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Vol. I.

THURSDAY, MARCH 12, 1885.

Number 11.

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EDUCATIONAL WEEKLY,
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The Educational Weekly.

TORONTO, MARCH 13, 1885.

PROFESSOR ALEXANDER BAIN, in his work on *Education as a Science*, enumerates a number of factors that tend to waste brain power—that use up brain force without giving any recompense. We think one of the most powerful of these is discouragement. No doubt the meaning of the word could be analysed and its different elements classified under different psychological heads. But with this we need not concern ourselves. Every teacher—certainly every pupil, knows what is meant by discouragement, for unfortunately it is very rife.

Teachers forget that they are not dealing with mature minds: they forget that they cannot expect the same quickness of comprehension from children which they find in adults; they lose sight of the fact that the subject which they have thoroughly mastered is to their learners as yet quite obscure; they have perhaps forgotten the various steps necessary to a correct comprehension of the matter in hand and the labor required to understand them and their sequence, and are often too apt to be impatient and irritated at what seems to them the dulness or wilful obstinacy of those whom they are teaching. As a consequence, also, they not seldom are unable to judge what amount of new matter to give their classes to prepare. It requires a delicate perception to know what is really difficult and what is comparatively easy in a new lesson. Often in translations from the classics or from the modern languages, there occur constructions which require a great deal of time spent upon them. Lessons containing these ought to be proportionately short. And yet we find it is always "Prepare fifty lines, or a page, as usual," whereas really there is no "as usual" about it.

These things discourage pupils, and than discouragement few influences are more deleterious. It affects their tempers; it affects their ambition; it affects their reverence for their masters; it affects above all their ability to learn. It blunts the faculties, takes away the keen edge of enthusiasm, and renders apparently dull and stupid boys and girls who were before remarkable for their keen perception and indomitable perseverance.

What is the remedy against this? Clearly for the teacher to put himself as far as possible in the place of the child: to remember how he first learned the lesson he is now teaching; to recall the difficulties he himself experienced; to retrace the steps by which he arrived at his present knowledge; and to make allowances for the different degrees of acuteness in comprehending them which exist in his different learners. Till he does

this he can never be sure that he is not discouraging some.

A FAVORITE question amongst undergraduates at college, and also amongst newly-fledged graduates, is "How much 'outside reading' have you done?" The importance, the practical benefit of reading a certain amount of work that is not specially mentioned in the curriculum, but which very materially bears upon the subjects covered by the text-books specified is recognized by all, and it is usually the case, we think, that the honest worker who, in addition to lectures and text-books, manages to read well round his subject, is able to obtain a wider view of all his branches, and, therefore, to take a higher stand in examinations.

Could "outside learning" be taught in schools? Could the pupils, that is, be habituated into keeping their eyes and their ears open for the observation of matters other than the details of lesson-learning? A great many interesting topics are continually cropping up in the daily lessons upon which the master might spend a few minutes both entertainingly and instructively. It brings in a little diversion, gives a sort of breathing spell, recuperates the flagging energies, gives a zest, the influence of which flows over and makes more easy the keeping of the attention fixed on drier necessities.

Of "outside" topics there are myriads in every branch. We remember gaining the riveted attention of a class that was becoming restless over some axioms of Euclid by descanting on the number of degrees in a circle, and from this going on to speak of longitude. On another occasion the origin and history of coal, with a few simple geological principles did much to wear off the ennui consequent on teaching dry tables of productions of countries in a geography lesson. These will suffice for examples of what we mean by "outside learning."

"AN action and not a thought," said Aristotle, "is the end of life." We may add as a sort of corollary or explanation to this, Carlyle's dictum: "Conviction is useless till it be converted into action." If this is true for the whole of life it is true for its every detail. A truth is applicable to every connected circumstance. The highest ideal includes and involves every the minutest factor that tends to its attainment. The most abstract generalization is abstracted from particulars. The highest aim is but an amplification or extension of lesser aims. A great aim is an aim that evinces itself in little things just as much as in great. Or rather is it not great, and does it not belong to great things, just because it includes a larger

number of little things than another and lesser aim? If so, then we can carry out these sayings of Aristotle and Carlyle in the "daily task," the "trivial round," equally as much as in the profoundest speculation or in the most abstruse thought.

Is there not at present greatly prevalent a separation between thought and action in education? It seems to us that we are most of us regarding only thought, leaving action as beneath our notice. We talk glibly of "methods." We are not so ready to apply them. We make wonderfully intricate analyses, and we tabulate them under wonderful-sounding "ologies." Do they help us? Again; we instil ideas, we teach rules, we draw out and develop the powers of the mind, we make our pupils think. How many of us make them apply what they have learned to the every-day acts and thoughts of life? We try to "turn out" brilliant scholars. We forget that true brilliancy—brilliancy other than gilt or varnish—is obtained by polishing hard material substance. Give a mind *substance*, it will polish itself in the friction of life.

SOME masters make little or no difference in the amount of work they set their pupils to perform at different hours of the day. They will hear a heavy list of lessons in the morning; another equally heavy in the afternoon; and set a third batch, perhaps equal in amount to the other two, to prepare in the evening. Surely there should be some method in this. Professor Bain tells us that the brain is most active shortly after the first meal, after which follows a sluggish period. These are repeated after the second and third meals, with this distinction: that each period of cerebral activity is shorter than the last, and that the activity is also less.

The mind, then, is strongest after breakfast. It is then that its powers can best be used, and they should be used on the most difficult subjects. The difficulty of the subjects presented to it, and the length of time spent upon them, ought, on Bain's theory, to be graded according to the power we have to work with.

In the evening often there is likely to come on a sort of fictitious energy, due to excitement, or the novelty of fresh subjects, or fear of not knowing the lesson, or various other sources. This probably is injurious. It drives the blood to the head when it ought to be somewhere else; it forbids sleep; it taxes the nervous system; and in time, in young children, there will in all probability be a marked falling off of health and consequently of mental energy.

Contemporary Thought.

EDUCATION should be in the largest degree liberal. It should make the man self-supporting, acquainting him with practical measures for comfortable and beautiful living. It should prepare him for citizenship. It should make him, it may be, a man of letters, or a scientist, or an artist. But it should go farther. It should strengthen and broaden his faith in God. It should deepen in his mind the distinction between right and wrong.—*Methodist Review.*

SINCE every modern government is necessarily in competition with other governments, either in the way of increasing its resources or perfecting its means of defence, it follows that aid to science is one of the factors essential to success; and that that nation which fails in far-sighted intelligence will lag behind in material affairs also. Science, both pure and applied, has become a necessity, upon which the welfare and very life of nations must depend. No nation can fairly expect to receive all the benefits of science while giving nothing in return. Even the narrowest utilitarian must see what vast results sprang from the niggardly public grant which rendered possible the first line of the Morse telegraph.—Professor F. W. Clarke, in *Popular Science Monthly* for March.

LONGFELLOW and Whittier, and Hawthorne and Holmes are household names among us, and yet, strange anomaly, they are entirely ignored in a curriculum which yet can find a place for *Gammer Gurton's Needle* and *Ralph Roister Doister*. There is something radically wrong here. It is a serious evil to regard English literature merely as an interesting relic of a bygone age, and to study it as a fossil or skull is studied by the ethnologist, and not as the living work of living writers, instinct with present human sympathy and heavenly aspiration. The inability or neglect which does not recognize literary merit unless it has been sanctioned by age and by English opinion is a foolish weakness in Provincial intellectual character.—*The 'Varsity.*

A PERSON signing himself "One Who Has Supervision of the Education of Some Hundreds of Young People," writes thus to the *Boston Daily Advertiser*:—"I thank you for your note in today's issue, touching the character of many of the pictorial theatre bills and posters of this city. I do so because it gives me an opportunity to say that I am one of thousands who are daily indignant at the infamous and ever bolder outrages which the authors and instigators of these vile pictures are perpetrating upon all decent people. Though no Puritan, either by birth or education, I desire with all emphasis to protest against these worse than heathenish abominations, and to beg the city authorities to close up at once a system of object teaching so utterly demoralizing. Have not the young and the pure at least a right to a clean highway?"

It is a hopeful sign that such thoughtful attention has, for the past few years, been given to the *what and how* of instruction in English. Both the principles and the methods of this work, in all the grades, have undergone careful examination and practical revision. And for a wise reason. Full

command of the mother tongue underlies and conditions accurate work in every line of study. Whether the pupil study or recite the facts of geography, the inductions of arithmetic, or the analysis of science, he must use his power over speech to give these expression. Ideas formulated in clear-cut terms, not those enveloped in mists and separated by chasms, accomplish effective results.—Prof. E. G. Smith, in *Indiana School Journal.*

BUT I would not be understood to in any way depreciate the importance of the scientific study of the English sentence. It certainly must gratify all true lovers of our mother tongue to see a deliberate stand taken in favor of a systematic, intelligent study of its forms and its powers of expression. We shall in this way come at last to realize that the English language is in a transitional state, and that its rules of grammar are not fixed, but changeable. That it is a living speech, not a dead one; that it is governed by use, not by form; that it is based upon the laws of thought and the growth of mind in each age, and is not simply a machine operated by cranks. Heretofore, the best authority in grammar has usually been the man who could in the shortest time show the absolute and fixed-from-all-eternity form and construction which a certain expression has, and what an ignoramus the other fellow was who couldn't perceive this.—Prof. E. G. Smith, in *Indiana School Journal.*

THE Council of the Shakespeare memorial says: "Donations or subscriptions will be gratefully accepted for the endowment fund, and authors, publishers, book-buyers and booksellers are respectfully solicited for presentation copies of any edition of Shakespeare's works, books illustrative of his life and times, essays, criticisms, plays as acted in London or provincial theatres, old Shakespearian play-bills, portraits of actors of his plays, medals—anything which bears the name, or is inspired by the fame of the great dramatist, will be welcome as stones to the cairn. It is also intended to collect general dramatic literature, thus forming a comprehensive reference library, or history of dramatic poetry and the stage. Visitors to the memorial, who wish to consult any work in the library, will have every facility for doing so on application to the librarian. Donors of books will add to the interest of their gifts by affixing book-plate and autograph."

No well-directed study is in vain. The child loses heart as well as power by not appreciating, not believing this. He studies hard, learns a lesson, and at recitation is asked no question in it, but on some phase of it that was not distinctly assigned, and the lesson is a failure and is so marked. He goes home impatient, disheartened, rebellious, declaring that it did no good to study so long and hard. Great care needs to be exercised to emphasize the fact that all study that is well done pays; and if it be not available as small change to-day, it swells the bank account for future draft. Daniel Webster once spent several days in preparation for a debate in the United States Senate that did not come off. His time was invaluable, but he did not complain; he simply laid aside his materials. Long afterward, a discussion was precipitated in which he must respond in the morning to one of the most effective speeches that had been made before that body, and no power on earth could have enabled him to do it but for that unused ma-

terial of other days; by its use he made the grandest argument that has ever been made in that hall. By such facts as these the scholars need to be encouraged to study for future emergencies as well as for class recitations.—*The American Teacher.*

IN these days the subject of the physical training of young men is occupying much attention, and the discussions are broad and full of interest. The fault is, that the needs of both sexes in this respect are not equally considered.

An erect figure, an organism in which the processes of life may go on without the ceaseless discord of functions at war with each other because of abnormal relations—in short, the added advantages which a fine physical adjustment gives to its possessor—are as necessary to one sex as the other, and for the same reasons.

If physical education and consequent improvement are things to be desired, it is not that a number of individuals as a result of this training shall be able to perform certain feats of strength or agility, but in its broadest sense it is for the improvement of the race, and the race cannot materially advance physically, intellectually, or morally unless the two factors which constitute the race share equally in whatever tends to its greater perfection. Therefore, if in consequence of proper physical training men can do more work, live longer, and transmit to their offspring a share of this improved condition, women also should be so trained that they can do more work, live longer, and contribute to the higher possibilities of their offspring by supplementing instead of thwarting the promise which has been presupposed in the higher development of the male parent.—From "Physical Training of Girls," by Dr. Lucy M. Hall, in *Popular Science Monthly* for February.

SCIENTIFIC education is a training in mental integrity. All along the history of culture from savagery to modern civilization men have imagined what ought to be, and then have tried to prove it true. This is the very spirit of metaphysical philosophy. When the imagination is not disciplined by unrelenting facts, it invents falsehood, and, when error has thus been invented, the heavens and the earth are ransacked for its proof. Most of the literature of the past is a vast assemblage of arguments in support of error. In science nothing can be permanently accepted but that which is true, and whatever is accepted as true is challenged again and again. It is an axiom in science that no truth can be so sacred that it may not be questioned. When that which has been accepted as true has the least doubt thrown upon it, scientific men at once re-examine the subject. No opinion is sacred. "It ought to be" is never heard in scientific circles. "It seems to be" and "we think it is" is the modest language of scientific literature.

In science all apparently conflicting facts are marshalled, all doubts are weighed, all sources of error are examined, and the most refined determination is given with the "probable error." A guard is set upon the bias of enthusiasm, the bias of previous statement, and the bias of hoped-for discovery, that they may not lead astray. So, while scientific research is a training in observation and reasoning, it is also a training in integrity.—From "The Larger Import of Scientific Education," by J. W. Powell, in *Popular Science Monthly* for February.

Notes and Comments.

PRESS of work has prevented our replying to *'Varsity's* comments on the view we have taken of the relative values of classics and modern languages. We hope next week to insert a short answer.

A PHILADELPHIA exchange tells us:—

Modern life has become intense. That the golden age, when mother earth yielded her fruits spontaneously, is far back in the past. That now it is only when we read her bosom that she gives us bread.

Is there not too much butter for the bread here? These three sentences might be used as a text for some interesting cautions as to the use of metaphors.

THE *'Varsity* in its last issue writes on burning subjects of interest to all. Half a dozen crisp "Editorial Notes" commend the number, and these are followed by articles on "Our Higher Degrees" and "Women in Universities," the latter by W. H. The communications are on the subject of "University Confederation," "A University Gymnasium," and "Cricket."

WE have received from Mr. J. M. Hunter who was chairman of the Simcoe Teachers' Convention held at Barrie on the 29th and 30th of January last, a letter stating that the report of this convention which appeared in our issue of February 5 was erroneous in several particulars, especially in its assertion that the meeting was a convention of North Simcoe teachers alone, whereas in reality it was a union convention of the teachers of both North and South Simcoe. We received the report from a member of the convention and published it as it came to us. As Mr. Hunter "feels that he is in duty bound to repudiate the report entirely," conceiving that by it "a real injustice was done to the teachers of South Simcoe," we freely offer to him and to the members of the South Simcoe Association our apologies.

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

Wide-Awake is one of those beautiful creations which modern enterprise, calling to its aid modern science and modern art, provides for children at a price within the reach of all except the very poorest. Most beautifully illustrated, and charmingly written, it gives to boys and girls much that is wholesome and instructive, while at the same time it develops in them a taste for what is beautiful in art and in literature. We notice in recent issues—poems by Edwin Arnold, boys' biographies by Edward Everett Hale, historical sketches by Rose Kingsley and Hezekiah Butterworth, easy readings in science by Professor Palmer, art writing by Sarah Whitman, and stories by Helen Jackson, Mrs. Whitney, and C. E. Craddock. A beautiful and novel feature is a series of ideal portraits of the heroes of twelve of the greatest English poets, from Chaucer to Browning, with illustrative text selected from their most famous poems.

MR. JAMES MILLINGTON has translated from the French of the Viscount de Vegüé *The True Story of Mazeppa*. "To the average Englishman," says Mr. E. A. B. Hodgkiss, writing of the book in the *Academy*, "the mention of Mazeppa conjures up before his imagination a horse, a naked body lying on it, Astley's circus, and Byron's poem. The average Russian, on the other hand, is reminded of Pushkin's beautiful romantic legend—of the old Cossack chief, enamored of his god-daughter, whom he is forbidden by the laws of his adopted country to marry, who returns his passion, and elopes with him. The terrible tragedy which follows, in which her father dies under the executioner's axe, is one of Pusnkin's masterpieces. Neither the one nor the other thinks of Mazeppa the statesman, the haughty exile, the crafty diplomatist, and, at last, the traitor and deserter."

WE take the following from *The Phonetic Journal*, London and Bath, Eng., printed by Isaac Pitman (inventor of phonography) at the Phonetic Institute, Kingston Bldgs., Bath: and published by F. Pitman, at the Phonetic Depot, 20 Paternoster Row, London. In connection with the article on "Spelling Reform," by Mr. Long, in our columns devoted to *Educational Opinion* it will be read with interest:—

A new educational paper, published at Toronto, Canada, THE EDUCATIONAL WEEKLY, makes the following announcement in addressing its readers:—"We intend to devote a good deal of attention to phonetics and phonography. Short-hand is claimed by its admirers to be of great educative value as a subject of study. Be that as it may, we are assured that it is of great usefulness, and facility in writing it is now almost as necessary a requisite to a young man looking for employment as ability to write long hand." The editor evidently feels, as we do, that phonography will soon be taught, as regularly as French and German and other subjects are now taught, in all commercial and most other schools.

A CORRESPONDENT has requested us to give the position of Korti. Korti is a town on the Nile, 45 miles from Debbeh, 1,120 from Cairo, 525 from Khartoum by the river, 185 from Metannah across the Bahiuda (or Bayuda) Desert. It is connected by telegraph wires with all the chief towns down the river Nile, and with Merawi, Berber, Shendy, etc., up that stream. It was from Korti that the two routes were taken for the relief of Gordon; one, commanded by General Wilson, going up the river; the other (the camel corps) going across the Bahiuda Desert by way of Gakdul, commanded by General Stewart. Korti was for some time General Wolseley's headquarters. He has recently, however, removed them further down the river to Dongola, amongst other reasons probably to retain better communications with the home government. It is close to Ambukol; and the largest towns on either side of it are Merawi (up stream) and Debbeh (towards Cairo). It is in proximity to the region inhabited by the Kababish Tribes, is not far from the spurs of the Wady Mokattam Hills, and is situated on the borders of the Bahiuda Desert. If our correspondent has the patience to wait till the publication of the *War in the Soudan*, he will find all the information he requires on this point.

AT the conversazione of the teachers of Toronto held on Friday evening last Mr. James L. Hughes, Inspector of Schools for the city, was presented by the teachers of his inspectorate with a magnificent gold watch and a gold chain. Such an act evinces what kindly feelings are cherished towards Mr. Hughes by those among whom he labors, and whose work it is his duty officially to supervise. We extend our heartiest congratulations to Mr. Hughes, and are glad to say that such an expression of good will is not evidence of popularity alone; it is also a recognition of distinguished merit. Mr. Hughes is one of the most progressive of our educationists. He has not merely been instrumental in bringing the schools of the city of Toronto to a position of superiority which should be no small boast of the Queen City of the Province, but he has been most influential in spreading advanced educational views, especially in regard to kindergarten training and technical education, among his professional fellow-workers throughout the country generally; views which, we are sure, will grow in public esteem, and become more and more widely adopted as the years go on. Mr. Hughes, is as indefatigable in other spheres of labor, as he is in his chosen profession. As a Sunday School worker, and as the chief promoter of the Chautauquan movement in Ontario, he has done his country good and lasting service. We predict for him a yet more useful career, and for the schools under his control an ever increasing efficiency and excellence.

Literature and Science.

OUR AUTOCRAT.

JOHN GREENLEAF WHITTIER.

Read at Dr. Holmes' Breakfast

His laurels fresh from song and lay,
Romance, art, science, rich in all,
And young of heart, how dare we say
We keep his seventieth festival.

No sense is here of loss or lack;
Before his sweetness and his light
The dial holds its shadow back,
The charmed hours delay their flight.

His still the keen analysis
Of men and moods, electric wit,
Free play of mirth, and tenderness
To heal the slightest wound from it.

And his the pathos touching all
Life's sins and sorrows and regrets,
Its hopes and fears, its final call
And rest beneath the violets.

His sparkling surface scarce betrays
The thoughtful tide beneath it rolled,—
The wisdom of the latter days,
And tender memories of the old.

What shapes and fancies, grave or gay,
Before us at his bidding come!
The Treadmill Tramp, the One-horse Shay,
The dumb despair of Elsie's doom!

The tale of Avis and the Maid,
The plea for lips that cannot speak,
The holy kiss that Iris laid
On little Boston's pallid cheek!

Long may he live to sing for us
His sweetest song at evening time,
And, like his Chambered Nautilus,
To holier heights of beauty climb!

Though now unnumbered guests surround
The table that he rules at will,
Its Autocrat, however crowned,
Is but our friend and comrade still.

The world may keep his honored name,
The wealth of all his varied powers;
A stronger claim has love than fame,
And he himself is only ours!

AUTHORS AT HOME.

No. II.

[THIS series of articles on "Authors at Home" is reprinted in the WEEKLY by kind permission from Messrs. J. L. and J. B. Gilder, editors of the *Critic*.]

DR. OLIVER WENDELL HOLMES IN BEACON STREET.

ALICE WELLINGTON ROLLINS.

BOOKS there are in this library, of course; but you are as little conscious of the books as you are of the world. You are only really conscious of the presence in the room, and the big desk on which is lying the manuscript of "The New Portfolio." Near the

manuscript is the pen that wrote both the other portfolios, and now is writing this one. As you take it up, it is pretty to see the look that steals over Dr. Holmes' face; it is the twinkle of a smile that seems to mean, "Yes, it was the pen that did it! I never could have done it in the world!" His success has given him a deep and genuine pleasure, largely due to the surprise of it. At forty-six he believed he had done all that could be expected of him, and he was content to rest his reputation—as well he might—on those earlier poems which will always make a part of even his latest fame. But the greater fame which followed was—not greatness thrust upon him, for genius such as his is something more than the patience which is sometimes genius,—but certainly greatness *dragged out of him*. The editors of the proposed *Atlantic* insisted that he should write for it. The Doctor did not yield, till, as he himself tells it, with another twinkling smile, they invited him to a "convincing dinner at Parker's." Feeling very good-natured immediately after the dinner, he promised to "try," and a little later sent off a few sheets which he somewhat dubiously hoped would "do." The storm of greeting and applause that followed even these first sheets filled him with amazement, but with a genuine delight. It is beautiful to see how deeply it touches him to know that thousands of readers think *The Autocrat* the most charming book they own. For this is not the arrogant satisfaction of the "master" who announces: "Listen! I have composed the most wonderful sonata that the world has ever heard!" Still less is it the senseless arrogance of a foolish violin that might say: "Listen! you shall hear from me the most superb music you can imagine!" Rather is it the low-voiced, wondering contempt of an æolian harp, that, lying quietly upon the window-sill, with no thought that it is there for anything but to enjoy itself, suddenly finds wonderful harmonies stealing through its heart; and out into the world, and sees a group of gladdened listeners gathering about it. "How wonderful! how wonderful that I have been chosen to give this music to the world! Am I not greatly to be envied?" As the harp thus breathes its gratitude to the breeze that stirs it, so Dr. Holmes looks his gratitude to the pen that "helped" him; with something of that same wonder at personal success that made Thackeray exclaim: "Down on your knees, my boy! That is the house where I wrote *Vanity Fair*!" Do we not all love Thackeray and Holmes the better for caring so much about our caring for them?

But it is growing late and dark. Across the river—one almost says across the bay—the lights are twinkling, and we must go. As Dr. Holmes opens the doors for us, and the cool breeze touches our faces, how strange it seems to see the paved and lighted street, the crowding houses, the throng of carriages, and to realize that the great, throbbing, fashionable world has been so near to us all the afternoon while we have been so far from it!

Now, as we go down the steps, and see Mr. Howells, who lives only three doors away, going up his steps, a sudden consciousness strikes us of what very pleasant places Boston literary lines seem to fall into! Is it that literary people are more fortunate in Boston, or that in Boston only the fortunate people are literary? For as we think of brilliant names associated with Beacon Street, Boylston Street, Commonwealth Avenue, Newbury and Marlborough Streets, it certainly seems

as if the Bohemia of plain living and high thinking—so prominent a feature of New York literary and artistic life—had hardly a foothold in aristocratic, successful, literary Boston.

Finally, if it seems wonderful that living almost exclusively in one locality Dr. Holmes should have succeeded as few have succeeded in dealing with the mysteries of universal human nature, still more wonderful is it, perhaps, that dealing very largely with the foibles and follies of human nature, nothing that he has ever written has given offence. True, this is partly owing to his intense unwillingness to hurt the feelings of any human being. No fame for saying brilliant things that came to this gentlest of Autocrats and most genial of gentlemen, tinged with a possibility that any one had winced under his pen, would seem to him of any value, or give him any pleasure. But, as a matter of fact, no bore ever read anything Dr. Holmes has cleverly written about bores with the painful consciousness, "Alas! I was that bore!" We may take to ourselves a good deal that he says, but never with a sense of shame or humiliation. On the contrary, we laugh the most sincerely of any one, and say "Of course! that is exactly it! Why, I have done that thing a thousand times myself!" And so the genial, keen-eyed master of human nature writes with impunity how difficult he finds it to love his neighbor properly till he gets away from him, and tells us how he hates to have his best friend hunt him up in the cars and sit down beside him, and explain that, though a Radical, he finds he enjoys the society of those who believe more than he does better than that of those who believe less; and neighbor and best friend, Radical and Conservative, laugh alike and alike enjoy the joke, each only remembering how *he* finds it hard to love *his* neighbor, and how *he* hates to talk in the cars. The restless "interviewer," who may perhaps have gained entrance to the pleasant library, will never find himself treated, after he has left, with any less courtesy than that which allowed him to be happy while he was "interviewing," to the misery of his hapless victim. The pen that "never dares to be as funny as it can" never permits itself to be as witty as it might, at the expense of any suffering to others. The gentle Doctor, when the interviewer is gone, will turn again to his ducks in the beautiful aviary outside his window, and only vent his long-suffering in some general remark, thrown carelessly in as he describes how the bird

Sees a flat log come floating down the stream;
Stares undisputed upon the harmless stranger;—
Ah! were *all* strangers harmless as they seem!

And the very latest stranger who may have inflicted the blow and drew out that gentlest of remonstrances, will be the first to laugh and to enjoy the remonstrance as a joke!

And so has come to the Autocrat what he prizes as the very best of all his fame—the consciousness that he has never made a "hit" that could wound. So truly is this his temperament, that if you praise some of the fine lines of his noble poem on "My Aviary," he will say gently: "But don't you think the best line is where I spare the feelings of the duck?" and you remember.

Look quick! there's one just diving!

And while he's under—just about a minute—

I take advantage of the fact to say

His fishy carcase has no virtue in it,

The gunning idiot's worthless hire to pay.

And not even "while they are under" will Dr. Holmes ridicule his fellow-men. It is

never *we* whom he is laughing at : it is simply human nature on its funny side ; and it is a curious fact that none of us resent being considered to have the foibles of human nature provided that they are not mad to appear personal foibles. So, while remembering ourselves the intensity of the pleasure he has given us, let us remember to tell him, what he will care far more to hear, that he has never given any of us anything *but* pleasure. —From *the Critic*.

THE FAIRY LAND OF SCIENCE.

MISS A. D. HUCKLEY.

(Continued from a previous issue.)

To understand this you must give all your attention, for it is important and at first not very easy to grasp. You must remember, in the first place, that the air is heavy because it is attracted to the earth, and in the second place, that since air is elastic all the atoms of it are pushing upwards against this gravitation. And so, at any point in air, as for instance the place where the paper now is as I hold it up, I feel no pressure, because exactly as much as gravitation is pulling the air down, so much elasticity is resisting and pushing it up. So the pressure is equal upwards, downwards, and on all sides, and I can move the paper with equal ease any way.

Even if I lay the paper on the table this is still true, because there is always some air under it. If, however, I could get the air quite away from one side of the paper, then the pressure on the other side would show itself. I can do this by simply wetting the paper and letting it fall on the table, and the water will prevent any air from getting under it. Now see ! if I try to lift it by a thread tied to the middle, I have great difficulty, because the whole 15 pounds' weight of the atmosphere is pressing it down on each square inch. A still better way of making the experiment is with a piece of leather, such as the boys often amuse themselves with in the streets.

Have you ever tried to pick limpets off a rock ? If so, you know how tight they cling. The limpet clings to the rock just in the same way as this leather does to the stone : the little animal exhausts the air inside its shell, and then it is pressed against the rock by the whole weight of the air above.

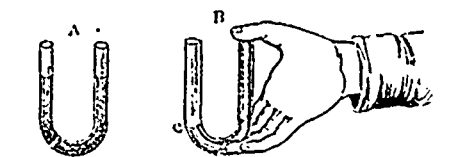
Perhaps you will wonder how it is that if we have a weight of 15 lbs. pressing upon every square inch of our bodies, it does not crush us. And, indeed, it amounts on the whole to a weight of about 15 tons upon the body of a grown man. It would crush us if it were not that there are gases and fluids inside our bodies which press outwards and balance the weight so that we do not feel it at all.

This is why Mr. Glaisher's veins swelled and he grew giddy in thin air. The gases and fluids inside his body were pressing

outwards as much as when he was below, but the air outside did not press so heavily, and so all the natural condition of his body was disturbed.

I hope we now realize how heavily the air presses down upon our earth, but it is equally necessary to understand how, being elastic, it also presses upwards ; and we can prove this by a simple experiment. If I fill a tumbler with water, and keep a piece of card firmly pressed against it, and if I turn the whole upside down, when I take my hand away, you would naturally expect the card to fall, and the water to be spilt. But no ! the card remains as if glued to the tumbler, kept there entirely by the air pressing upwards against it.

And now we are almost prepared to understand how we can weigh the invisible air. One more experiment first. I have here



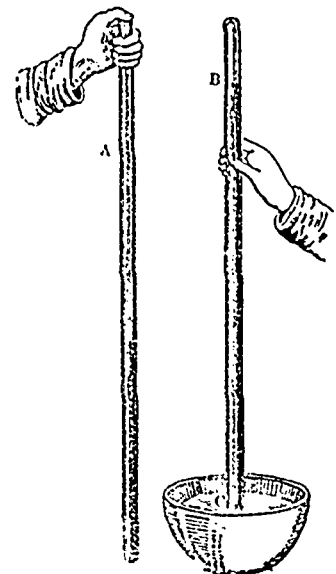
A, Water in a U tube under natural pressure of air.
B, Water kept in one arm of the tube by pressure of the air being at the open end only at c.

what is called a U tube, because it is shaped like a large U. I pour some water in it till it is about half full, and you will notice that the water stands at the same height in both arms of the tube (A), because the air presses on both surfaces alike. Putting my thumb on one end I tilt the tube carefully, so as to make the water run up to the end of one arm, and then turn it back again (B.) But the water does not now return to its even position, it remains up in the arm on which my thumb rests. Why is this ? Because my thumb keeps back the air from pressing at that end, and the whole weight of the atmosphere rests on the water at c. And so we learn that not only has the atmosphere real weight, but we can see the effects of this weight by making it balance a column of water or any other liquid. In the case of the wetted leather we felt the weight of the air, here we see its effects.

Now when we wish to see the weight of the air we consult a *barometer*, which works really just in the same way as the water in this tube. An ordinary upright barometer is simply a straight tube of glass filled with mercury or quicksilver, and turned upside-down in a small cup of mercury (see B, next Fig.) The tube is a little more than 30 inches long, and though it is quite full of mercury before it is turned up (A), yet directly it stands in the cup the mercury falls, till there is a height of about 30 inches between the surface of the mercury in the cup C, and that of the mercury in the tube B. As it falls it leaves an empty space above the

mercury at B, which is called a *vacuum*, because it has no air in it. Now, the mercury is under the same conditions as the water was in the U tube, there is no pressure upon it at B, while there is a pressure of 15 lbs. upon it in the bowl, and therefore it remains held up in the tube.

But why will it not remain more than 30 inches high in the tube ? You must remember it is only kept up in the tube at all by the air which presses on the mercury in the cup. And that column of mercury C B now balances the pressure of the air outside, and presses down on the mercury in the cup at its mouth just as much as the air does on the rest. So this cup and tube act exactly like a pair of scales. The air outside is the thing to be weighed at one end as it presses on the mercury, the column C B answers to the



Tube of mercury inverted in a basin of mercury.

lead weight at the other end which tells you how heavy the air is. Now if the bore of this tube is made an inch square, then the 30 inches of mercury in it weigh exactly 15 lbs., and so we know that the weight of the air is 15 lbs. upon every square inch, but if the bore of the tube is only half a square inch, and therefore the 30 inches of mercury only weigh 7½ lbs. instead of 15 lbs., the pressure of the atmosphere will also be halved, because it will only act upon half a square inch of surface, and for this reason it will make no difference to the height of the mercury whether the tube be broad or narrow.

A METHOD has been devised for transferring a design on to a tissue which is to be embroidered. A mixture is made of printers' ink, glycerine and wax, and the design is printed in it on to a sheet of paper which has been folded, a solution of stearine and wax having been applied between the folds. The paper is then placed over the material upon which the design is to be transferred and is pressed over by means of a smoothing bone.

Educational Opinion.

PLUTARCH.

By PROFESSOR HUTTON.

VERY little is known of Plutarch's life. The writer of so many illustrious biographies—it has been said—had to wait long for his own. He was born about 50, A.D.; his native place was Chaeronea, in Bœotia; and in this small country town the years of his life, especially the latter years during which his biographies were composed, went by amid the round of little duties—honorable but uneventful—which made up the career of an obscure country squire. On two occasions this monotony was relieved by a visit to Rome where he lectured on philosophy; but he does not appear to have stayed in the city long enough to learn the language, and though Rome numbered among her residents at that time, or within a few years from that time, Persius, Juvenal, Lucan, the two Senecas, Quintilian, Martial, Tacitus, Suetonius, the two Plinys, he mentions none of them and is mentioned by none. The legend that he was tutor of the Emperor Trajan; that he was made consul; that he was appointed to govern the Roman province of Achaia or Greece, contains within it barely an iota of truth; the utmost that can be said is that he dedicated one of his writings—a collection of the sayings of famous men—to the Emperor Trajan and may have been introduced to him.

When we turn from Plutarch's life to his writings the first point which must strike even the careless reader is that Plutarch is not an historian; he is a moralist; he writes his lives of great men not for the sake of the facts but for the sake of the morals which the facts carry with them, he describes the past not for the past's sake but to inculcate right doing and to discourage wrong doing in the future. For this reason—it may be remarked in passing—Plutarch became in our fathers' time a favorite book to put into the hands of children, and entered into rivalry with Miss Edgeworth's *Parents' Assistant*; and the fact that, notwithstanding, it still continued popular, would be a striking testimony, if any were wanted, to its intrinsic interest.

This feature of Plutarch's Lives may be best brought out by quoting a few lines from the introduction to his life of Alexander the Great. In that introduction Plutarch writes "I do not write Histories but Lives; nor do the most conspicuous acts of necessity exhibit a man's virtue or his vice, but oftentimes some slight circumstance, a word or a jest shows a man's character better than battles with the slaughters of tens of thousands and the greatest arrays of armies, and sieges of cities. Now, as painters produce a likeness by a representation of the countenance and the expression of the eyes without troubling themselves about the other parts of the body, so I must be allowed to

look rather into the signs of a man's character and thus give a portrait of his life, leaving others to describe great events and battles."

It has become by this time a commonplace that "battles with the slaughter of tens of thousands, and the greatest arrays of armies and sieges of cities" do not constitute history; it is tolerably clear, however, that anyone who goes as Plutarch does to the other extreme cannot be, in the ordinary sense of the word, an historian. Writing history would be a very much more entertaining pursuit than it is if that were so; if it were really true, e.g., that it would be more profitable for historical purposes to read Sir W. Temple's love-letters than to wade through cart-loads of protocols and despatches. But though Lord Macaulay has declared in favor of the love letters, it is much to be feared that in so doing he gave way—not for the first time—to a spirit of paradox. Examples of this ethical spirit in Plutarch might be gathered without difficulty from any of his Lives. In one passage, e.g., he will pause to ask his readers to notice that a merry heart is not confined to wine-bibbers; in another he will dilate upon the qualities which bring a man peace at the end. Thus, in his Life of the Gracchi, he seizes upon the character of the widowed and childless Cornelia as affording a convenient moral with which to close the essay—"She was most happy when telling to new comers or to her visitors the story of the life and ways of her father, Africanus; wonderful, too, was the placidity and quietness with which she spoke of her sons and their deeds and sufferings; answering questions about them as though they had belonged to the golden time. And so it was that some thought age had taken away her reason, or that the severity of her lot had made her insensible to sorrow; whereas the *insensibility* was in them, who did not see how great a help a good disposition, good birth and good education are towards lessening grief; who did not understand that fortune, though it can defeat virtue where it attempts to avoid misery, cannot rob it of peace of mind."

To the prevalence of this moralizing tone in Plutarch we may trace two or three of the other features of his Lives. For example, he is too good a moralist to be tempted to palliate or excuse those acts of his heroes which plainly offend against morality; he is too jealous for the triumph of righteousness wherever it may be found to turn himself into the pamphleteer of a party. Hence his Lives of the Gracchi, among others, show a spirit of moderation. He is appreciative, but at the same time exacting; he does not try to justify the deposition of Octavius; he is severe upon the spirit in which Tiberius, when he sought re-election, attacked the senate (ch. XVI). Where the facts cannot be disputed, and where they are at the same time unfavorable to his heroes, he prefers to let his heroes suffer rather than offend his conscience by attempting excuses.

On the other hand where, though the facts may be certain, the interpretation is disputed, Plutarch like a true moralist prefers that interpretation which best serves to exalt the dignity of human nature. Hence, though he never consents to dishonor his conscience by palliating the obviously unheroic, he is ready to put the highest interpretation possible upon any act which will bear more than one interpretation. Two examples of this will be enough. It would have been easy for him to have painted the Gracchi in very much darker colors than he has done, had his temperament led him to do so. There were no doubt a sufficient number of documents of an anti-Gracchi tendency to be found in Rome—such as the writings of Livy and Tacitus and parts of Cicero—to have justified even a fair-minded man—if he had been a cynic with a disbelief in human excellence—in including the Gracchi in almost the same condemnation as the Senate and nobles, their opponents. Plutarch, however, took the other and happier view and wrote a life which has secured for the Gracchi irrevocably the admiration of posterity. The Life of Alexander is a still more striking instance of this same optimism in Plutarch. Cynical historians and historians who are not cynics have often represented Alexander as an ordinary vulgar conquerer actuated by an intense lust of power and fame, as, in fact, a sort of Macedonian, Napoleon, without any higher virtues than those which Napoleon is usually supposed—perhaps wrongly—to have alone possessed. Plutarch will have nothing to say to this theory: very different from the vulgar conqueror is the Alexander whom Plutarch celebrates. The conquests of Alexander had for their *result* the Hellenization of Asia. Plutarch seizes hold of this undeniable fact, interprets it as an indication of the motive as well as the result of Alexander's life, and transforms the Macedonian prince into one of the striking figures of history. "Conceiving he was sent by God to be an umpire between all and to unite all, he reduced by arms those whom he could not conquer by persuasion, and formed of a hundred diverse nations one single universal body, mingling as it were in one cup of friendship the customs, marriages, laws of all. He desired that all should regard the whole world as their common country, that every good man should be termed a Hellene, and every evil man a Barbarian." In other words Alexander was an advanced philosopher—more advanced indeed than his tutor Aristotle himself—and conquered Asia as the prophet of God, with Hellenic cosmopolitanism and Aristotle's Nicomachean Ethics by way of a Koran. That this was Plutarch's conception of Alexander is certain from another passage in the same book. Alexander, he tells us, was guided in his conquest of Asia more by the dictates of his tutor, Aristotle, than by those of his father, Philip; more by the maxims of the encyclopædic philosopher than by those of

that rough, shrewd, beer-drinking king who was wont to liken all philosophers and Athenians to those statues of Hermes which they worshipped. "Mere prattle and prudence," said Philip when the name of Athens was mentioned in his hearing, and turned again to his cups.

There is another curious characteristic in Plutarch's sketches which may be as conveniently noticed here as elsewhere since (like the idealizing spirit which has just been mentioned), it illustrates his determination to make his heroes heroes in the strictest sense of the word, wherever it is possible to do so. He sedulously imitates Homer. He strives to throw around the somewhat commonplace Romans of the second century, B. C., some of the glory which is suffused over the figures of the Homeric poems. Before the last combat between Hector and Achilles there is the famous parting of Hector and Andromache. So in Plutarch on the last morning of Caius' life there is the parting of Caius and Licinia: when Hector has been killed Andromache faints and is carried away by her maidens; the same fate befalls Licinia when Caius tears himself away from her forever. Again, when the single combat between Hector and Achilles has begun, Hector is seized with fear and flies across the space between the two armies, crying for help and finding none; so Caius in his last flight calls on his friends to interpose between himself and his pursuers, and to give him a horse; but "as it had been in a race though all shouted to encourage him no one stirred a foot;" a little Homeric touch which we may be permitted to think is more natural in Homer than in Plutarch.

To this same didactic spirit in Plutarch may be traced another of the peculiarities of "The Lives," and one which distinguishes them from strict history more than the didactic tone itself, viz.: his carelessness about the political significance of the career of his hero. Once indeed he lets fall a significant expression that the alteration introduced by Caius in the direction in which speakers turned their eyes when addressing the people typified the change from oligarchy to democracy as a rule he steers as clear as he can of political discussion: he disapproves of the deposition of the tribune Octavius, but he does not trace its political consequences; he introduces Caius Gracchus' laws in a confused mass, and dismisses them without explanation. The significance of the corn laws and the laws relating to the Equites are not noticed; the agrarian laws of Tiberius, and the Roman agrarian system are incorrectly described and various measures are attributed to Tiberius which seem to occur only in the legislation of his brother. Plutarch in fact finds statistics and laws very dull reading, and does not trouble himself about them.

It has been already said that Plutarch is a moralist more than an historian: it may

be added that he is a biographer more than an historian: he not merely prefers incidents which contain a moral to mere facts however important which do not; he also prefers—apart from this didactic spirit—to study character rather than to "trace the course of events. His Life of Cicero, *e. g.*, is full of anecdotes illustrating the petulant wit and the irrepressible sarcasm which drew down upon Cicero (as upon Erasmus, a later Cicero), the bitter animosity of all parties. So in the Lives of the Gracchi the care and skill with which the characters of the different actors are drawn—of Tiberius, of Caius, of Quintus Metellus, of Fulvius—is as marked as is the didactic purpose, and the carelessness about politics.

Hitherto we have treated Plutarch as the moralist and biographer writing history: we have considered him as the author of "The Lives." But "The Lives" is not the only book which Plutarch wrote: he also wrote various treatises on different subjects connected more immediately with morality and with social life, as well as a few treatises on religion. We have now to consider him as the moralist writing on morals.

Plutarch's "Morals," as the book is called, is not of course so famous as "The Lives." "The Lives" cannot be superseded, for there is no fresh evidence to be discovered which could diminish the value of his researches. Morals, on the other hand, are progressive, and the moralists of pagan Greece and Rome especially, are now chiefly interesting for historical rather than practical purposes. Regarded however from this historical point of view "The Morals" of Plutarch are not unimportant. They may even be said to constitute an upward movement in the evolution of ethical thought. Their importance will be most easily understood if we remember the time at which they were written. Plutarch was born about 50, A. D.; he was therefore a young man of 20 when Vespasian was made emperor: he was in his prime when Domitian persecuted the philosophy which he found reigning in Rome—or at any rate reigning among the best Romans whom Rome contained. This philosophy was Stoicism. Now Stoicism is, of course, one of the great philosophies of the world. It is true that its votaries no doubt did not by any means live up to their professions. Seneca, *e. g.*, who laid down the maxim that the wise man differs from the Deity only in duration, proved conclusively in his own person that whatever the difference might be in *theory*, in *practice* it was something more than a difference in duration; nevertheless it cannot be doubted that this philosophy did excite very genuine devotion, and that almost alone of the ancient philosophies, it was a religion as well as a philosophy and numbered martyrs among its professors. Its agreement with many of the teachings of Christianity is notorious; in fact there are

probably still to be found critics who maintain that Seneca drew his maxims from St. Paul; the apocryphal gospels of Paul to Seneca and Seneca to Paul, though banished from our Bible were accepted by Jerome who in consequence counted Seneca among the Christian fathers; and some sentences undoubtedly occur in Seneca which might be translations from the Bible so far as the sense goes. "The service of God is perfect freedom," *e. g.*, is found in Seneca no less than in the Bible. "Seneca is a very Christian pagan," said a well-known critic. However, though, this is one side of Stoicism it had another side not so noble. On the one hand it was a masculine creed: as man differs from woman so the Roman nation differed from other nations, and so the philosophy of the best of the Roman nation, Stoicism, differed from other philosophies: on the other hand it was so masculine as to become harsh and unfeeling. "Pity," says Seneca, is a fault of narrow souls. "Your son is dead," said a friend to the philosopher Anaxagoras, one of the earliest of the Greek philosophers who show the Stoic spirit. "I never imagined," replied the philosopher, "that I had begotten an immortal." When Megara said his country was ruined and his daughters with it, the philosopher Stilpo boasted that he had lost nothing, for the sage is not dependent on circumstances. In short the chief aim of the pagan moralists was to triumph over an outer foe, the slings and arrows of fortune and external circumstance; and therefore their chief weapon was self-love and pride, just as the chief aim of Christian moralists has been to triumph over an inner foe, self and selfishness; and therefore their chief virtues have been love and humility.

This was the philosophy which dominated the best minds of Rome during Plutarch's prime, and it is in Plutarch's writings earlier than in any others, unless it be in the writings of the younger Pliny, that a gentler and more humane spirit can be traced. Stoicism had never been popular in Greece in spite of Anaxagoras and Stilpo—and in Plutarch we see the spirit of Greece—essentially mild and merciful—uttering its protest. The protest was heard in Rome, and the history of the next century or two is the history of the eclipse of Stoicism: (1) by the gentle and reasonable spirit of Greece, and (2) by the mystical and devout spirit of Egypt preached by mystics—Iamblichus, Porphyry and Libanius.

However, the important point for us is to notice some of the ways in which Plutarch's morals were the precursors of a more enlightened morality than that of the Stoics. Roughly speaking there are three subjects on which Plutarch's treatises are in advance of their age, and in which especially they coincide with our own beliefs.

(To be continued.)

TORONTO:

THURSDAY, MARCH 12, 1885.

ON THE TEACHING OF HISTORY.

A TEACHER of history in one of our collegiate institutes has asked us to give an opinion respecting the teaching of history to advanced classes. As history is an important subject, and as the methods of teaching it are being revolutionized, we hope to be able to supplement what we shall say to-day by other remarks in future, and by a series of papers, now in course of preparation, from a number of our most experienced teachers.

As has been remarked, the teaching of history, and indeed the writing and study of it, are being revolutionized. The old conception of history, as a chronicle of events marshalled with skill, and described with vividness and sympathy, is giving way to another, having its origin in the scientific tendencies of the age. In this newer conception, history is a science by which the laws of human conduct, in regard to public matters, are discovered and verified. Sociology, in its restricted sense, the theory of government, political economy, jurisprudence, political ethics, are all subordinate sciences, which exist by virtue of principles deduced from the facts of history, or rather principles which history establishes. There are, indeed, those who go so far as to assert that a highly finished literary description of events, men, characters, and human actions, is *not* history, but that history has two distinct provinces corresponding with those which every science has, *viz.*: (1) the ascertainment of facts of human action, and the allocation of them in proper classes according to their nature; (2) the deduction from these facts of laws by which human actions of to-day, and of the future, may be wisely directed. We need not say that historians and students possessing this conception of history are few; rather the greater purpose of modern historians has been to put the reader into so real a possession of the facts of human action that he sees and knows them as if they had come within his own ken, and been a part of his own life. It may, perhaps, be well to remark that in doing this, for the sake of producing a more vivid picture, a sacrifice of reality has been made, which all science, and therefore historical science, must forbid.

Despite, however, the number and abili-

ty of what may be called the *impressionist* school of historical writers, the scientific study of history is gaining ground every where; and not even the most vivid scene-painter among historians now writes without a purpose of inculcating lessons and deducing what are known as historical truths. In other words, what is called the spirit of philosophical enquiry pervades all history-writing; and every historical treatment has to be judged by a double standard—first, in respect of the accuracy of its facts; second, in respect of the soundness of the lessons deduced from these facts.

The writings of history being thus in a state of transition from a treatment purely artistic to one purely scientific, it is impossible to lay down a fixed method of teaching it. In the most advanced classes of the foremost universities of Germany and the United States, the purely scientific method is pursued; the student first by reading and by original research gathers his facts, then investigates their relationships, discovers their significance, and, if his study has been wide and deep enough, brings these facts to support some established law, or to weaken the force of one not so well established, or to illustrate some principles which he has himself discovered.

In the lower classes of these institutions, a lower grade of scientific historical enquiry is pursued. *E. g.*, some branch of sociology being fixed upon, as the *theory of government*, or *political economy*, or *jurisprudence*—history is read with an entire reference to it—those details being omitted which have no bearing on the particular department of political science which is being investigated, the general principles which belong to the department being verified and illustrated by what the student discovers in his reading. Work, a little more advanced, is to select some sub-department, *e. g.*, "ancient law," and to read history so as to discover legal principles, and their application in different political states; and still more advanced work is to select some special topic, as "municipal institutions," or the "origin and use of money," topics which are fully treated in the text books that the student reads for general guidance and information, but upon which he obtains his more intimate knowledge by his personal investigation of original authorities.

This sort of work presupposes a good mental grasp of the main events of history,

and of their relationship to one another, in respect of their chronological sequence, their kind, and importance. In other words his study of history in the primary and secondary schools should have put the student in the possession of these main facts, and should have given him this clear idea of their relationships. What parts of this ought to be done in the public school, and in the high school, respectively, we cannot now stop to discuss. It is evident, however, that the work of preparation for the university cannot be said to be finished until this much has been accomplished.

Our own universities have not, so far as we know, in the least degree recognized or demanded the scientific study of history described above. A series of text books has been prescribed, some descriptive and pictorial in their treatment, others dealing first with facts, and then with principles deduced from these facts. The student masters these with a success depending largely upon his memory—a faculty which is, to say the most, but semi-intellectual. His success at his examinations depends of course not wholly on his memory, but also upon his ability, first to understand the scientific deductions of his text books; and second, to apply to the settlement of questions propounded by his examiners, his knowledge of facts, and of such principles as he may have been able to understand in the text book, or to deduce for himself. But he has not pursued the study of history in a more scientific spirit than would be shown by a student in chemistry who had never entered a laboratory or made an analysis, or a student of physiology who had never examined a tissue;—having obtained his knowledge from text books alone. In other words the work in history demanded by our universities differs from the history work which should be done in secondary schools in nothing but extent of ground gone over.

With this state of things we have no quarrel just now. We may say, however, that such a state cannot endure long. The wheels of progress are upon us.

Reverting, then, to the work to be done in history in our high schools, we repeat that when it is accomplished the student should know the main facts of general history, have a somewhat more particular knowledge of the main facts of the history

of his own country (in our case including Britain), and that furthermore he should have obtained a knowledge of the relative importance of these facts, that is to say, of their true bearing upon political science and economy. If he do more than this it should be to master some particular period.

Next week we shall speak more definitely upon methods of teaching history in secondary schools, and shall say something upon the teaching of history in primary schools.

BOOK REVIEW.

Latine.—Edited by Edgar S. Shumway, Adjunct Professor of Latin in Rutgers College. New York: D. Appleton & Co.

Latine, which commenced somewhat over two years ago as a little eight page journal, has now thirty-two pages. It was begun in a tentative way; its success is now assured. It was first printed entirely in Latin; it has now an English supplement. It makes no great pretensions; it has no doctrines or theories to promulgate. Professing to be but incidentally helpful to the teacher in the class-room, or to the pupil at his desk, it is yet indirectly quite helpful to both. It is devoted to the promotion of taste for the study of Latin as a culture-giving process. Its editor and contributors are all in love with their work. As instructors, of course, much that they write has direct reference to the class-room. Neat, scholarly, happy translations; delicate *jeux d'esprit*; re-translations of favorite poems; letters; conversations—these form the matter of the purely Latin part. The English part is more professional. Latin archaeology, sociology, history, philology, bibliography, and criticism, with a department of "Notes and Queries" which is intended as a "free parliament," where everyone has the right to ask for information or advice—form the second or English part.

We should like to know of every teacher of Latin in Canada taking *Latine*; not so much for the material benefit he would receive from it, as for the help and sympathy he would gain in being brought into intimate companionship with his collaborators over the whole continent, and for the opportunity it would give him of exchanging his views with theirs, and again, for the increased tone of culture and refinement which would accrue to his own work by its being put constantly into relationship with some of the best work done in his department of study on this side of the Atlantic.

The Elements of Euclid, Books I-VI., with deductions, appendices and historical notes, by John Sturges Mackay, M.A., F.R.S.E. London and Edinburgh: W. & R. Chambers. 364 pp., 3s.

The mechanical make-up of this book is first-rate: the paper is thick and good, the type clear and well-proportioned, the diagrams well drawn, and the ink black. In the necessary hasty perusal we have given it we find very much to praise and commend. The editor says that the utmost pains have been taken to make the text strictly accurate.

We have not been able, of course, to test for accuracy; that can be done only in teaching. But it is a great thing to know that the editor has been alive to the importance of accuracy. In textbooks of Euclid, unfortunately too much used in our schools, there is very much of inaccuracy.

The main features of the editing are:—Explanatory annotation distinguished from the text by a difference of type, and very suggestive to the teacher: historical notes, intended to perpetuate the memory of those who have added to geometrical knowledge, in so far as their work bears upon Euclid's science: over fifteen hundred questions, deductions and corollaries: an adherence to Euclid's sequence of proofs, and to some extent to his mode of proof; and a frequent change in the lettering of the diagrams, in the construction of the figures, and in the enunciation of the propositions, to draw attention to analogies existing between pairs of propositions.

In our judgment the suggestive questions and well graded exercises are the most valuable part of the work. They are so numerous and appropriate, especially in the first book, that they cannot but help both teacher and pupil. From our own standpoint we regret very much to see algebraical and other symbols substituted for verbal expressions; first, because it is the use in one science of symbols which have a very different meaning in a science akin to it, *i. e.*, algebra; and secondly, because we think the main value of the study of Euclid is not its mathematical value, but its logical value; and hence that a habit of correct expression is one of the principal benefits to be obtained from it. The symbolical expressions lead to a want of clearness in apprehension, and hence to a want of exactness in expression. Of course this is true only for young minds, but we believe it is true for all those for whom the first three or four books of Euclid are intended.

On the whole we can heartily recommend this book to all teachers of Euclid. In fact we think they will lose much by being without it. Indeed we should not be surprised to see it substituted for the texts now in common use: one of which is positively bad; another with numerous typographical and other errors; and a third, so conservative, like ourselves, in text and phraseology, as to be, undeservedly we think, somewhat neglected.

Materials for Object Lessons.—By Charles McKee, M.A., sometime Assistant-Inspector of Schools. London and Edinburgh: W. & R. Chambers.

OBJECT teaching, as has so often been stated in these columns, has two values:—The matter, or knowledge gained, being the measure of the one; the method of acquiring this knowledge, and the quickening of the senses, the development of the perceptive faculties, and the training of the judgment, determining the other. All teaching should be *scientific*: it should proceed in harmony with mental law. To receive a fact that has been prepared for him, given to him, absolutely forced upon him, is not so important to a child as to acquire it by virtue of his intelligence, his perception, his judgment. If facts are studied so that law, sequence, arrangement, order, are discovered in them, or are made manifest by them, then the mind becomes ardent, not to gain merely new facts, but to discover new laws, sequences, arrangements, by which facts in greater variety and num-

ber than could else be known can be discovered and explained, and made part of one's store of information. As we have elsewhere stated, object teaching, or rather object *learning*, properly pursued, is the threshold to every science. But this presupposes a wise instructor, a well thought-out method, and much patient and slow investigation.

Object teaching, as it is generally understood, means little more than the presentation of a mass of facts which appertain to some common object. The object talked about is usually present in imagination only, or at most represented by a picture. The teacher's general store of information is the source of knowledge. This store is, for the most part, ill arranged, acquired without scientific or methodical study, and presented without arrangement or method. We do not say that such work is not useful: that there is no educative value in it; but we say that it is poor work, that it has little educative value, that it demands scarcely any skill or wisdom on the part of the teacher, and that to the pupil it is not so useful an occupation as the gathering of information for himself in the woods, in the fields, in the garden, the house, the workshop, without books or teacher. The only thing that can be said is that *some* information, *some* useful knowledge, is gained in this way, whereas if the boy remained out of school, in addition to the risk of becoming idle, there would be almost a certainty of acquiring ill-disciplined habits and moral perversity.

We have not seen any work on object lessons which comes up to our ideal. Certainly the book before us does not. And yet it is in many respects an excellent book. It contains a vast deal of useful information upon things everyone should know something about: which a teacher of experience and skill could use with effect. The objects are: water, milk, butter, cheese, tea, coffee, bread, salt, sugar, woollet cloth, cotton, linen, silk, leather, coal, iron, soap, glass, paper, pins, the ordinary domestic animals, animals of interest like the whale and the elephant, the apple, the orange, the potato, wheat, air, rain, ice and snow, rivers, the sea, the farmer, carpenter, blacksmith and mason, and a few others. The author disclaims all pretension to arrangement and method. He simply collects facts, which the teacher is to use. If the teacher were to use such a book, systematically and continuously teaching it, as text books are ordinarily taught, we believe the results would be pernicious to teacher and pupil. We can however imagine a teacher, with an inductive turn of mind, a skill in questioning and an experience in getting pupils to observe and think for themselves, using the book as a sort of cyclopaedia of such facts as he needs, and making his object lessons, based on it, of real value to his pupils. But to the teacher who wishes to make his lessons valuable, not this book nor indeed any book, could be sufficient. He needs a more general store of information, a careful study of each lesson beyond what is suggested in the text, a tact in getting his pupils to supply the objects required for study and investigation in every stage of perfection, and a wisdom and skill in introducing those facts, which though beyond the pupil's power of verification, are still good for him to know. In a word, to the good teacher such a book as Mr. McKee's would be extremely helpful; to the poor, unthinking teacher, it would suggest false methods, and be fruitful of "exam."

Music.

DR. DAMROSCU belonged to a noble type of men. We refer to that rarer class who learn early in life what they are best fitted to do and with all their heart and soul set about doing it.—*New York Graphic* (February 16).

THE great musical festival annually held at Birmingham will this year have an unusually important character, for the reason that Gounod's latest oratorio, "Mors et Vita," will be produced and also new works by Dvorak, Mackenzie, Stanford, Cowen, and Anderson.

THE London Philharmonic Society season begins in February. Joachim plays at the first concert, Minnie Hauk sings at the second, and Wilhelmj appears at the third. Herr Dvorak conducts his new symphony at the fourth, Mr. Franz Rummel plays Dvorak's concerto at the fifth and Moszkowski directs his *Jour of Arc* at the sixth.

MR. TORRINGTON, conductor of the Philharmonic Society, announces his intention of performing Mackenzie's new oratorio, *The Rose of Sharon*, in May next. When one begins to think what a musical wilderness Toronto might still be had it not been for the advent of this musician, one cannot be too grateful. I consider Mr. Torrington's musical career, since he has been here, to have been a benefit to the nation. Others are now reaping the fruits of his labours, but I hope I shall never forget, either now or in the future, how much we owe to his energy, indomitable pluck and high musical aims.—*Correspondence of The Keynote*.

THE Chicago Opera Festival is a great national event. It is an affair of large proportions as befits the wide horizons and the wonder-working genius of the broad West, broad in its areas and broad in its standards. When the philosopher of the future shall come to the investigation of institutional beginnings he will surely find that the promotive influence of these magnificent musical enterprises in the development of permanent agencies for musical cultivation was of the most effective character. That the establishment of the Festival, with all its immortal outreachings, has been due to the liberality of men in commercial life who appreciate the immense value of a leaven of artistic taste in the composition of a noble community, is as creditable to their sagacity as to their philanthropy; and that the immediate rewards are such as to attract the participation of the greatest artists in the world is indicative of the genuine love of art which exists and is quickly manifest even where commercial ambitions are most sharply engaged in material affairs. It is significant that these Festivals grow in dignity with each recurring season. The coming affair, beginning April 6, will include fourteen performances, the operas to be given being *Lohengrin*, *Les Huguenots*, *L'Africaine*, *Faust*, *Mirella*, *Der Freischütz*, *Marta*, *Aida*, *Il Trovatore*, *Traviata*, *Semiramide*, and *I Puritani*. The greatest singer of the world, Patti, will lead a distinguished company of artists, including Fursch-Madi, Nevada, and Scalchi, and a chorus of three hundred voices. A peculiarly interesting event will be the appearance of Patti in *Lohengrin* for the first time, and it will prove a great triumph for her if she shall acquit herself as an interpreter of Wagner as splendidly as she has as an exponent of the Italian school.

Drama.

AT Rochester, N.Y., recently, a burlesque company drew \$2 at a matinee.

MISS MARY ANDERSON is twenty-six years old, according to the records of her adoption by her step-father.

IT is not the least of honors that have come to Miss Ellen Terry that Tennyson elaborated the part of Rosamund in *Becket* with a view to its portrayal by her.

WE, US & CO., a new comedy, has been very successful at the Fifth Avenue theatre, New York, the past three weeks, having attracted the handsome sum of \$22,800 in that time.

ANOTHER foreigner is going to test the patience of the American public with her broken English. She is announced as the Baroness Narda de Rotchkoff, of Siberia, and she is going to do *Camille* at Wallack's next Thursday afternoon.

BOUCICAULT, who is the leading performer in Irish drama of the present time, thinks the dynamiters have made it impossible to profitably produce plays of Irish life in England for many years to come. Still it may be said on behalf of the dynamiters that they are providing new themes for the future writers of Irish plays, and for this Boucicault should be grateful.

THE other day I noticed the commanding figure of Miss Helen Barry in the Vaudeville stalls—a circumstance that surprised me not a little, as I believed the lady to be far away over the sea, says a London dramatic chronicler. Everybody will welcome her back to England, especially as she is to make her reappearance shortly at the Crystal Palace.

HAS anyone yet given an adequate explanation of what must be called the depreciation of the stage? Let the number of companies which act Shakespeare be compared with those that confine themselves to light comedy, sensational play, dime-novel-like tragedy, and the like, and it will be granted that the public are gradually losing the taste for the best and highest the stage can give them and are satisfied with comparatively low elements of mimic art.

IS not the source of this to be found in the fact that the average audience goes to the theatre to be amused and made to laugh rather than to have their deeper emotions stirred?

WE go now to the theatre merely as a species of recreation. Our work for the day over, we think it pleasant to sit in a comfortable box or orchestra-chair, and for a few hours to see pretty faces and figures, listen to light easy music, and hear something that shall take our minds off our business without giving them anything serious to think about. Our physical and mental powers are fatigued and the stage is merely looked upon as a means of pleasant and innocent recuperation. We live fast and we are unable to calmly analyze or judge of the intricacies and depths of character or plot. We prefer comedy to tragedy, opera bouffe to oratorio, and farce to all.

IT was not this produced the trilogies of Sophocles and Aeschylus. Then people were careful to secure their seats early in the morning; often took their meals with them; and were delighted to listen for hours to passages which to-day would probably be called 'dry' in the extreme.

Art.

ARTISTS now concede the fact that, the simpler the array of colors, the stronger the picture will be.

THE most serious criticism that can be made of American architecture is that it lacks appropriateness, the first aim of decoration.

THE Cincinnati Art School now numbers three hundred pupils, and has the best endowment of any institution of the kind in this country.

MEISSONIER is described as "a great painter of little pictures." He is a Dutchman at heart although an artist of the French Renaissance.

FOREIGN cut glass is of a light straw color, while the American manufacture has a bluish white tint and surpasses the foreign work in brilliancy and in worth.

THE *Cercle de la Librairie* at Paris will soon open an exhibition of the designs of Gustave Doré for the illustration of books. Publishers in France and in other countries will contribute.

THE Corcoran Gallery was opened at Washington in 1874; the Museum of Fine Arts, Boston, 1876; the Pennsylvania Museum, Philadelphia, 1876; the Metropolitan Museum, New York, 1880; and the St. Louis Museum, 1881.

IT is a painful truth that not only individuals, but even whole nations, are oftentimes so enslaved to the habits of their education and immediate circumstances, as not to judge disinterestedly even on those subjects, the very pleasure arising from which consists in its disinterestedness, namely, on subjects of taste and polite literature. Instead of deciding concerning their own modes and customs by any rule of reason, nothing appears rational, becoming, or beautiful to them, but what coincides with the peculiarities of their education. In this narrow circle, individuals may attain to exquisite discrimination, as the French critics have done in their own literature; but a true critic can no more be such without placing himself on some central point, from which he may command the whole, that is, some general rule, which, founded in reason, or the faculties common to all men, must therefore apply to each,—than an astronomer can explain the movements of the solar system without taking his stand in the sun. And let me remark, that this will not tend to produce despotism, but, on the contrary, true tolerance, in the critic. He will, indeed, require, as the spirit and substance of a work, something true in human nature itself, and independent of all circumstances; but in the mode of applying it, he will estimate genius and judgment according to the felicity with which the imperishable soul of intellect shall have adapted itself to the age, the place, and the existing manners. The error he will expose lies in reversing this, and holding up the mere circumstances as perpetual, to the utter neglect of the power which can alone animate them. For art cannot exist without, or apart from, nature; and what has man of his own to give to his fellow-man, but his own thoughts and feelings, and his observations so far as they are modified by his own thoughts or feelings?—*Coleridge*.

Practical Art.

PERSPECTIVE.

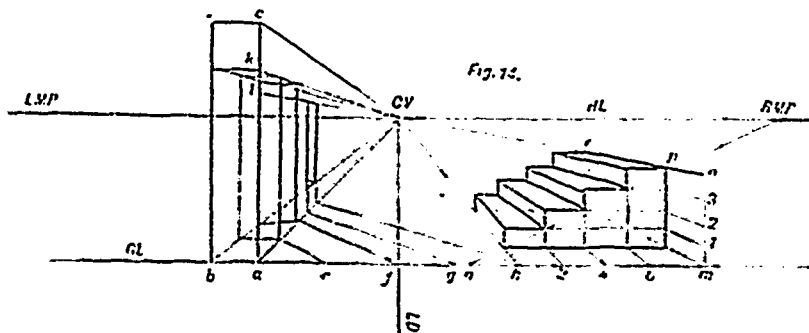
SEVENTH PAPER.

Problem 21.—Show a flight of 4 steps 8' long, 1' riser, 2' tread, having one end facing spectator and ascending to the right, near left-hand of base, being 5' to the right, and 2' within.—Figure 14.

Represent the base of this group of steps in the usual way; divide *h m* into divisions of 2' each, and *m o* into divisions of 1' each, and from these points carry lines towards *C V* as far as front horizontal and right-hand vertical edge; from these points draw horizontal and vertical lines to obtain profile of near end; from near left-hand corner of top step draw a line to *C V*, and cut it at the far end by a horizontal line from *r*. Work down from this corner by vertical and horizontal lines to cut the lines from angles of near end of steps to *C V*, to obtain profile of far end. The line *r R M P*, used to find the far right-hand corner of base, happens to touch the inner angles of near end of steps, but that is only a coincidence and no attention should be paid to it, as, if the measurements were slightly changed, it would occupy a different relative position.

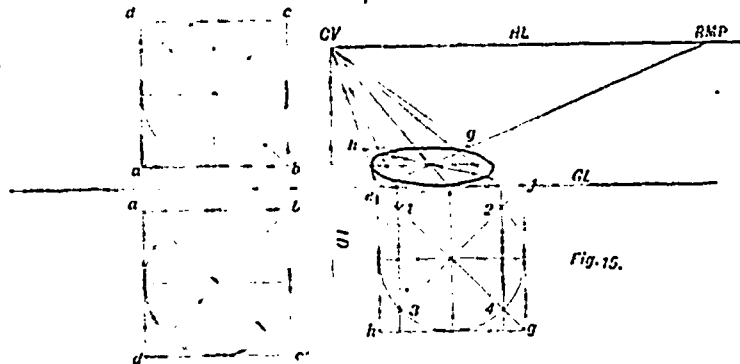
Problem 22.—Represent in perspective a wall 10' high, 2' thick, retiring at right angles to *P P*, and touching it *6'* to the left; in it, 3' from *P P*, is a doorway 3' wide, 8' high, and 2' beyond, a window, 3' x 5', the sill of which is 2' from the ground.—Figure 14.

The points *a, b, d, c*, represent the end of the wall where it touches the *P P*; to the right of *a* make *a e* equal to 3'; *e f*, 3', the



width of the doorway; *f g*, 2', the distance between door and window; *g h*, 3', the width of window; lines from these to *L M P* give, on a *C V*, these different measurements; *a k* is 8', the height of door; *a l*, 7', the height of the top of window; and above *a*, on a *c*, is a point 2' distant, a line from which gives the bottom of the window. It is another of those awkward coincidences, being in the same line as *b C V*, and, unfortunately, it has not been indicated by a letter or figure; however, no doubt this and the completion of the figure will be understood without any further explanation.

We are now ready to take up the perspective of the circle and right lined geometric figures, having their sides or edges in any other position than parallel or perpendicular to *P P*. It might by some be deemed advisable to postpone explaining the method of representing them until the perspective of rectangular solids had been fully considered, and make them a means of introducing the rules of angular perspective. This course would possess certain advantages over any other, but it is not followed here, because



the object of these papers is to supply those studying for the coming spring examinations, with information that will be helpful, and will supplement the work of the teacher. Text books are rightly considered a necessity in public and high school work, and the reason why they are not adopted in Art schools, is, perhaps, the difficulty in obtaining suitable ones. These articles may, to a certain extent, take the place of a text book on Perspective, to those into whose hands they may come, and for this reason it is necessary to treat first of the work most likely to be called for at an examination. By

following the course suggested above, the circle, triangle and polygons might not be taken up in time to be of use.

In order to find the position of the corners of any of these right lined figures, we must adopt some method, that will enable us to use the rules of parallel perspective, as we are not supposed to know anything of vanishing points of lines retiring at angles other than 45° and 90° with *P P*, or the method of obtaining them. With regard to the circle when viewed obliquely, it appears as an ellipse, and to draw this properly we must obtain the position of certain fixed

points in the circumference of the circle, which we can represent in perspective, and use them as guides in drawing the curve.

The most convenient method for this purpose, is the use of a *plan* of the object placed in its proper relative position as regards the *P P* and *G L*, and drawn on the scale mentioned for the working of the problem. A *plan* is a drawing, showing the principal lines in the position in which they really are, and is such a view as would be obtained from a balloon passing over the

object. When the surface to be delineated, is of a considerable size, the drawing is called a *map*. Thus we have a plan of a building, and a map of a town or country.

By referring to fig. 15, it will be seen that if a circle is enclosed in a square, and the diameters and diagonals of the square are drawn, they will divide the circle into eight equal parts, and these points of division are such as can easily be shown in perspective, for the lines by means of which they are obtained can be drawn without any difficulty. If a circle 8' in diameter was placed with its centre *6'* to the left and 5' back, it would evidently occupy the position of that contained by the square *a b c d*, the centre of which is *6'* to the left of *L D*, and 5' beyond the *G L* or *P P*. This is as it would appear from a point above it. To the right of *L D* the line marked *G L* is the line where *P P* is standing, and the same line to the left, represents the top edge of *P P*. It will be noticed that the *H L* is omitted to the left of *C V*, because it would not be seen. But it would be inconvenient to have the plan in this position as the lines of the perspective drawing would be mingled with those of the plan, and cause confusion, so we must place it somewhere else taking care that its centre is the same distance from *L D* and *G L* as before. If it was rotated on the *G L* it would be represented by *a' b' c' d'*, and this new position will fulfil all necessary conditions. This explanation is given that it may be understood why the plan is placed apparently on the near side of the *P P*, instead of beyond it.

Problem 23.—Height, 6'; distance, 16'; scale, 1/96.—Show in perspective a circle of 3' radius lying on the ground and touching *P P* in a point 5' to the right.—Fig. 15.

Arthur J. Reading

The High School.

ANTIBARBARUS.

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

Accomplish, *efficere, consequi aliquid, not praestare.*

Account of, *hoc in te reprehendo, not propter hoc te reprehendo, per me (not propter) licet.*

Accustom one's self, *assuescere* (never with *se*) *aliqua re. i. e., to something* (not *consuescere*, which in classic prose is joined only with the infinitive).

Advanced age, *aetate provectum esse, not aetate provecta esse.*

Advise against, *dissuade from, dissuadere aliquid or de aliqua re or nequis faciat, not dissuadere alicui aliquid.*

Advocate, *patronus (causae), not advocatus—* who through his presence at court aided the accused (*adesse alicui*).

Affirm *dicere, not contendere* (contend in strife).

Age, of Pericles, *temporibus* (not *tempore*) Periclis; the greatest man of his age, *summus vir illius aetatis, not suae aetatis*

Aim, object, end, with (or to) what? (*quo consilio? Quid spectans? Not quem ad finem? (How long? To what point?)*)

Allude to, *significare aliquem (aliquid), describere aliquem, significatione appellare aliquem* (not *alludere, to play with, to joke, C. Dat., or ad aliquem*).

Also, at the beginning of the sentence, *atque, etiam, nec—non, not etiam.* Also not, at the beginning of a new thought, *nec, not etiam non; emphatic ne—quidem; and also not, ac ne—quidem, not nec—quidem.*

Altar, *altaria—um, in classic prose in plural only.*

Altogether too, *nimis or nimium, not nimis* (which is adjective).

And not even, and also—not, et or ac ne—quidem, not nec—quidem.

Angry, *iratum esse or succensere, not irasci* (to be wrathful).

Answer, *respondere, not responsum dare, which is said only of oracles or jurists.* He answered (in O. recta), *inquit, not respondere.* To reply to a person, *respondere alicui, but ad aliquid or alicui rei.*

Antiquity, not antiquitate but *antiquis temporibus.* When it equals "men of antiquity," *veteres* (*dixerunt*), *antiqui* (*dixerunt*), not *antiquitas*, which equals "the ancient age" (as a period), therefore mementoes of antiquity (*antiquitates*), *monumenta antiquitatis.*

Appeal to, e. g., the tribunes, *appellare tribunos plebis, not app. ad tr.; the appeal, appellatio tribunorum* (*obj. gen.*), *provocatio ad populum.*

Appear, often not expressed, e. g., to appear as praiser, *laudatorem esse; as defender, defendere aliquem, not laudator exstitit; as orator, aggredi*

ad dicendum, not surgere (*opp. sedere*) *ad dicendum* (used of one who has been hitherto sitting).

Apennines, *Apenninus, not in plural.*

Applause, approval, *plaudere, not applaudere, which is uncommon and ante-classical; applause, plausus, not applausus, which is not a Latin word.*

Arbitrary, *ad arbitrium, arbitrio, ad libidinem factus; or through gen. arbitrii, libidinis, not arbitrarius* (ante- and post-classical).

Arise from, *oriri ex, not exoriri.*

Arm, in many connections not to be expressed by *brachium*, e. g., to bear some one in the arms, *in manibus aliquem gestare; to hold in the arms, aliquem complexum tenere; to die in the arms, in alicuius complexu mori.*

As, in such expressions as "He distinguished himself as orator," *eloquentia valuit, dicendi arte, or eloquentiae laude floruit, not orator floruit. As C. says, ut ait Cicero, not ut Cicero ait.*

Assailant, *aggressor, oppugnator, or through relative clause, not invasor* (which is as late Latin as *invasio*).

Attack, *impetus, only in the forms impetus,—um, —u, not impetui, impetuum, impetibus, which must be supplied through incurio.*

Audience to, *sui potestatem facere alicui, or colloquendi copiam facere, not audientia, which occurs only in the expression audientiam facere alicui, or orationi alicuius, to procure a hearing for some one.*

Author, *scriptor, not auctor.*

Avoidable, *qui, quae, quod evitari potest, not evitabilis* (post-classical and poetical).

Avoidance, *vitatio, devitatio, declinatio, not evitatio* (post-classical).

Banish, *in exilium eicere, expellere, not mittere.*

Before, many years before, *multis annis ante, not antea or prius; as before said, ut supra diximus, dictum, not ut ante dictum.*

Believe me, *mihī crede, not crede mihī, which belongs to colloquial language.* Cicero in speeches and essays always uses *mihī crede.*

Blinded, *oculis captus, not caecatus or occatus, which in classical prose were used only figuratively.*

Bombast, *bombastically, inflatum orationis genus, exaggerata alicuius oratio, not tumor verborum* (post-classical); *inflato genere dicendi uti, not tumide dicere.*

Break out into words, *dicere coepisse, or simply, dicere, into tears, lacrimas effundere, into laughter, cachinnum tollere, not crumpere, in verba, lacrimas, risum.* War, wrath breaks forth, *bellum, ira evadescit.* But *risus, vox, fletus, seditio, crumpit.*

Breast, figuratively, *annus, not pectus, which is used very seldom figuratively* (*toto pectore amare, cogitare, tremere*), strong (of an orator), *latera bona.*

Bribery, *corruptela, largitio, ambitus* (for office), not *corruptio, which in Cicero is used only passively, lost condition, etc.*

Bridge, build over the stream, *pontem in flumine facere not trans flumen.*

Briefly, *denique* (in enumerations), *ne multa, quid plura? Sed quid opus est plura? Not breviter, which stands only in connection with verba dicendi, e. g., breviter narrare, exponere, ut breviter dicam.*

Bad custom, *res mali or pessimi exempli, consuetudo mala, mos pravus; abuse, vitium male utentium, etc., not abusus, which is a law term.*

Busy one's self about, *studere.*

By no means, *minime; not in the least, ne minimum quidem, not ne minime quidem, nor non minimum, not a little.*

Call (loudly), *clamare, not vocare, which = call to one's self. (?)*

Capacity, *captus, but always in the expression ut captus est alicuius, other wisemens, intelligentia, not capacitas, which means the capacity of a vessel.*

Capital, *urbis nobilissima, primaria; caput only with the genitive of the land or the people. Rome as capital, simply urbs.*

Carry off the victory in the fight, *proelio vincere, not pugnantem victoriam reportare. Over some one, victoriam reportare ab aliquo, not de aliquo.*

Carry out a plan, *propositum* (but without genitive, adjective, or pronoun), *peragere, consilium exsequi, not consilium perficere.*

Cease from, *mittere, omittere, praetermittere, desinere, et al., not intermittere, which = to lay something aside for a shorter or longer period—* e. g., *studia. I cannot now refrain from— = facere non possum quin.*

Challenge, *Invitatio, evocatio, or by verbs* (*hortari, provocare, etc.*), *not provocatio, which in classic prose means appellation.*

Cite a place from Plato et al., *locum Platonis afferre, laudare, not citare, which means "call forth a witness" (testem).*

Classic. 1. Concerning the Greek and Latin e. g., the classic writers, the old classics, *veteres scriptores* (*Graeci et Latini*); 2. Meaning "choice," equals *optantissimus, praestantissimus; hence, in this meaning, scriptores, optimi, praestantissimi. Do not use classicus.*

Comical, *ridiculus* (*homo ridiculus*), not *comicus, which = appearing in comedy, senes comici.*

Command, *iussum, but usually only in the plural: on command, iussu, iusso.*

Commit suicide, *mortem sibi consciscere, manum sibi afferre, se interimere, not se interficere.*

Communicate, something to some one—i. e., to narrate, *narrare, tradere alicui aliquid, certiore facere aliquem de aliqua re or alicuius rei, not communicare aliquid cum aliquo, which means to share with any one for common use.*

Complain. To some one about something, *expostulare or conqueri cum aliquo de aliqua re, not apud aliquem.*

Compound words, *verba copulata, iuncta, coniuncta, not composita, which is well-ordered words.*

The Public School.

PRIMARY ARITHMETIC.

BY ELLA NISSLEY, GENEVA, O.

(Continued from a previous issue.)

I DO not know the opinion of the best primary teachers in regard to the matter, but it has been my experience that introducing too many signs at first is liable to confuse the pupils, and for that reason I have succeeded best when I did not require them to express on their slates these mental exercises of division and multiplication until they had become so familiar with the signs of addition and subtraction that the introduction of two more signs would not confuse them. Let the pupils actually perform every operation indicated on their slates, and, for this purpose, blocks, skewers, or match-sticks are very convenient, and, when they see for themselves just how the results are obtained, the change from the concrete to the abstract is very easily accomplished. When they have become familiar with all the simple calculations embracing the nine digits, let the teacher tie some of these little sticks that they have been using, into bunches of ten sticks each, and show them the difference between 1 bunch and 1 stick.

Now draw two vertical lines on the board, place a letter B over the one at the left and tell the children that it stands for bunches, and then place an S over the line at the right, and tell them that means sticks, and that they are to write all the bunches on the line B, and all the sticks on the line S.

Let the teacher handle the sticks at first, and call on different members of the class to write the numbers on the board. When the lines are full, erase, and draw two more, this time making the lines light and omitting the letters, and the next time she can omit the lines also, and the children understand that bunches are always written at the left of sticks, so that they will know where to find them, just as their teacher knows where to find each one of them—in his own seat and not in that of his neighbor.

Now tell them that we will call ten teen, and with a little explanation they will be able to read all the "teens," and in the same manner they may be led on from twenty to one hundred. Then tie ten bunches into a large bunch; tell them its name and where they can always find hundreds if they keep in their places. Call different members of the class to place on the table large bunches, small bunches, and single sticks, in their proper places, and just as many of each as they choose, and let others read the numbers from the sticks, and still others write them on the board. After hundreds, the sticks can safely be dispensed with, and, with a little explanation, the children will understand the higher orders as they reach them. I would let them use the sticks until they understand carrying tens and borrowing tens. For instance, give the children two numbers to add—say, 26 and 18. Let them place on their desks 2 bunches and 6 sticks, and below these 1 bunch and 8 sticks. Now let them write those numbers on their slates, just as they have the sticks on their desks. Ask how many single sticks they have, and they will tell you "fourteen." "Can you get a bunch out of fourteen sticks?" "Yes, ma'am, and have four sticks left." "Very well, tie up the bunch and put it with the hundreds, and then see what you have." They do so,

and find that they have four bunches and four sticks. Now let them add, looking at the figures on their slates instead of at the sticks, and they will soon know why and how they carry tens.

Next we want to know how to borrow tens. I take two bunches and three sticks and place them on my table. "Now, Mary, you may come and hand me six single sticks from the table." Mary comes, looks at the sticks, and says, "I can't. There are only three." "Yes, but I must have 6 sticks. Who will give me six sticks? Well, Carrie, you may try." Carrie comes and says, "I can get some out of one of the bunches." "Very well, untie one of the bunches. Now it is not a bunch at all, but falls into—how many pieces?" "Ten." "Yes, ten single sticks, and, with the three sticks you had before, they will make—how many single sticks?" "Thirteen." "Now give me 6 sticks, and how many single sticks have you left?" "Seven." "And what else have you?" "One bunch." "Yes, one bunch and seven sticks. Now I will write on the board just what I had on my table—2 bunches and 3 sticks. How many did I want Carrie to give me?" "Six." "Now I will put the 6 right here, so that we can remember how many I wanted. What did she have to do before she could give me six sticks?" "Untie a bunch."

"Now, if we untie one of these two bunches, we will have just one whole bunch there, so we will cross out the 2 and place 1 above it, so that we shall remember that we have just 1 whole bunch. Then the bunch that she untied made 10 sticks, and with the 3 that she had here?" "Thirteen."

"Now, how many did she give me?" "Six." "And how many single sticks left?" "Seven." "Yes, and we will put that right under this line, and now how many whole bunches have we left?" "One." "So, we have under this line 1 bunch and 7 sticks—just the same that Carrie had left on the table."

After a few such exercises the children have no more trouble with borrowing tens.

This method, it is true, does not explain the process which borrows 1 from the next higher order of the minuend and then adds 1 to the next higher order of the subtrahend. Perhaps some one could make that process clear to the minds of children; but I should fail, for the reason that it has never yet been made clear to my own mind. A method that authorizes me to borrow a cup of sugar from one neighbor and then square the account by paying it to another neighbor, will, it is true, leave the correct result with me, as I keep nothing that does not belong to me. But I think I would be likely to cause trouble in the neighborhood; and I do not believe I could induce even a six-year-old boy to lend his jack-knife on those conditions; and it seems to me that, if the honest nine digits had possessed the power of speech, they would long ago have entered their protest against that kind of neighboring.

The children can make their own multiplication table, and at this point the signs of multiplication and division can be introduced. When a child finds that $2+2+2=6$, he can easily be made to see that he takes 2 just three times. Then show him that it is a shorter way to write it $3 \times 2 = 6$. Let him use the sticks until he reaches numbers so large that the sticks become burdensome, and then let him make marks in groups on his slate, adding the groups and writing the results first by addition and then by multiplication. In this way he will make his own multiplica-

tion-table and will commit a good share of it to memory while making it. We have found singing the table to be a great help to the children in memorizing it. Division may be taught as the reverse of multiplication, or as a short method of subtraction.

Let the children take two measures, one of which is much larger than the other, and see how many times they can fill the smaller one and pour its contents into the larger. Suppose that the sixth time the smaller one is completed, the larger one is found to be just full; then a few words will explain to them what contains means, and they know that the larger measure contains the smaller one just six times.

Then they will also see that if taking three chestnuts two times will give them six chestnuts, six chestnuts must contain three chestnuts two times. Now let them call the sign of division contains, and they will understand how to express on their slates *six contains three two times*. ($6 \div 3 = 2$.) Carrying tens to the next higher order in multiplying, and reducing them to the next lower order in dividing, will not be difficult for the pupils to grasp after they have become perfectly familiar with carrying and borrowing tens in addition and subtraction, and understand how one unit of one order makes ten of the next lower.

We do not present this as the best method of teaching Primary Arithmetic, but simply as one of the many stepping-stones on the way toward finding the best method. But we believe that the best method, when found, will be that one which most easily renders the first steps in arithmetic as clear to the mind of the six-year-old as advanced mathematics is to the mind of the advanced student. We believe that this wonderful "walking interrogation point" demands the *why* as well as the *what*. Answer the *what* and you do well; answer both the *what* and the *why*, and is it not better?

SALOMON REINACH writes from Paris to the *Action* strongly advocating the proposal to institute in New York a museum of casts and photographs, and copies of the painting of the Old Masters.

O. B. FROTHINGHAM, in *The Century* for March, expresses the belief that the present worship of Shakespeare will not disappear until the doctrine of evolution shall come to prevail, "for this doctrine tends to remove the prestige of individual intellects, takes mountains from their place, and substitutes a slow, gradual advance along an inclined plane for the invasions of genius." Mr. Frothingham very kindly suggests that the time when there shall be a general acceptance of the doctrine may not arrive within a computed distance of years.

ONE must be very patient to wait without a murmur, and be very profitably employed to wait at all, for the appearance of contributions in some of the larger magazines and weekly papers. A correspondent writes that a certain famous young people's weekly accepted from him and paid for a story, three years ago, which has not yet been published. This recalls the statement of a New England writer that he once waited *five* years for the appearance of one of his articles in *Wide Awake*, and a friend of his waited *twelve* years for the publication of a story accepted at the office of the *Atlantic Monthly*.—*The Literary World*.

Educational Intelligence.

VICTORIA TEACHERS' CONVENTION.

A JOINT convention of the Teachers' Associations of East and West Victoria, was held in Lindsay on Monday and Tuesday, March 2 and 3, and was probably more largely attended than any former convention held in the county. On Monday forenoon, after the President's address, J. H. Knight, P.S.I., read a paper on reading and spelling, which was followed by an interesting discussion, after which the remainder of the forenoon was devoted to business, the associations sitting apart. After noon the subject of Literature was discussed by J. C. Pomeroy, M.A., of Oakwood High School, who read a paper urging the necessity for giving more attention to the subject, and illustrated his method of teaching by a few examples from the *Lady of the Lake*. Dr. McLellan then followed on the A, B, C, of Arithmetic, giving clearly and fully his ideas as to how first notions of number should be imparted. Miss C. Holtorf then read a carefully prepared paper giving an account of a "Trip to Germany" and her impressions of places visited there.

In the evening Dr. McLellan delivered a lecture on "Education in Ontario" in the Opera House, to a large audience. In the course of his remarks, he compared the condition of popular education in the Province at present with its condition 20 or 30 years ago, and showed that great progress has been made. He also made comparisons between Ontario and other places that went to show that in some respects at least we are at the head. The lecture was attentively listened to, and could not fail to excite greater interest on the part of those who heard it in the work of education, as well as to render those actively engaged in it more earnest and enthusiastic workers.

On Tuesday morning Dr. McLellan spoke on the "Art of Questioning." He confined himself entirely to the objects of questioning, eight of which were referred to. He laid special stress on the use of questioning as a means of imparting knowledge, of fixing knowledge, and of exciting interest and sympathy. H. Reayni, P.S.I., gave a brief historical sketch of the entrance examination, referring to the condition of the high schools before it was instituted.

In the afternoon Dr. McLellan took up the subject of Analysis at some length and W. O'Connor, M.A., of Lindsay High School, made a few remarks on teaching natural science, in which he commended the action of the minister in making physics obligatory for teachers' certificates. Resolutions were then passed approving of the action of the Minister in appointing "Directors of Institutes" and of the proposition to institute a course of private reading for teachers. It was resolved by the E. Victoria Association, that it would hold its convention in the fall, at the same time and place as the west provided one of the directors could be present.

We learn with pleasure that Clinton high school is in such a state of excellence that it is likely soon to attain the dignity of a collegiate institute.

New professorships in medical science are to be created at the University of Oxford in response to a general demand that more attention be given this branch of education.

THE recent alterations and additions to the building, and the enlargement of the grounds, of Port Hope High School, are improvements thoroughly appreciated both by teachers and students. The attendance at this institution has so increased of late that before long it will take rank as a Collegiate Institute.

THE attendance at the various German universities during the summer semester of last year was: Vienna, 4,706; Berlin, 4,145; Leipzig, 3,230; Munich, 2,511; Prague, 2,000; Halle, 1,716; Tubinger, 1,500; Breslau, 1,481; Bonn, 1,241; Wurtzburg, 1,232; Gottingen, 1,100; Heidelberg, 989; Konigsberg, 925; Freiburg, 924; Jena, 636.

SO far as the system of free text-books to children has been tested in Massachusetts, it is found that it results in a largely increased attendance in the public schools and it is, therefore, regarded as a most efficient aid in reducing the percentage of illiteracy. The *Christian Union* states that no city which has adopted the system has abandoned it.

THE growth of the Free School in popular favor has had a striking demonstration in Berlin. In 1883, 122,098 children received gratuitous instruction as against 53,783 in 1872, while only 34,646, or 22 in 100, children paid for instruction in 1883, as against 33,993, or 39 in 100, in 1872. At the present time about four fifths of the Berlin children are educated at public expense.

DR. MASSON, professor of English literature in Edinburgh University, has severely censured Froude for some of his publications as the literary executor of Carlyle. Dr. Masson declares the sepulchre of Carlyle has been profaned, and maintains that if Carlyle had the right to leave himself for dissection he had no right to leave his wife also for dissection. He suggests that Mr. Froude has excited great indignation in the spirit world.

THE fourth annual conversation of the Toronto Teachers' Association took place at the Normal School building last Friday night. The musical part of the programme was the best the teachers have yet given their friends. The Convocation Hall was crowded to the doors. Mrs. Agnes Corlett-Thomson's numbers were received with warmth and applause. Mr. Gorrie, Miss Berryman, Mr. Hurst and Mr. Theo. Martens, together with Mr. J. F. Thomson, who had the programme in charge, acquitted themselves well.

A GENTLEMAN prominently identified with Union College recently informed a *Union* reporter that considerable surprise had been expressed by Union College men in regard to the course of the Rev. Dr. E. N. Potter since his acceptance of the presidency of Hobart. Many of the Union men expected that Dr. Potter would tender his resignation as a trustee of Union at the first opportunity, but no action of this kind was taken by him at the recent meeting of the trustees in Albany. The Union men say that Hobart is a rival of Union, that there is competition between them, and that Dr. Potter, as president of the college at Geneva cannot be expected naturally to work for Schenectady when the interests of the two colleges clash. Dr. Potter's resignation will not be asked for, but according to the statement furnished to the reporter by the gentleman there is a strong belief that Dr. Potter should tender his resignation.—*Schenectady Union*.

A SCOTTISH exchange gives the following information:—"The Townhead Public

School, Glasgow, officially opened on Friday night, is a notable addition to our school architecture. Everything about it is on a big scale. It is, in fact, the biggest school in Scotland, the Neilston Institution in Paisley being next. It has school places for 1,627 children, and its cost to the ratepayers is no less than £23,000! Glasgow is now able to tick creation in the extent and expense of its Board schools. Last year there were half a dozen Board schools here, each with over a thousand children in attendance. Oatlands boasted the highest average with 1,432 scholars; Henderson Street had 1,137; Bishop Street—the most expensive school in Christendom—1,111; Crookston Street, 1,108; Camden Street, 1,039; and Springburn, with 1,005. Following closely on these came Tureen Street, with 995; Overnewton, 984; Woodside, 957; Abbotstord, 940; Dennistoun, 985; Oakbank, 913. These dozen schools have cost over a quarter of a million sterling! I should like to know if any other Board in Britain can beat this record.

AT the educational congress held at New Orleans on the 23rd-28th of last month, a paper by Mr. Samuel Woods, M.A., principal of the Ladies' College, Ottawa, was read on "The Education of Indians." In preparing his paper Mr. Woods first takes up the influence exerted on the Indians by the missionaries of the Anglican, Roman Catholic and Methodist Churches; by treaties which were not allowed to be broken; by the Dominion and Provincial license laws; by the Hudson Bay Company's officials, and by the example in the new province of the Dominion of the Indians of the older ones in leading them to the habits and customs of civilized life. Mr. Woods next takes up the education question proper, at the date of Confederation—1867—and shows the immense advances which have been made; that at that time there were only 51 Indian schools, and those situated in Ontario and Quebec, attended by not quite 1,700 pupils, while in 1884 there were 150 schools with over 4,300 pupils in attendance. This progress Mr. Woods traces from its beginning in each of the Provinces of the Dominion, and then proceeds to notice the educational advantages provided for the benefit of these wards of the nation in the establishment of farms of instruction and industrial schools and in the exceedingly liberal nature of the enactments of the several Acts of Parliament, while many inducements are held out to the Indians to qualify themselves for the active duties and the responsibilities of citizenship. In the form of an appendix, Mr. Woods furnishes a list of schools supported by the various Churches at the date of Confederation; the present condition of about two hundred ex-pupils of Indian schools; the establishment of schools year by year from 1866 to 1884 under the Dominion Government; the agricultural statistics of the industrial farms and statistics of the Indians of the Dominion for the year 1884; the clauses of the Indian Acts bearing on enfranchisement and municipal privileges; and, finally, the condition of the Indian funds, showing that the Department is self-sustaining, and has now a capital of nearly three and a half millions of dollars. It is the intention, we believe, to publish in connection with the congress all the papers presented in the form of a Blue Book at Washington; and thus the American public will obtain a succinct view of how our Indian problem has been successfully worked, and perhaps, if not yet too late, they may learn a useful lesson for the management of their Indians.

Personals.

GENERAL.

IT is said that the late wife of James Russell Lowell was the critic whom he most heeded in his literary work.

THE English papers announce that Messrs. Blackwood have already made a profit of not less than £8,000 on their life of George Eliot.

MRS. ELIZA BLAINE WALKER, the wife of Major Walker, a retired army officer, and the sister of ex-Senator James G. Blaine, died in Baltimore last week.

MR. ANDREW LANG, it turns out, is the author of *Much Darker Days*, that parody on Mr. Conway's last novel. Copies of the book have now found their way to America.

DR. PUSKOV'S Life says the *N. Y. Tribune*—will not be published for at least three years to come. He left his vast collection of letters and papers in a state of indescribable confusion.

NELLY MARSHALL MCAFEE, the poet-novelist of Kentucky, has just completed a short serial of great interest, entitled "The Abbot of Bernis," which will soon appear in the columns of *The Current*.

THE memory of Jacob Grimm, the great German story-teller, is to be honored by the erection of a monument in his birthplace Hanau. The centenary of his birth has just been celebrated all over Germany.

CHARLES G. D. ROBERTS, the Canadian literator,—says *The Current*, has been passing several months in New Brunswick collecting literary material for extended work similar to his "Echoes from Old Acadia."

RICHARD GRANT WHITE, who has been confined to his house, No. 330 East Seventeenth-street, with severe illness for several weeks, is slowly improving. His physician, however, would not permit him to receive visitors.

MR. THEODORE ROOSEVELT has written an article on "Politics in America," which will be published in the *Century*, and a book on *Ranch Life in the West*, which is now in the press of G. P. Putnam's Sons, the firm of which he is a member.

THE Very Rev. Edward Henry Bickersteth, who has been promoted to the Bishopric of Exeter to succeed Dr. Terroule, who has been made Bishop of London, is the author of the poem, "Jesus Christ, the same yesterday, to-day and forever."

CHARLES O'CONNOR'S library is to be sold at auction by Leavitt & Co. early in the present month. It numbers about 5,000 volumes, and includes nearly all of his law-books, except those lettered on the back "My Own Cases," which were left by will to the New York Law Institute.

LEO XIII. evidently desires the most to be made of the Vatican archives. He has reduced the length of vacations given to the employes who are working on them, and in various other ways indicated his appreciation of the urgent importance of issuing historical works based upon the genuine documents contained there.

EMILE ZOLA is thought to be the most successful of living authors, so far as financial returns are concerned. His income from

his literary work has averaged about sixty thousand dollars a year for the past five years. This despite the efforts of several governments to suppress the circulation of his works.

BRIGADIER-GENERAL HAZEN has been court-martialed on charges of conduct prejudicial to good order and military discipline, in having officially and publicly criticized the action of the Secretary of War, for not following his recommendation to send an expedition to the relief of Lieutenant Greely, in September, 1853.

As an American magazine has just offered Tennyson one thousand dollars for a four-verse poem, or more than three times the sum Goldsmith received for "The Vicar of Wakefield," and as he probably reads none of the severe criticisms on his work recently passed by the American press, he, doubtless, is not conscious of any loss of popularity.—*The Current*.

JULIAN HAWTHORNE is an athlete and a sportsman, fond of long walks and out-doors. He talks in low tones, both on the lyceum platform and off it. "His manners," says the *Portland Transcript*, "are private and reserved, without shyness or a recitation. He is about five feet eleven inches high, and weighs about one hundred and seventy-five pounds. His friends say that he can prepare more 'copy,' and feel less tired over it, than any other American author."

IT has been stated, with some show of authority, that General Grant's autobiography is to be published by Mr. Charles L. Webster, the publisher of Mark Twain's books, and not by the Century Co. It may be that Mr. Webster will be the General's publisher, but up to the time of our going to press, the contract had not been signed. General Grant has suspended work upon his book. Until a few days since, he wrote energetically several hours a day.

THE popular interest in England with regard to the career of the late General Gordon is indicated by the large number of books which have been written about him, among them Forbes' *Life of Chinese Gordon*, Hake's *Story of Chinese Gordon*, *Gordon in Central Africa*, *Gordon's Letters from the Crimea*, *Gordon in China*, *Gordon's Reflections in Palestine*, with doubtless several more to follow.

AMID current rumors of Ismail Pacha's intrigues to regain his Khedivate, it is interesting to remember that Gordon, a few days before setting out for Khartoum, said: "If Egypt is to have a ruler capable of maintaining a really efficient native government, Ismail must be the man. He is the worst-used man in Europe. He was the best and most capable ruler Egypt ever had, with all his faults, and the calamities we are witnessing are the natural consequences of the withdrawal of his master-hand."

LORD LYTON (Owen Meredith) will soon bring out a new poem, somewhat in the manner of *Lucile*. *Glenavrie*, or *The Metamorphosis* will be its name; and it will be published in London by Murray, in six monthly parts, while by an arrangement with the author, Messrs. Appleton will be its sponsors in this country. The story, it is said, is wholly modern, possesses a strong narrative interest, and contains some parliamentary portraits of contemporary English statesmen, as well as sketches of London life.

LIEUTENANT-COLONEL PHILIP EYRE, who lost his life in the battle of Dulka, was once a clerk in the Dublin post office. He was careless in his work and one day the head of the department angrily told him he never would earn his salt as a clerk. "What shall I do then?" asked Eyre. "Better go and enlist. You'd make a good target." Next day Eyre did not put in an appearance, but late on the second came strolling in leisurely. "Well, sir," demanded the enraged chief, "explain why you were absent without leave yesterday." "Oh, I took your advice and enlisted. Thought I'd just call in and bid you all good-bye!"

WHILE the world seems willing to forego discussion of George Eliot's relations to Lewes, and concedes to her husband and biographer, Mr. Cross, the privilege of withholding from the public any information regarding the matter, it does not condone her offence, as may be judged from recent expressions. The London *Saturday Review's* remarks may be taken as an example of the general trend of current opinion "For ourselves," it says, "we like no part so little as that of 'unco guid.' George Eliot stood or fell to her own master, not to us. But we shall only say that when third persons speak of 'Mrs. Lewes,' of 'wife,' and so forth, in reference to this connection, they not only debase the moral currency, but, taking the matter out of debatable points, indorse a deliberate literary and historical falsification. It is no more true that the author of 'Adam Bede' was Mrs. Lewes than it is true the author of 'Adam Bede' was Joseph Liggins."

OLIVER WENDELL HOLMES wrote to the committee in charge of the unveiling, at Portland, Me., of the replica of the Westminster bust of Longfellow: "Of all the marbles that fill Westminster Abbey with the glory of great memories, not one bears one speaking a language so eloquent as that which is faithfully reproduced in the bust before us. For it announces itself as a pledge of brotherhood recorded in the most sacred shrine of a great nation with which we have sometimes been at variance, but to whose home and race our affection must ever cling, so long as blood is thicker than water. The seemingly feeble link of a sentiment is often stronger than the adamant chain of a treaty. It is the province of literature, and especially poetry, which deals with the sentiments common to humanity, to obliterate the geographical and political boundaries of nations, and make them one in feeling. The beautiful tribute of Englishmen to an American poet, giving him a place in their proudest mausoleum, by the side of their bravest, noblest, best, greatest, is a proof of friendship and esteem so genuine that it overleaps all the barriers of nationality." John Greenleaf Whittier also sent a letter on that occasion, as follows: "The gift of the Westminster Abbey committee cannot fail to add another strong tie of sympathy between two English-speaking peoples. And never was a gift more fitly bestowed. The city of Portland—the poet's birthplace, 'beautiful for situation,' looking from its hills on the scenery he loved so well, Deering's Oaks, the many islanded bay and far inland mountains, delectable in sunset, needed this sculptured representation of her illustrious son, and may well testify her joy and gratitude at its reception, and repeat in so doing the words of the Hebrew prophet: 'O man, greatly beloved!—Thou shalt stand in thy place.'"—*New York Tribune*.

Official Regulations.

REGULATIONS RESPECTING TEACHERS' CERTIFICATES FOR 1885.

(Continued from last issue.)

IV. FIRST CLASS CERTIFICATES.

17. IN order to be qualified to receive a First-Class Certificate, the candidate must have obtained a Second Class Certificate, and must have passed such professional and non-professional examination for First-class Certificates as may be prescribed.

18. Graduates in Arts, who have proceeded regularly to their degrees in any university in the British Dominions, and who produce satisfactory evidence of having taught successfully for one year, and satisfactory proof of good character, may be admitted to the examination for First Class Certificates without previously obtaining Third and Second Class Certificates.

19. The non-professional examination for Grade C must be taken before the Candidate is eligible to write for a higher grade, provided always that the examination for the higher grade may be taken in the same year, and before the results of the examination for Grade C are ascertained.

20. After having taken a First Class Grade C the Candidate is then eligible for Grade B or A, in which the following option is allowed:—(a) English and Literature with History and Geography, or (b) Mathematics.

21. The Department will accept the following examinations according to the curriculum of the Honour courses prescribed by the University of Toronto, or the curriculum of equal standard in any college possessing University powers in the Province of Ontario; or in the University of McGill College at Montreal, as equivalents for the non-professional examination as hereinafter mentioned, namely:

(a) For Grade B, first-class honours taken in the first year in any one of the departments of Mathematics, Classics or Modern Languages; or First Class Honours taken in the second year either in the department of Natural Science, or that of Mental and Moral Science and Civil Polity.

(b) For Grade A, First Class Honours taken in the second year either in the department of Classics or that of Modern Languages, or First Class Honours taken in the third year either in the department of Natural Science or that of Mental and Moral Science and Civil Polity; provided the Candidate also passed the full examination prescribed in the year in which honours are accepted as above.

22. The Professional Examination for all Grades of First Class Certificates will be the same. Papers will be required on the following subjects:—

1. Education, viz.: (a) *Education Methods* (the candidate may consult the following works:—*Teacher's Manual of Method and Organization*, by Robert Robinson, Inspector of National Schools, Ireland; *Methods of Instruction*, by J. P. Wickersham, A.M., Principal of the Pennsylvania State Normal School; Jewell on *School Government*; *Lectures on Teaching*, by J. G. Fitch, M.A.); (b) *History of Education* (the following works may be consulted: *Essays on Educational Reformers*, by Robert Henry Quick, M.A.;—*Practical Educationists and their Systems of Teaching*, by James Leitch, Principal of the Church of Scotland Normal School, Glasgow); (c) *Psychological Foundations of Education (Education as a Science*, by Alexander Bain, LL.D.; Sully's *Psychology*).

2. Reading and Elocution:

3. Music and Drawing;

4. Drill and Calisthenics.

23. Candidates for First Class Certificates at the Non-Professional Examination must make fifty per

cent for Grade C, sixty per cent for Grade B, and seventy per cent for Grade A, of the aggregate marks attainable on all subjects.

24. The non-professional examination for grade C will be limited as follows:—

English Language and Literature.

Grammar.—A thorough acquaintance with the subject will be required.

Composition.—Candidates will be required to show, by passing an examination on this subject, and by the character of their answers in other subjects, that they are in the habit of writing the English language correctly.

Literature.—Candidates will be required to have a general acquaintance with English Literature and its history, and a fuller knowledge of special eras and authors to be prescribed from time to time by the Department.

History and Geography.

History.—A special knowledge of the History of England between 1688 and 1820, as presented in Green's *Short History of the English People*.

Geography.—Political Geography of North America, Europe, and the British Empire, with Physical Geography as treated in Geikie's *Primer of Physical Geography*, and Mathematical and Physical Geography as treated in Sullivan's *Geography Generalised*.

Mathematics.

Algebra.—Fundamental Operations; Involution and Evolution; Resolution into Factors; Principle of Symmetry; Theory of Divisors. Fractions; Ratio; Proportion and Variation; Theory of Indices; Surds; Arithmetical, Geometrical, and Harmonical progression; Scales of Notation; Permutations and Combinations; Introduction to Binomial Theorem as far as positive and negative integral exponents; Simple and Quadratic Equations, with relations between Roots and Coefficients; Problems.

Arithmetic and Mensuration.—The candidate will be required to know the subject in theory and practice; to be able to solve problems with accuracy, neatness and despatch; to be familiar with rules for mensuration of Surfaces and Solids.

Geometry.—Euclid, Books I. to IV. (inclusive), Book VI., and definitions of Book V. Exercises.

Elementary Mechanics.

Statics.—Equilibrium of Forces acting in one plane; Parallelogram of Forces, Parallel Forces, Moments, Couples, Centre of Gravity, Virtual Work, Machines. Friction, Experimental Verifications.

Dynamics.—Measurement of Velocities and of Accelerations; Laws of Motion, Energy, Momentum, Uniform and Uniformly Accelerated Motion, Falling Bodies, Experimental Verifications.

Hydrostatics.—Pressure of Fluids, Specific Gravities, Floating Bodies, Density of Gases as depending on Pressure and Temperature, Construction and use of the more simple Instruments and Machines.

Physical Science.

Chemistry.—The examination in this subject will be based on Reynold's *Experimental Chemistry, Parts I. and II.*, and Tilden's *Chemical Philosophy*.

Heat.—Stewart's *Elementary Treatise on Heat*, 3rd edition.

25. The limitation of grades A and B will be as follows:—

DEPARTMENT OF ENGLISH.

Composition.—*History and Etymology of the English Language; Rhetoric and Forms; Prosody.* Books of Reference: Earle's *Philology of the English Tongue*; Abbot and Seeley's *English for English People*; Bain's *Composition and Rhetoric*, or Hill's *Rhetoric*; Marsh's *English Language and Literature*, Lectures VI. to XI. inclusive.

Literature:

1. History of English Literature, from Chaucer to the end of the reign of James I. Books of Reference: Craik's *History of the English Literature and Language*, or Arnold's *Literature*, English Edition; Marsh's *English Language and Literature*. Lectures VI. to XI. inclusive.

2. Specified works of standard authors as prescribed from time to time by the Department.

History:

Greece.—The Persian to the Peloponnesian War inclusive.—Cox's *History of Greece* (unabridged).

Rome.—From the beginning of the Second Punic War to the death of Julius Cæsar.—Mommsen's *History of Rome*.

England.—The Tudor and Stuart Periods, as presented in Green's *Short History of the English People*, Macaulay's *History of England* (or Frank Bright's *History of England*, Second Volume), and Hallam's *Constitutional History*.

Canada.—Parkman's *Old Regime in Canada*.

Geography.—So much Ancient Geography as is necessary for the proper understanding of the portions of the Histories of Greece and Rome prescribed.

DEPARTMENT OF MATHEMATICS.

Algebra.—Symmetry, Binomial Theorem, Multinomial Theorem, Exponential and Logarithmic Series, Interest and Annuities, Indeterminate Coefficients, Partial Fractions, Series (Convergency and Divergency, Reversion, Summation), Inequalities, Determinants as far as in *Gross*, Reduction and Resolution of Equations of first four Degrees and of Binomial Equations, Relations between Roots and Coefficients of Equations, Indeterminate Equations, Problems.

Analytical Plane Geometry.—The Point (including Transformation of Co-ordinates), the Right Line, the Circle, the Parabola, the Ellipse, the Hyperbola, the General Equation of the Second Degree, Abridged Notation.

Trigonometry.—Trigonometrical Ratios, General Values of Angles, Functions of Sum and Difference of Angles, Multiples and Sub-Multiples of Angles, Trigonometrical Equations, Solutions of Triangles, Measurement of Heights and Distances, Inscribed, Circumscribed, and Escribed Circles of a Triangle; Quadrilaterals, Description of Vernier and Theodolite, Trigonometrical and Logarithmic Tables, Demoiivre's Theorem.

Dynamics.—Moments of Inertia, Uniform Circular Motion, Projectiles in Vacuo, Collisions, Simple Pendulum, Experimental Verifications.

Elementary Geometrical Optics.—Reflection and Refraction of Light at Plane and Spherical Surfaces, including Prisms and Lenses (aberration not considered); the Eye; Construction and use of the more simple Instruments.

The following books are recommended for reference in addition to those prescribed for Grade C:—

Algebra.—Gross.

Analytical Geometry.—Refer to Salmon, Vyvyan and C. Smith.

Trigonometry.—Hamblin Smith; Refer to Colenso or Todhunter.

Dynamics.—Garnet, or Gross's *Kinematics and Kinetics*.

Geometrical Optics.—Aldis.

(To be continued.)

BOOKS RECEIVED.

Hall, Horatio, M.A. *The Iroquois Sacrifice of the White Dog*; reprinted from the American Antiquarian for January, 1885. From the author.

Hall, Horatio, M.A. *The Life and Work of Chief George H. M. Johnson Onwanoonyshon among the Six Nations*; reprinted from the Magazine of American History for February, 1885. From the author.

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