to be taken.

Jacques Cartier at Hochelaga—Page 93, Old Reader.

1. Define:—Pinnace, harbor, gallant crews, shallowness of the water, volunteers, metropolis. The Battle of Hastings—Page 37, New Reader.

2. Define:—Ambassadors, helmet, wrecked, divers-colored sails, gilded vanes, retreat.

3. What nations lived in England previous to the Norman Conquest? About what time is each met with?

4. What were the crusades? What English kings engaged in them?

5. What were the Wars of the Roses? Why so called? When did they begin and end? What was the result?

6. What kings were called by the following surnames respectively:—Beauleere, Bolingbroke, Cœur de lion, Confessor, Conqueror, Great, Ironside, Longshanks, Rufus, Unready?

LITERATURE AND HISTORY.

THIRD CLASS SENIOR.

Readers may be used.

The Pine Tree Shilling—Page 226.

1. Locate Massachusetts, England, Portugal, Spain.

2. Define:—Current coinage, colony, bullion, buccaneers, Puritan laws, enormous, receptacle, ponderous.

The Story of Fine-car—Page 250.

3. Where is Brest?

4. Define:—Galleys, atrocious, oblivion, suicide, vigilance, amputation, turnkey, acquiescence, dormitory.

5. Divide into syllables and mark the accented syllable in: insensible, difficulty, disquietude, compassion, imprisonment.

6. By what nation was Canada first settled?

7. How was a change in government brought about, and how long ago?

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