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ADDRESS— **EDUCATIONAL WEEKLY,**
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TORONTO, JANUARY 14, 1886.

THE resignation of General Eaton from the post of United States Commissioner of Education, to which he was appointed by General Grant in March, 1870, is very greatly regretted by the friends of education throughout the world. General Eaton's labors in his position have been immense. The National Bureau of Education, which scarcely had an existence at the time of his appointment, owes its present popularity and influence to his tact, judgment and discernment. Its function is to collect and distribute information regarding education, not only in every part of the States, but in every part of the world. The reports and pamphlets prepared by General Eaton, as Chief of the Bureau, are universally sought for and valued. The topics discussed and illustrated by him in these writings are of great public interest, and have included—libraries, industrial education, public health as affected by the schoolroom, negro education, manual training-schools, the kindergarten, and so on. By his efforts the National

Government has been kept constantly informed of the condition of education in every State and Territory of the Union; and the evidence adduced in his reports of the alarming prevalence of illiteracy, especially in the South, has been a powerful influence in determining public opinion in favor of the Blair Bill, which is now the chief educational topic of the people of the United States. One great thing accomplished by General Eaton, is the establishment of a national educational library and museum, which now contains 16,000 volumes, and 40,000 pamphlets, and a vast number of educational appliances.

PRESIDENT CLEVELAND assured General Eaton that he personally wished him to retain his office, so that the General's resignation is entirely voluntary. It is occasioned by an imperative necessity for rest and recuperation after so many years of arduous work at construction and organization. The retiring Commissioner is not without his laurels. He has been made an honorary member of the French Ministry of Public Instruction, he has been made a member of a Japanese society for promoting public education, he has been elected to the membership of many foreign scientific societies, he has been appointed by the Emperor to the membership of an Order in Brazil, he has been honored with the degree of Doctor by several universities, he was President of the International Congress of Education which met at New Orleans last year, and was Vice-President of the International Congress of Educators which lately assembled in Havre, France.

THE Blair Bill, which is soon to come up again in the United States Congress, is a very important measure; and its passing or rejection will very greatly affect the future of educational progress in the States, especially in the South. By this Bill, introduced by the Hon. H. W. Blair, of New Hampshire, it is proposed to give \$77,000,000 of national funds, in money, to the several States and Territories of the Union on the basis of illiteracy—that is, "to each State or Territory in that proportion which the whole number of persons in each, who, being of the age of ten years and over, cannot write, bears to the whole number of such persons in the United States, the computation being made according to the census of 1880." The payment of this sum is to be distributed over eight years. The

Bill passed the Senate on the 7th of April last by a vote of 33 to 11, or, including the "pairs," by 44 to 22. But it did not reach the House of Representatives in time for consideration.

THE statistics which have been adduced in support of the Blair Bill are astonishing. The illiterate voting population of the United States numbers 1,869,245; of whom 852,665 are illiterate white voters, and 1,016,580 are illiterate colored voters—over eighteen hundred thousand voters who cannot read the ballot papers which they are entitled by law to use. Of the children of school age in the United States, 9,499,542 did not receive one hour's instruction in the year 1883; 6,030,936 were returned as not having ever attended any school, public or private! Even in the State of New York, of the 1,600,000 children of school age, only 600,000 are in average attendance. One half of the school population of the United States are destitute of school houses, of school teachers, of any of the necessities of instruction even of the most inexpensive kind. For the education of this vast host of uneducated children at least 120,000 additional teachers are required, the number now employed being 400,000.

IT will be interesting to know in what proportions the several States will be entitled to help from the proposed relief. For example, Alabama will receive \$5,370,848; Tennessee, \$5,089,262; Mississippi, \$4,624,339; Kentucky, \$4,316,930; Louisiana, \$3,945,057; Missouri, \$2,586,647; Arkansas, \$2,503,170; Illinois, \$1,801,616; Indiana, \$1,372,441; Iowa, \$577,532; and Colorado, \$129,873. In some of these States schools are now kept open but three or four months in the year. It is thought that with the help that will be given by the passing of the Blair Bill, all public schools will be kept open a uniform period of nine months in the year.

THE opposition to the Blair Bill is, we are happy to say, constitutional, and not factious. But the abiding danger to national character which a vast illiterate constituency imposes is a much more serious matter than a temporary assumption by the National Government of the responsibility which rests upon each State for the education of its own citizens. The argument is conclusive that if the National Government has turned the slaves into citizens, it must complete the work of emancipation, and by education make them worthy of citizenship.

Contemporary Thought.

MANDAL training departments have been added to the high schools of Toledo and Cleveland. The *Journal of Education* says that the cause of industrial education "is now proceeding along legitimate lines and with hearty progress."—*Current*.

THE defeat of the women candidates for positions in the school-board at the recent municipal elections in Boston was not without its consolations for those who are advocating the selection of women for these offices. One of the women received over twenty-one thousand votes, and more women voted than ever before. This would indicate an extraordinary growth of public sentiment in favor of their participation in school management, and it is indeed difficult to understand why a woman, if acceptable as a teacher, should not be regarded equally acceptable as a school-director.—*Current*.

THE list of books prescribed by the Canadian Minister of Education, given elsewhere, seems rather long. There are two in pedagogy, six in science and eight in literature and history—sixteen in all, for each year. This is certainly more than the average teacher will be likely to do well. There is not much value, and may be positive injury, in running the eyes hastily over a large number of pages. The attentive, thoughtful perusal and review of a few good books will be far more fruitful. We trust the members of our reading circles will keep this in mind. The Board of Control evidently had this in view when the Ohio course was arranged.—*Ohio Educational Monthly, on Ontario Teachers' Reading Course*.

THE English peasant is said to live and die with a vocabulary of three hundred words; the Cherokee Indians learn to read their language in eight weeks, some having made the transition from spoken to written language in four days, their problem of learning to read being more easily solved than ours, because their language is phonetic. The striking difference between the vocabulary of the children of five years at the north end in Boston and that of children of the same age coming from the homes of intelligent farmers in Ohio renders our chart, primer, and even first-reader work one of such complexity that only teachers with brains can simplify it for the individual needs of our schools. Until every primary teacher is a genius, therefore, text-books will be in demand.—*The University*.

IT is stated that, during the past ten years, the failures of pupils who have attempted to pass the arithmetical examinations in Scotland have amounted to 47,000 annually, and that the consequent loss of imperial grants has equalled £7,000 yearly. The fault is attributed to Scotch inspectors, who are charged with preparing special arithmetical puzzles for the mystification of pupils and the confusion of teachers. The matter came before the House of Commons in May, and the result is that, in future, inspectors will not be allowed to use any examination cards, either printed or written, except those which are about being issued by the Education Department of Scotland. These cards will contain uniform sets of questions for the nineteen inspectorial districts into which Scotland is divided, and claim to be eminently impartial and reasonable. No questions will be given involving weights, measures, or denominational money no longer in

use. This is a hopeful indication, and points to the prospect of the Scotch Educational Department at length awakening to the fact that the famous three R's are not an end, but a means, in the acquisition of knowledge.—*The Mail*.

THUS shell-money of this peculiar description, composed of small circular discs, perforated and strung together, and used both as currency and also (so far as our information extends) in important public and religious ceremonies, has been traced from the eastern coast of North America westward across the continent to California, and thence through the Micronesian Archipelago to China. In no other parts of the world, except those situated along or near this line (as in some parts of Melanesia), has the use of this singular currency been known. It is possible, of course, that the custom may have originated independently in each of the four principal regions in which it existed—that is, in China, Micronesia, California, and Eastern North America. Few persons, however, will be inclined to doubt that the Micronestians received this invention from Eastern Asia; and, at the other end of the line, the transmission of the usage from one side of the Rocky Mountains to the other will seem equally probable. The only question will be as to its passage across the Pacific. The fact recorded by Dr. Wilson, in his work already quoted, that in 1833 a Japanese junk was wrecked on the coast of Oregon, and that some of her crew were subsequently rescued from captivity among the Indians of that region, will show how easily this transmission might have been made. Nor is this the only instance known. Mr. Charles Wolcott Brooks, in his report on Japanese vessels wrecked in the North Pacific Ocean, read before the California Academy of Science in March, 1876, states that "one of these junks was wrecked on the Queen Charlotte Islands in 1831, and numerous others have been wrecked on other parts of the northwest coast."—*From "The Origin of Primitive Money," by Horatio Hale, Clinton, Ont., in Popular Science Monthly for January*.

THE number of a man's ancestors doubles in every generation as his descent is traced upward. In the first generation he reckons only two ancestors, his father and mother. In the second generation the two are converted into four, since he had two grandfathers and two grandmothers. But each of these four had two parents, and thus in the third generation there are found to be eight ancestors—that is, eight great-grandparents. In the fourth generation the number of ancestors is sixteen; in the fifth, thirty-two; in the sixth, sixty-four; in the seventh, 128. In the tenth it has risen to 1,024; in the twentieth it becomes 1,048,576; in the thirtieth no fewer than 1,073,741,834. To ascend no higher than the twenty-fourth generation we reach the sum of 16,777,216, which is a great deal more than all the inhabitants of Great Britain when that generation was in existence. For, if we reckon a generation at thirty-three years, twenty-four of such will carry us back 792 years, or to A.D. 1093, when William the Conqueror had been sleeping in his grave at Caen only six years, and his son William II., surnamed Rufus, was reigning over the land. At that time the total number of the inhabitants of England could have been little more than two millions, the amount at which it is esti-

mated during the reign of the Conqueror. It was only one eighth of a nineteenth-century man's ancestors if the normal ratio of progression, as just shown by a simple process of arithmetic, had received no check, and if it had not been bounded by the limits of the population of the country. Since the result of the law of progression, had there been room for its expansion, would have been eight times the actual population, by so much the more is it certain that the lines of every Englishman's ancestry run up to every man and every woman in the reign of William I. from the king and queen downward, who left descendants in the island, and whose progeny has not died out there.—*Rev. Henry Kendall, in Popular Science Monthly for January*.

Lippincott's Magazine for January contains George Eliot's criticisms on her contemporaries originally published in the *Westminster Review*, as one of the editors of which she began her literary career. These writings have so long been overlooked that they now are new to the public. Of Tennyson she said: "As long as the English language is spoken the word-music of Tennyson must charm the ear; and when English has become a dead language, his wonderful concentration of thought into luminous speech, the exquisite pictures in which he has blended all the hues of reflection, feeling and fancy, will cause him to be read as we read Homer, Horace and Pindar." Of Dickens and Thackeray: "The fact that Mr. Thackeray has succeeded so well in drawing Rebecca Sharp and Blanche Amory, the representatives of two classes, so like yet so different, without exaggerating the peculiarities of either, would alone prove him to have the most intimate acquaintance with human nature of any writer of the day. Mr. Dickens generally solves the problem in a different way; his characters, even when they are only of the *bourgeois* class, are nearly always furnished with some peculiarity, which, like the weight of a Dutch clock, is their ever gravitating principle of action. The consequence is, they have, most of them, the appearance of puppets which Mr. Dickens has constructed especially for his present purpose." Of Carlyle and Kingsley: "Carlyle's great merits Mr. Kingsley's powers are not fitted to achieve: his genius lies in another direction. He has not that piercing insight which every now and then flashes to the depths of things, and alternating as it does with the most obstinate one-sidedness, makes Carlyle a wonderful paradox of wisdom and wilfulness; he has not that awful sense of the mystery of existence which continually checks and chastens the denunciations of Teufelsdrückh; still less has he the rich humor, the keen satire, and the tremendous word-missiles which Carlyle hurls about as Milton's angels hurl the rocks." Of Ruskin: "Now, Mr. Ruskin has a voice, and one of such power that, whatever error he may mix with his truth, he will make more converts to that truth than less erring advocates who are hoarse and feeble." Of Robert Browning: "We admire his power, we are not subdued by it. Language with him does not seem to spontaneously link itself into song, as sounds link themselves into melody in the mind of the creative musician; he rather seems by his commanding powers to compel language into verse. He has *chosen* verse as his medium; but of our greatest poets we feel that they had no choice; verse chose them."

Notes and Comments.

WE shall begin our papers on the literature prescribed for entrance into High Schools next week.

WE shall publish next week a paper on "Music in Public Schools," by Mr. H. E. Holt, director of music in the High and Public Schools of Boston. It will contain the substance of the address which Mr. Holt delivered at the late convention of music teachers, which we noticed last week. Mr. Holt has, with much kindness, specially prepared this paper for the EDUCATIONAL WEEKLY.

AMONG our contributors this week are Mr. W. S. Milner, classical master of Lindsay High School, whose paper on the "Culture of the Imagination" is concluded; Mr. Wm. Houston, who replies to Principal Grant's criticisms on "Paper Universities"; Thomas O'Hagan, M.A., of Pembroke High School, on "Practical Elocution"; and Mr. L. H. Graham, of Walkerton, from whom we are to look for a series of papers on the "Art of Penmanship." Mr. Reading resumes his very valuable papers on "Elementary Drawing."

IN connection with our editorial remarks on the Blair Bill, it will be interesting to note what the Peabody Fund is doing to help the cause of negro education in the Southern States. This fund, as is well known, was the gift of a wealthy London merchant, who, being a native of America, bequeathed to his native country, in trust for her poor negro population, a magnificent sum to be spent in their education. Owing to the low interest now paid on United States bonds, in which securities the fund is invested, the annual income is reduced to \$75,000. But this is productive of much benefit. Of this amount Alabama received last year, \$5,300; Arkansas, \$3,100; Florida, \$2,375; Georgia, \$4,175; Louisiana, \$1,800; Mississippi, \$2,250; North Carolina, \$5,430; South Carolina, \$5,000; Tennessee, \$11,850; Texas, \$7,150; Virginia, \$6,775; West Virginia, \$2,500. It has been decided for the future to confine the distribution of the fund to various normal and other schools devoted to the education of teachers.

WE print in another column a very useful and valuable paper on "Primary Reading," from the pen of Mr. Samuel Findley, the editor of the *Ohio Educational Monthly*, one of the most practical of our exchanges, notable alike for its plentiful common sense, and for its lack of that offensive self-praise which is a too prominent characteristic of so many American educational journals. To what Mr. Findley otherwise says the following should be added, having been

necessarily excised from its proper place in his essay:—"Dr. Thomas Hill, already quoted, says, 'To allow a child to read what he cannot at least partially comprehend, is to encourage him to read without thought, which is the greatest hindrance to literary and scientific progress. If his intelligence be not called into play, or if he have little general intelligence, his reading is likely to be of little worth.' This suggests an important consideration, too commonly overlooked, that true progress in reading cannot more than keep pace with the child's growth in intelligence. Good reading implies a considerable degree of intelligence, and to expect a child to become a good reader without other intellectual attainments is unreasonable."

THE third annual meeting of the Modern Languages Association of America was held in Boston, on December 29th and 30th. A few notes will be interesting. In the discussions the University of Toronto was ranked with Harvard, Cornell and Michigan as amongst "the larger colleges," an acknowledgment which we have never before noticed, and which is very pleasing to friends of Toronto. The excellent work done in the Canadian Universities was commended. The multiplicity of degrees was characterized as the curse of the American educational system. The study of English upon the historical method was recommended, and it was urged that English is more inadequately taught than either French or German. The Creole French of Louisiana was declared to be pure, but the French which Mr. Cable puts into the mouths of his educated Creoles was characterized as "an absurd, contradictory, and impossible jargon." The French of the region of Acadia, in Nova Scotia, and that of Lower Canada was pronounced remarkably pure, although exhibiting the features of the original French language of the period of colonization. Among the many papers read was one on "Modern Language Study in Ontario" which gave a resumé of the system of education in Canada, and the successive steps by which the study of French and German had advanced in the public schools.

ALL Canadians, and especially all educationists, will rejoice in knowing of the honor paid to Dr. J. G. Schurman in his appointment to the new chair of Ethics and Philosophy in Cornell University, endowed by Mr. H. W. Sage with \$50,000, and with a new \$10,000 residence. The following account of Dr. Schurman is taken from the *Mail*. That so young a fellow-countryman should be chosen for so honorable and important a post is a matter for national pride:—"Dr. Schurman is at present professor of philosophy and ethics in Dalhousie College at Halifax, N. S. He was born in 1854, and gained his early education in Prince Edward Island.

In 1875 he won the Gilchrist scholarship of \$500 per year for three years at the London University examinations annually held in Canada. Two years later he won the London University scholarship in logic and philosophy, and the Hume scholarship in political economy at University College. In 1875 he received the degree of doctor of science in mental and moral philosophy at the University of Edinburgh. He was subsequently elected to the Hebbard travelling scholarship of \$1,000 a year for two years. He pursued his studies at the leading German universities, writing a volume on the ethics of evolution which attracted much attention. He is a friend of the leading philosophers of Europe, and is a man of impressive appearance. President Adams regards the appointment as of great importance and promise, and Mr. Sage commends the appointee. Dr. Schurman will begin with the new college year."

WHEN the statutes relating to the University of Toronto come up for consolidation at the approaching meeting of the Legislature, as they undoubtedly will, an effort should be made to secure some necessary amendments. The Senate at present is composed of 26 *ex-officio* members, 15 representatives of the body of graduates, and 2 representatives of the high school masters. The introduction of the elective element into the constitution of the Senate (effected if we mistake not in 1873) has resulted in making the University practically, instead of nominally, a public institution. The admission of high school representatives, as an additional elective element, has resulted in bringing the university into a closer sympathy and a more intelligent relationship with our high school system, beneficial alike to the University and to secondary education. In our opinion this elective element ought to be increased—the graduates ought to be, as in most universities they are, the ultimate authority, under the Government, in all matters of university policy. Again, the representation of the high school masters should be strengthened. Instead of two representatives there should be at least three. The high school masters should see to it that this change is effected. The actions of the Senate of the University of Toronto affect their interests almost as directly as those of the Government, and not less importantly. The third amendment, and one naturally following the other two, but necessary even if they be not made, is that the meetings of the Senate should be held at regular and fixed intervals, say quarterly, and should continue from session to session until all necessary business be finished. The administration of details should be left to an interim committee, composed of members resident in or near Toronto. Let us hear from our graduates what they think of these propositions.

Educational Opinion.

THE CULTURE OF THE IMAGINATION.

(Concluded from last week.)

IN considering a few subjects more clearly adapted for strengthening the imagination, I need speak only of the study of English poems.

Almost our only aim should be to ensure that our scholars shall realize them, and to bring out clearly the setting of the poem. Something, too, can be done to train the ear to an appreciation of the music of the metre when it has a music—most school literature has not. Further than this we should not attempt to go. And this realization of poetry means a great deal.

We must first realize the poems ourselves, and yet the well-cultured men and women who actually realize what they read in poetry are fewer in number than one would at first suppose.

We all know certain poems, which from much reading have become imbedded in our memory, yet their sweet rhythm and rich cadences have so pleased us that we never cared to ask what they might mean throughout.

We must also be careful lest, by dwelling too long at a time upon individual poems, we dull their effect. The finer the poem the more delicate and reverent handling does it require.

When we have done our utmost the pictures of the poems will not have been brought out in very vivid colors, but they may have a certain air of reality.

It is doubtful whether anything is comparable to the true educational effect of a good engraving. Education is an expensive thing, but, if it is good, its value cannot be estimated in dollars and cents. I hope that we may yet see the time when our schools shall be supplied with suitable engravings. To take a practical example from my own book—Doré's engravings on the Ancient Mariner, would, I am persuaded, do more in one week for the imaginative growth of my pupils, than I could do for them in a year. To many of them those great engravings would be a revelation such as I know not how else could be given them.

Equally valuable to a school would be Doré's Milton, and engravings of Millais' Tennysonian paintings and of the paintings in the Boydell Shakespeare Gallery. This brings me to speak of the school study of Shakespeare—the acme of all imaginative teaching. Shakespeare, I am more and more convinced, cannot as yet be studied by pupils under seventeen or eighteen years of age. Like the ordinance of marriage, that study is not to be "rashly enterprised or

taken in hand." If we merely believe with the Greeks that he is now dimly conscious of what is going on in the world, what are we to suppose must be his feelings at the torture which his works experience at our hands? Were proper attention given to the culture of the imaginative faculty, the time of appreciating Shakespeare might be made much earlier. With scholars of 15 and 16 we could read interesting plays simply for the plot, *as it should seem to them*, trying at the same time to help them to realize the situations; and by quiet and unobtrusive efforts it is not too much to hope that a few of our pupils might some day, after leaving school, awaken to a knowledge of what riches are there stored up. As it is, the men and women, who in the leisure of a busy life find a delight in the highest class of our literature, are almost always those who have not been taught in our schools.

Nor is the study of the language itself without its imaginative side, if we appreciate what a great part the imaginative faculty has played in its formation, since almost the entire abstract portion of language is, as we know, simply compressed metaphor—the lively and poetical expression of thought in forms open to the five senses. An argument that is often adduced in favour of the study of grammar is that it fastens the attention upon the language itself. This end is more immediately attained by awakening an interest in the derivation of words. The most vivid metaphors are often found in the commonest words, as, *e. g.*, in the word "tribulation," "the rubbing out of corn by a spiked sledge." And in countless others what histories do we find! What a leavening of the world by Christianity is indicated by the change in meaning of the word "humility," and on the other hand what utter degradation has the word "policy" undergone! An account of a few such words as "tantalyze" would surely be sowing Lord Bacon's "seed of knowledge." I should not, however, leave the subjects of history and literature without again adverting to the great danger of inaccuracy. Pre-eminently does it belong to us, if we take this higher ground, to insist with greater boldness upon accuracy and sound judgment.

Romancing in history or etymology is not an accompaniment of high imaginative power.

Two other studies are taken up in our schools from which I should look for even higher results than can be achieved from those already mentioned. I mean the studies of elementary physics and botany.

They need to be treated with reverence or it would be better to leave them alone. No man can produce from these studies the true results, who is on the one hand devoid of a certain child-like wonder and a sense of rever-

erent awe, or who is on the other a mere collector of specimens.

The classes should be small, and the work discontinued before the interest has time to flag in the slightest degree.

It seems to me almost a sufficient education in itself that a child should once be filled with a sense of how wonderful a thing is the boiling of water, or flame, or the conduction of sound, or expansion by heat. And the materials are always at hand. He who teaches these subjects to children should feel that he is dealing with what is next in interest only to the spiritual mysteries of human life.

That portion of botany which is useful from an educational point of view lies on this side of classification. The study of the minute structure and growth of plants is an unfolding of beauty after beauty, mystery after mystery. No one can over-estimate the effect upon a child's mind of his discovery that the minutest things of creation are finished with the same perfection as the greatest, or of his wonder and awe at the sight of the cell—the ultimate constituent of organic life.

With the culture of the observation we are not now concerned. It is one of the greatest advantages of the natural sciences that they train us to observe; but they all—and botany perhaps in an especial degree—may have a much higher result in awakening in us and strengthening a sense of nature's beauty.

Botany cannot of course be studied without pocket lenses or small microscopes. It could, however, be studied to infinitely greater advantages with good microscopes. I say "infinitely," advisedly, though not in cold blood, for the revelations of the microscope, are, to many, almost a second existence. By our future educationists, I believe, a good supply of microscopes, such as are used for laboratory work, and can be purchased for about \$35, will be considered as important parts of school equipment as a good library. Many such schools are already to be found on this continent, but they necessarily demand a most liberal support.

Yet all cannot, in my judgment, be permitted to pursue these studies. To many it would be only an injury.

For we are compelled to admit that there are pupils to whom the most wonderful things in God's world do not now appeal. One of the saddest of all spectacles is to observe how a mixed number of people are individually affected by the exposition of some wonder-working law of nature. The stolidity of some and the pitiful expressions of silly amusement on the part of others, bring to our lips, "The pity of it, Iago!"

We shall be forced to acknowledge that there is, after all, something in the rather amusing theories of our friends, the kinder-

gaertners, as they talk of bursting the bonds of the convolutions of the brain, with other expressions of an esoteric nature. Everything goes to show that the culture of the imagination must begin very early. A dear friend of mine once told me that she had brought up five boys on that inimitable story, "At the Back of the North Wind." That, with porridge, though somewhat light, you say, ought to prove wholesome diet for a higher than the Spartan ideal. In all seriousness, I believe that such magazines as *St. Nicholas* and *Good Words for the Young*, unique in the history of the world, will, in the next generations, if supplemented as I plead that they should be at a higher stage of development, produce a most powerful result. They must already be doing so.

It were long since high time that we should recognize the necessity of training this first mental faculty. We are to-day really studying the science of education, and there are not a few men engaged in observing closely, with a scientific purpose, the characters of children, of boys and girls. It is strange, however, that they make no account of the imagination.

It must have food. If we do not undertake its culture, it will burn itself out, and sometimes with no healthy fires. Our boys will exhaust theirs upon "blood and thunder fiction," our girls (and they suffer worse) upon the "milk and water" travesties of passion of Miss Braddon and "Ouida." This is a very practical consideration and deserving of thought. Had we only in view the evil effects of weak and pernicious reading, and the devising of means to supplant it, it would be worth a great effort; but we are also discussing the positive results to be attained by the culture of the imagination. Those studies which develop the judgment and habits of work are indispensable.

The more it is to be desired that the vision of the soul should be kept undimmed and clear, and made more penetrating, the greater value do we set upon accuracy, patient observation, systematic habits, work and the power of expression. Yet these are but handmaids to the culture of the spirit.

Of all men none need this culture more than we ourselves, both from the high demands of our work and the peculiar nature of our surroundings. It is unfortunately the case, that our education, greatly wanting in many of the elements of culture, and entirely so in this, has not done much to help us. The character of our vocation is such as to largely isolate us from our fellows and the very nature of our work makes too great drains upon the best that is in us. We need a rich mental culture, and a true self-sufficiency, if we are to withstand to the last the daily inroads of that ossifying demon, who, in the end, too often conquers. Somewhere, perhaps in Mr. Thring's excellent work, I

have read a mild protest against that common remark of business men as well as teachers, that they shut in all thoughts of the day's work, as at night they lock the door of the shop or school. "A teacher, more perhaps than any other, needs to be able, at least, "to lock the door" and keep it locked. If he is not to lose his usefulness, to stunt his own intellectual growth, and mar his happiness, he must live two lives at once.

And, again, as he thinks of how great are the possibilities which lie undeveloped, in material often very unpromising, of what one thought, dropped at the right time, and in the proper place, may sometimes blossom into, he feels how much is needed to keep his own fire blazing. The higher, too, is his aim, the more will he know of that mortifying experience of "casting pearls before swine"—a two-fold injury—for not only does the soul suffer from such a profanation, but it is not without a benumbing and hardening effect upon the pupil. The only way to avoid this is by holding steadily before us the great truth, that knowledge should come to our scholars as a *discovery of their own*.

It is worse than madness—it is a sin against any great truth and against the highest that is in us, to offer it to another who is not already searching for it—or prepared to receive it. And it is with truths and not with facts that the educationist is dealing.

Nevertheless, we should not grudge an occasion to give our best, for intellectual wealth, like any other, moulds in the keeping, and grows in the using. Teachers of all kinds know this feeling. We must hold the faith stoutly, that we can give nothing which does not return to us again, when "the wheel is come full cycle."

The daily schoolroom jars upon the finer feelings are known to each of us, when examples occur of blindness of the imagination to make the soul stand aghast.

Let us remind ourselves that such too was the experience of the Great Teacher. Never, in the history of the world, has the divinest truth fallen upon a soul apparently more hopelessly dead than on that occasion, when in the midst of a great multitude, Christ began: "I say unto you, my friends, 'Be not afraid of them which kill the body'"—and went on to explain the fatherhood of God in words, which, alas! are dull with too much use, whose meaning our imaginations are not keen enough to grasp. Hardly could the sound of the words "Ye are of more value than many sparrows" have died away, when with "immortal obtuseness" one from the crowd broke in: "Master, speak to my brother, that he divide the inheritance with me."

I cannot conclude without saying that the subject of this essay was long ago suggested to me by something I once read in the writings of George Macdonald. As an example

of what *can* be said on this subject by a man of genius, see his essay on the Imagination in "Orts." A volume of his essays containing this is published by Lothrop & Co. If it shall seem to contain anything good, willingly would I attribute it to him. It is my own observation that much of the highest thought of to-day is more or less inspired by that great writer.

W. S. MILNER.

PAPER UNIVERSITIES.

IN the EDUCATIONAL WEEKLY of October 15, the Rev. Principal Grant spoke of "paper universities" and "written competitive examinations" as "pestilent crotchets." In a public address, a summary of which appeared in the *Varsity* of November 14, I challenged the correctness of his views, and charged him with directing his remarks against the University of Toronto. To my published statements he has replied in two articles, one in the WEEKLY of December 3, the other in that of December 17. The former of these articles is devoted to "paper universities" alone, and to that subject I shall confine myself in this brief paper, reserving for another what I have to say by way of rejoinder to his article on "written competitive examinations."

My first duty is to apologize to Dr. Grant for assuming that he intended his attack on "paper universities" in general to be an attack on the University of Toronto in particular. He disclaims in the most emphatic way any such intention, and I accept his disclaimer without reservation. He makes it perfectly clear that he could not have been consciously directing his attack against the University of Toronto because he does not regard it as a "paper university" at all, holding University College with its teaching faculty to be its "soul and substance." I shall show presently that his view of the constitution of the Provincial University is entirely erroneous, but meanwhile I fully withdraw the charge of animus, which, under the belief that he was better informed than he is, I made against him.

The University of Toronto, like the University of London, is exactly what Dr. Grant calls a "paper university." Not only has it no teaching faculty, but it is prohibited by law from having one. The Act of Parliament which is its charter has this clause:

There shall be no professorship or other teachership in the said University of Toronto, but its functions shall be limited to the examining of candidates for degrees in the several faculties, or for scholarships, prizes, or certificates of honor in different branches of knowledge, and to the granting of such degrees, scholarships, prizes, and certificates, after examination, in the manner hereinafter mentioned.

This prohibition has been in force since 1852, and if a university which has strictly observed it for thirty-three years is not a

"paper university," I can see no sense in perpetuating that somewhat offensive epithet.

Let me point out further that not only does the University of Toronto not insist absolutely on attendance of undergraduates at lectures in affiliated colleges, but it has no legal authority to do so. Section 61 of the University Act (R.S.O., Chap. 210) authorizes the Senate to take colleges into affiliation with the university for the purpose of admitting their students to its examinations, but the next section provides that "persons not educated in any of the said institutions for the time being affiliated with the said university may be admitted as candidates for examination . . . on such conditions as the chancellor, vice-chancellor and members of the Senate may from time to time determine." The word "may" is often in public statutes interpreted by the courts to mean "shall," and an examination of the authorities will show that under this clause an applicant for a degree would have good ground for an appeal to the courts if the Senate were to refuse to examine him because he had never attended lectures. To reject a candidate for such a reason would be to violate the spirit if not the letter of the University Act, and if the term, "paper university," does not apply to an institution so limited I would like to have a definition of the expression.

The fact that "the vast majority" of the graduates of Toronto University have been students of University College is not pertinent to a discussion of the university's constitution. Moreover, the "fact" is not exactly what Dr. Grant's language implies. A considerable number of graduates, and these not the least eminent, have never been students of University College at all. A still larger number have attended that institution for only a part of their course. Those who have even nominally attended the whole four years constitute a much smaller majority than is generally supposed, and so far from making its requirement in this matter more stringent the Senate last year repealed a statute which made one year's attendance absolutely necessary.

Dr. Grant's opinion, that University College "is the whole that is valuable" in the Provincial University system, though it appears to be shared by some of the teachers connected with University College, is not shared by the graduates generally, not even by those who have been most faithful in their attendance on lectures and have profited most by them. The university has functions quite as important as those of any college can be. It has to keep up a standard of higher education, and its standard has always been higher than that of any of its affiliated colleges. For many years the university has kept up in its arts curriculum a course in Political Economy, but

that subject is not taught in University College, and within the past few months the College Council reported to the Lieutenant-Governor that it was not desirable to have it taught. Several members of the Faculty of University College are members of the Senate of the University of Toronto, and whenever the curriculum of the latter is under revision their persistent contention is that the course prescribed should be only what they are in a position to teach. Possibly Dr. Grant would endorse this contention. If so, I must differ from him as I do from them. It is the business of the Senate to prescribe what, in view of the progress of higher education elsewhere, and especially in America, is a fair course, and if affiliated colleges cannot live up to the standard set for them they are likely to do at least quite as good work as if they were allowed to create one for themselves.

Having said so much by way of showing that when Dr. Grant next attacks "paper universities" he will be attacking the University of Toronto, I would have no objection to discuss with him "the general subject" if space permitted. But *cui bono?* Such discussions amount to nothing. Queen's University has its time-honored constitution, for which Dr. Grant is not responsible. Toronto University has its time-honored constitution, for which I am not responsible. Each of us is trying to get his own university to do as much for the cause of higher education as its funds will enable it to accomplish. Dr. Grant knows quite well that I have never questioned the utility of Queen's, and that I have never tried to show that it could do better work under some other constitution. I hope he will hereafter maintain a similar attitude towards "paper universities," especially when there is in the Dominion one besides that of Toronto. I refer to the University of Manitoba, which has not even an affiliated University College. I am not in a position to express any opinion of its work as a "central examining board," but I unhesitatingly assert that if it does its duty as such a board it will quite justify its existence, though it may never have a teaching faculty.

On what Dr. Grant calls "the general question," I may be allowed to remark that the tendency amongst educationists is not universally in favor of leaving each university to create its own standard. To go no further than the State of New York; they have there a Board of University Regents, whose charter empowers them to confer degrees. Two of the teaching universities of the State of New York stand in the very front rank, Cornell and Columbia. I have before me as I write the Regents' Report for 1885, including a paper by Dr. Wilson, of Cornell, on the relations of their university to the colleges and the higher education of the

State. His contention is that the University Regents should systematically exercise their examining and degree-conferring function even on candidates who attend no college, that for purposes of these examinations whoever is in the State should be considered "as in residence," that the examiners should be asked to give such assistance to intending candidates as they may be able to give, either by personal interview or by correspondence, and that the selection of examiners should not be confined to professors of colleges. A few months ago I had the pleasure of conversing for an hour or two with Dr. Barnard, the venerable and distinguished President of Columbia College, and he advocated a somewhat similar scheme. How is this to be accounted for?

It is quite true, as Dr. Grant says, that "we educate by the contact of mind with mind," but it is not true that this contact is secured only "through the media of living men." It is secured also through the instrumentality of books, and in some ways better secured. Sir Henry Maine must be a very attractive lecturer, but a student of comparative politics will learn more from reading his celebrated lectures than he would by simply listening to them. The same remark applies to Austin's lectures on jurisprudence, to Max Mueller's on the science of language, and to formal lectures in general on any subject whatever. There is a kind of teaching which is useful, that which is known now-a-days as the seminary method, where the student does as much of the talking as the teacher does. But this implies reasonably small classes. How can one teach English successfully to a hundred students, or Latin prose, or French, or algebra, or history, or anything else? I do not argue in favor of outside examiners, much less of examiners who have had no pedagogical experience. In the University of Toronto we have been driven to appoint outsiders, partly because no member of the Senate is allowed to act as examiner, partly because no examiner is allowed to act more than four years continuously, partly because we have a competitive system, and under such a system the students of an examiner's class would have an obvious and unfair advantage over other candidates. The abolition of competition would do away with the chief objection against having teachers as examiners in Toronto University. In Queen's, where the college and university are identical, no such difficulty can be felt. I am not aware that anybody ever attempted to impose outside examiners on Dr. Grant and his fellow professors, but if I am correctly informed, a sister teaching university has this year chosen one of the professors of Queen's to examine her students. If she has done so, I think she has acted not unwisely.

Dr. Grant speaks of his "ideal of a university system," and of his belief that I was in favor of it. All I can say is that I am not against it, for I have no ideal of my own to prefer. Heretofore I have contented myself, as a member of the University of Toronto, with endeavoring to make my *alma mater* as efficient as possible with her present constitution. There are some amendments which I would like to see made in our University Act, but I have no desire to see Toronto University identified with University College. It is not proposed to bring about such an identification even by the federation scheme promulgated a year ago. For better or worse we must remain as we are in this respect, and I believe it will be found to be for the better. If the federation scheme comes to naught we must continue to entertain applications for affiliation, and to grant them on reasonable terms. We must continue to work as we do now, as we have been doing for a third of a century, on the "learn-where-and-when-you-can-and-we-will-examine-you" theory, on which Dr. Grant is so sarcastically severe. We must continue to manage a "paper university," but we do not admit that in so doing we regard the professor as little and the examination as everything. We have no theory or ideal in the matter. The duty is imposed on us by the state, and we discharge it to the best of our ability, leaving others to realize their ideals in their own way.

WM. HOUSTON.

MANUAL TRAINING IN GENERAL EDUCATION.

PROF. C. M. WOODWARD, PH.D.

"THE education which the manual training school represents is a broader, and not, as the opponents of the new education assert, a narrower education." We put the whole boy to school, not a part of him, and we train him by the most invigorating and logical methods. We believe that mental activity and growth are closely allied to physical activity and growth, and that each is secured more readily and more fully in connection with the other than by itself.

Moreover, we believe that healthy growth is always pleasurable, whether of mind or body. We believe that it is no more necessary to give the mind disagreeable, wearisome, unintelligible, intellectual exercise, than it is to give the body disgusting, ill-assorted, indigestible food.

A MANUAL TRAINING SCHOOL.

My readers cannot be expected to follow me with interest unless they know just what I mean by a manual training school. After several years' experience in developing a course of shop practice for engineering students of college grade, I organized a secondary school for younger lads in which the claims of the new education are all recog-

nized. In June next it will complete its fifth year.

It is a school of 215 boys, from fourteen to seventeen years of age, admitted on examination. They are in three grades, one year apart. The programme of each day includes the learning of three lessons—in mathematics, literature, and science—one hour of drawing, and two hours of shop practice—making a session of six hours, from 9 till 3.30, allowing thirty minutes for lunch. The order in which these exercises occur varies with the divisions of a class.

In each subject taught the instruction is progressive and thorough. Mathematics begins with percentage in arithmetic, and ends with plane trigonometry. Literature includes the study of English authors and composition, and may include history and political economy, or Latin, or French. Science, beginning with Huxley's *Primer*, runs through botany, physical geography, elementary physics, mechanics, and chemistry. Drawing is free-hand and mechanical, projection and model, geometric, technical and ornamental.

The shop work runs impartially through the range of bench, lathe, and pattern-work in wood; moulding, forging, tempering, brazing, and soldering metals; bench, lathe, planer, and drill-work in iron, brass, and steel. Every graduate of the school must have all the studies and all the shop-work in the order named.

With the exception of the choice of Latin and French, there is no option in the school.

The aim is to do well, rather than much. Every exercise must yield useful knowledge and valuable discipline; it must be a step forward, intellectually and morally.

The various shops are all in the school-building, and the shop exercises are in all respects part of the school. The shop teachers are gentlemen of education and technical skill. They take the boys in sections of from twenty to twenty-four, according to the number of sets of tools, benches, lathes, or anvils, and devote their entire energies to the work of systematic instruction.

They lecture, explain, show how to do things by doing them, then supervise and direct the boys in doing the same things. The shop tasks are as carefully and logically arranged as are the examples and problems of algebra. All tools and materials are furnished by the school.

Between fifty and sixty of the boys are on free, or nearly free, scholarships. These scholarship boys are either orphans or the children of persons of small means. All boys able to do so are expected to pay an annual fee of about \$75. It is only a day-school. In the school programme there is no distinction between the children of the rich and the children of the poor.

THE FRUITS OF MANUAL TRAINING.

I claim as the fruits of manual training, when combined, as it always should, with generous, mental and moral training, the following:—

Larger classes of boys in the grammar and high schools; better intellectual development; a more wholesome moral education; sounder judgments of men and things, and of living issues; better choice of occupations; a higher degree of material success, individual and social; the elevation of many of the occupations from the realm of brute, unintelligent labor, to one requiring and rewarding cultivation and skill. I shall have time to touch only three or four of these points:—

Boys will stay longer in school than they do now. There is a wide conviction of the inutility of schooling for the great mass of children beyond the primary grades, and this conviction is not limited to any class or grade of intelligence. In usual secondary schools education becomes narrower. The walls of traditional culture hem them in. The course of training looks in the direction of literature, history, pure mathematics, theoretical mechanics, and generally to abstract subjects. Every one knows how classes of boys diminish as they approach and pass through the high school. The deserters scale the walls and break for the shelter of active life. The drill is unattractive, and, so far as they can see, of comparatively little value.

From the observed influence of manual training upon boys, and indirectly upon the parents, I am led to claim that, when the last year of the grammar and the high schools includes manual training, they will meet a much wider demand; that the education they afford will be really more valuable, and, consequently, that the attendance of boys will be more than doubled. Add the manual elements with their freshness and variety, their delightful shop exercises, their healthy intellectual and moral atmosphere, and the living reality of their work, and *the boys will stay in school.* Such a result would be an unmixed good. I have seen boys doing well in a manual training school who could not have been forced to attend an ordinary school.

I do not hesitate to assert that the St. Louis Manual Training School has served to demonstrate the entire feasibility of incorporating the elements of intellectual and manual training in such a way that each is the gainer thereby.

The students are, intellectually, as active and vigorous as in any high school. Nay, more, I claim, and I have had good opportunity to observe the facts, that even on the intellectual side the manually trained boy has a decided advantage.—*Abridged from Education.*

TORONTO:

THURSDAY, JANUARY 14, 1886.

OF WHAT GOOD IS READING?

Of the ways of quickening and strengthening the powers of the mind, reading is certainly not the best. A man who reads and does not reflect, or one who reads and does not observe, can never become educated. Observation and reflection are the processes by which the mind gains ideas, assimilates them so to speak, and builds them into its own strength. The power of comparison, of grasping many particulars and detecting their resemblances and differences, and the power of generalization, *i.e.*, of orderly classifying these agreements and disagreements, of perceiving their natural relationships, and of discovering law or sequence amid the variation of the particular instances—these two powers mark the strong mind, and their development should be the first object in an educative process.

If a man has these powers well developed he is an educated man; and many such there are who have had little culture in the schools.

Next in importance to the educator, after comparison and generalization, is invention; and next to them rather than equal, only because it is less capable of improvement. It is a natural endowment, generally having strong predilections, or bents; and so, while admitting cultivation in some directions, almost defies it in others. It is, however, the quality of mind which most distinguishes one individual from another, and that to which success in achievement is for the most part due. It behooves everyone to discover as early as possible what the bent of his invention is, and to apply himself with diligence and ardor to the cultivation of its power—if he wish in any way to differentiate himself from the great mass of average mediocrity of which humanity is for the most part made up.

As reading involves necessarily neither observation nor reflection, neither comparison nor generalization, nor yet invention, it is manifest that in itself it is of little educative value. A voluminous reader may still be a very ill-informed man; and he may, too, be quite well-informed, and yet not be educated—not have the power of grasping the meaning of new facts, of seeing what inferences may be drawn from them, of putting his know-

ledge to good use for the purpose of regulating his life and conduct, and influencing his fellow-men for good, of inventing for himself new processes which shall contribute to the world's knowledge and to his own material and intellectual well-being.

Of what good, then, is reading? The main value of reading is its incentive power. Rightly pursued it acts as a spur to the intellect. It does not supply mental force—it guides it, turns it towards good ends. It enlarges one's horizon, illumines it, makes clear what is obscure. It quickens our own intellectual activities by bringing others into comparison with them. It brings us into contact with greater minds than our own; their thoughts do not dominate ours, they rather buoy us up; the world is fairer, more beautiful, grander, fuller of meaning and purpose when we have looked at it with their eyes, caught its color and form from their vision, seen its awful magnitude, discerned its marvellous complexity, with their keener sight.

Who that has studied humanity with the inspiration of Shakespeare's portraiture of it, who that has studied nature from the vantage-ground of Humboldt's reverent account of her beauty and her wonders, but becomes greater in soul, more charitable, more devout, more ardent in the pursuit of a true conception of man, of nature, and of God?

And yet, as a rule, so much are we engaged with the petty details of life, we read too little, or not wisely. If the scantiness of our reading were due to our hard thinking, to our devotion to the study of men and things by personal observation, little could be said in objection. But this excuse avails few of us. Either we are of slothful intellectual habits, or we are so given up to the materialities of life that our minds grow little by reason of their efforts to assimilate the thoughts of others. Yet, no man should devote himself to any pursuit without constantly acquainting himself with the best that is written regarding that pursuit. The schoolmaster should know pedagogics; the merchant, the literature of trade and banking; the manufacturer, that of fabrics; the decorator, that of art; the statesman, political science; the lawyer, jurisprudence. If any worker, whether by brain or hand, confines himself to his personal experience, or even to the handbooks of his trade or profession, he is only

a mechanic, a machine-man, although perhaps an intelligent one. He misses that grasp of his art, and of its relation to the universal truths of science, and to humanity, which comes alone from a wider knowledge, a knowledge gained from the experience of the millions of workers who are his co-laborers, or who have been his predecessors. He is a mere bread-and-butter seeker, though his table-service may be of gold and porcelain.

The literature of one's profession, then, should be one's first acquisition—not to save one from thinking; that would be to acknowledge one's self an intellectual serf—but to give to our personal experience and observation, and generalizations, their true value by putting them in comparison with those of others, who have perhaps had better facilities for scientific investigation, or a wider experience, or a greater natural endowment than we.

But no one should be content with that mental development alone which ensues from devotion to one's profession. There is a higher attainment than this for us. The world should not be to the teacher, all schools and schoolmasters; nor to the lawyer, all judges and juries. We shall pursue our profession with a greater zest if we are able to take within our ken the pursuits of other men. Thought is like leaven; it matters not where it germinates, it leavens the whole lump. The best thoughts of all men have a vivifying and fructifying influence on all other men. Science reacts on literature, literature on science. Poetry purifies us all, history instructs us all, art inspires us all. Wisdom impersonates many forms, but with one spirit. Truth, whether veiled with imagery in Polymnia's hymn, or hidden under Melpomene's mask, or buried deep in Clio's roll, is ever truth, and will well repay our most tiresome search for it. Indeed we are not veritable men and women if our lives be not a daily and hourly quest for it.

OUR EXCHANGES.

THE *Chautauqua* for January has an excellent list. Dr. Hale's "How to Live" is continued. Dr. W. J. Beecher commences "God in History." Frances E. Willard continues "How to Win." Dr. Smith's "Carlyle's Home in Craigenputtoch," and Mr. Bishop's "Josh Billings—or the Good of Bad Spelling," are eminently readable articles. (Meadville, Pa.: T. L. Flood. \$1.50 a year.)

THE *Atlantic Monthly* for January opens with "In the Clouds," by "Charles Egbert Craddock." Those of our readers who read "The Prophet of

the Great Smoky Mountains" by this author in last year's *Atlantic* will be more than pleased to welcome the new serial. The editor, Thomas Bailey Aldrich, probably the most popular story writer of the day, contributes "Two Bites at a Cherry." The old serials are continued. The reviews are of the "Life of William Lloyd Garrison" and "Stedman's Poets of America." (Boston: Houghton, Mifflin & Company. \$4.00 a year.)

The Literary World maintains its position as the leading exponent and chronicle of current literature. Its Christmas number was a "Survey of World's Literature for 1885," embracing the bibliography of the year in Biography, History, Science and Philosophy, Religion, Fiction, Travels, Medicine and "Miscellaneous" for the United States, Great Britain, France, Germany, Italy, Denmark, Norway, Sweden, "other continental countries," and the "near and far East." One is prone to ask "where is Canada in this list"? There is also a very full Necrology. (Boston: E. H. Hames & Company. \$2.00 a year.)

THE *Pansy* for December is a genuine holiday number, brimful of illustrations. Looking over it one wishes it could go into every household. The "P.S." or Pansy Society corner, is a praiseworthy feature. Its membership is indicated in the following: "Every boy and girl who takes the *Pansy*, and is willing to promise to try to overcome his or her faults, to encourage every good impulse, to try to conquer some hard lesson at school, to do anything that shows a disposition to help the cause of right in the world; any one who will say from the heart: 'I promise to try each day to do some kind act, or to say some kind word that shall help somebody'; honest effort will be accepted as much as if success were gained. This promise must be dated, and will be copied into the "P.S." roll-book. The most important of all to remember is our whisper motto: 'I will do it for Jesus' sake.'" (Boston: D. Lothrop & Company. \$1.00 a year.)

THE *Popular Science Monthly* for January is an excellent opening number. The article which Canadians will read with most interest is Mr. Horatio Hale's account of the "Origin of Primitive Money," in which he describes "wampum" and its uses among the Iroquois and other aboriginal tribes, and traces the existence of similar currencies in other parts of the world, and even, in the most ancient times, in China. Mr. Hale, who is deservedly described by the editor as "an accomplished student of aboriginal history and customs," is, as our readers know, a Canadian, a resident of Clinton. The whole number is so full of interest that we are fain to describe each article, but the merest skeleton must suffice. It opens with M. Pasteur's communication to the French Academy of Sciences, announcing his discovery and successful application of "Inoculation against Hydrophobia." In "The Flower or the Leaf," and "The Study of the Relations of Things," Dr. Mary Putnam-Jacobi and Miss Eliza A. Youmans discuss, from their respective points of view, ostensibly how the study of botany should be begun, but really fundamental principles of primary instruction. Mr. George F. Kunz has an

interesting paper, illustrated, on the "Agatired and Jasperized Wood of Arizona." Other papers of interest are Professor Fowler's "The Varieties of the Human Species," Grant Allen's "Fish out of Water," Herbert Spencer's social science study of "Nonconformity," the Rev. Henry Kendall's startling speculation on "Natural Heirship; or, all the World Akin," Dr. William Odling's "Science in its Useful Applications," Mr. Eddy's "Progress in Tornado Prediction," Mr. Morris' "Communal Societies," and Dr. Ellis' "Physiology of the Feet." The biographical sketch, accompanied by the usual portrait, is of Frank Buckland, one of the most interesting characters in the history of science. (New York: D. Appleton & Company. Fifty cents a number, \$5 a year.)

BOOKS RECEIVED.

Longman's New Readers. First Primer; Second Primer; Infant Reader; Standard I.; Standard II.; Standard III. London: Longmans, Green & Company. 1886.

Theory and Practice of Teaching; or, the Motives and Methods of Good School-keeping. By David P. Page, A.M., First Principal of the State Normal School, Albany, N.Y. To which is added a biographical sketch of the author. A new edition, edited and enlarged, by W. H. Payne, Professor of the Science and Art of Teaching in the University of Michigan. New York: A. S. Barnes & Company. 1885. 422 pp.

BOOK REVIEW.

The Talisman. By Sir Walter Scott. Edited by Dwight Holbrook, Principal of the Morgan School, Clinton, Conn. Boston: Ginn & Company. 1886. 441 pp. Mailing price, 60 cents.

Those who have read the "Talisman" will agree that no more entrancing tale of chivalry was ever written. As an indirect account of the crusades, and of the social life of the last part of the twelfth century, it is unsurpassed. The Messrs. Ginn have wisely chosen it as one of their "Classics for Children." In Mr. Holbrook they have found an editor of discretion whose notes are supplied not oftener than they are needed, and just when they are needed. Scott's style is so lucid that few notes are necessary, save for the many technical words relating to the chivalric customs of the time, which even our best dictionaries neglect to notice. In the present edition these are adequately explained. We should like to see the "Talisman" prescribed as a text for high school study.

Elements of Algebra. By G. A. Wentworth, A.M., Professor of Mathematics in Phillips Exeter Academy. Boston: Ginn & Company. 1885. Shorter Course. 282 pp. \$1.

We can convey no more accurate idea of this work than by saying that it is very similar to Hamblin Smith's "Algebra," so well known in our schools, except that several chapters are omitted. Indeed, in looking over the book one is forced to the conclusion that, to some extent, it borrows from Mr. Smith's admirable book, or else that both authors have obtained their material from

the same sources. The chapters on factoring are almost identical; no one can compare Exercise 29 of Wentworth with Exercise 33 of Hamblin Smith without being convinced of this. Nor are these the only instances of extreme similarity that can be pointed out. The whole arrangement of the one bears a likeness to that of the other. The insertion of Exercise 29 before factoring instead of after it, we think, an improvement. We are inclined also to look on Mr. Wentworth's arrangement of his chapter on Fractions as preferable to Mr. Smith's, although his treatment of Fractions is not nearly so exhaustive. On the whole we fail to see that the book can be of very much service to the teacher or student who is possessed of Mr. Smith's larger and more complete work, though it will be of excellent service to those who do not possess the latter. It is well printed on beautiful paper, is neatly bound and, so far as the mechanical part is concerned, it is worthy of the highest commendation.

Aesop's Fables. A Child's Version; with a supplement containing fables from La Fontaine and Krilof. By J. H. Stickney. Boston: Ginn & Company. 1886. 204 pp. Mailing price, 40 cents.

A general agreement among educationists, to which there is no important exception, is that children learn to read most easily, learn anything most easily, when that which employs their intelligence and their memory, at the same time arouses their imagination and enlists their sympathies. No more attractive and wholesome vehicle for conveying a knowledge of moral qualities to the mind, no more potent instrument for stimulating the moral sense, has ever been found than the fable. It has the double merit of imparting truth both directly and by metaphor. It excites the imagination of the child and brings him to a world whose objectivity he ever takes deeper and deeper interest in. Of all fable writers Aesop is the prince—and next to him are La Fontaine and Krilof.

Miss Stickney is fast winning for herself a reputation as an educator who can be trusted. She evidently loves her work; and of this last book only praise can be uttered. It contains 156 fables, graded in difficulty, and suited to children who in our schools are reading the Second Primer and the Second Reader. The introduction and the appendix will be useful to all teachers. The publishers have done their part well. The book is strong, bound and plentifully illustrated. The type is large and clear; the paper, white.

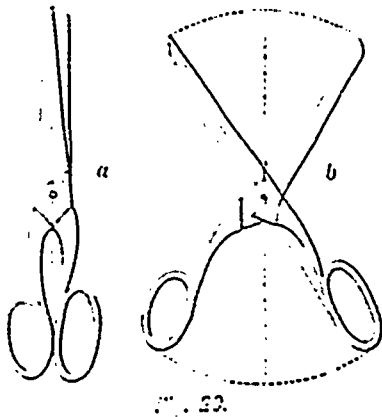
ONE of the literary problems now under discussion is how long ought writers to work? Edward Everett Hale follows Bulwer in saying three hours of hard literary work is as much as any man can stand for any length of time. George W. Cable goes to his study at 9 o'clock in the morning and leaves it at five in the afternoon, only leaving the room for lunch. R. H. Stoddard begins work at 11 o'clock in the morning and does not leave it until four in the afternoon; besides this he works frequently at night. T. B. Aldrich goes early to his editing of the *Atlantic Monthly*, and leaves at lunch time. He writes only when the mood is on him.—*Chautauquan.*

Practical Art.

ELEMENTARY DRAWING—XII.

ACCOMPANYING this paper is the illustration (fig. 20) which was omitted from my last one. The watering-can (fig. 22) is an interesting and useful object for a drawing lesson. Interesting, because it is familiar to every child, and useful, because it embodies so many of the principles laid down in these papers. It is one of those objects whose form has been decided with regard to the use to which it is to be put.

The proper way to treat it is to analyze it and find out the different geometric forms which enter into its composition. Thus, we have the cylinder, cone and circle. The curve of the handle is what may be termed a reversed compound curve. Questions should be asked for the purpose of ascertaining if the children are able to form an opinion as to the reason why these particular forms should be adopted in preference to others. Children should be taught to look for causes. It is part of their nature to do so, and therefore it requires only a little encouragement and wise direction on the part of the teacher to cultivate this proclivity.



It should be shown that the cylindrical form is chosen probably because it is easily constructed; it is stronger than a solid enclosed by plane surfaces, and it possesses a greater bulk for the amount of material employed than any other solid except the sphere, spheroids and ovoid. One handle is placed at the top for convenience in carrying the vessel, as in the case of the pail illustrated in a former paper, and the other handle is placed at the side for the purpose of holding it while pouring water out of the spout. It escapes through the rose, slowly, and so the can must be suspended, in some cases for a considerable time, before it is empty. It will be found that most watering-cans have the smaller handle so placed that by simply suspending the can by it, the water will run out through the spout, almost to the last drop. The importance of this will be readily seen, as by it the labor of using the vessel is reduced to a minimum.

All similar vessels, such as jugs, teapots and coffee-pots, should be constructed upon this principle, and designers usually take it into consideration in designing them. Perhaps more will be said about it in a future article.

The top handle is made rigid instead of movable, because it is necessary in large watering-cans to use both hands, one on each handle, to support the weight while pouring, and if the top handle were movable, the purchase on it would not be great enough, and it would be comparatively difficult to stop the flow of water instantly when necessary.

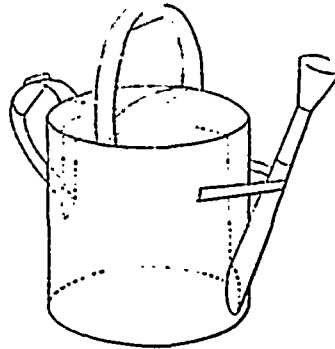


Fig. 22.

The spout is inserted opposite the side handle and close to the bottom.

The handles are strengthened by having wire let into the edges, or by folding the edges over. These edges, if left without some protection, would hurt the hand of the person using the can, and so a rounded piece of tin is soldered on the inside of each handle where the hand grasps it. Besides this, there are usually on large watering-cans braces of tin to give additional strength to both of the handles and the spout, and on the small handle is a half cylinder of tin intended as a rest for the thumb.

The spout itself is a truncated cone of great altitude, and the rose is also a truncated cone but of a less altitude. The perforated plate on the rose is a portion of a sphere, as this shape increases its strength and makes it less liable to injury. The top of the can is covered half over by a plate to prevent the water from spilling while the can is being used for sprinkling. This plate is also rounded outwards for the reason mentioned.

In some such way as this the object may be used for the sake of imparting other information than that directly relating to drawing. Children, boys especially, will be greatly benefited by having their minds stored with mechanical ideas, and so it may not be amiss at this juncture to show how, by means of a simple expedient, the strength of materials may be greatly increased. The teacher may possess himself of two circular pieces of tin, one perfectly plain and the other turned up round the edge at right angles to the plane of the circle, as in the bottoms of

tin vessels used in every household. One will be very easily bent while the other will be quite stiff and strong. Or, a few pieces of thin wood may be provided, about $\frac{1}{8}$ of an inch thick, 1 inch wide and 2 feet long. Two of these may be separate, and two of them nailed together so as to form an L-shaped trough. The separate pieces will possess very little strength and may be easily bent and twisted, but those nailed together will be found to possess nearly as much strength as a solid piece about $\frac{1}{4}$ of an inch square. In this case truly "union is strength." A more simple way of showing this is to cut a long strip of paper 1 inch wide and 2 feet long. When it is held by one end it will not remain in any other position than hanging vertically downward, but by folding it lengthwise into a trough it will not only support its own weight horizontally, but will possess, for it, considerable strength. This system of strengthening metal plates is largely adopted in bridge building and in building other structures where great strength is required without a corresponding increase in weight.

In drawing the watering-can, commence with the cylinder; draw a line across the top to indicate the position of the ends of the top handle; draw another line through the centre of the top, perspectively perpendicular to the first line—that is, to divide the top perspectively into four equal parts—to show the direction of the plane in which are the side handle and spout; draw lines from the ends of this last line, down the cylinder, to obtain the points where the side handle and spout are fastened; draw the two handles and the spout and rose, and finish by erasing all lines representing invisible portions of the can. A little shading is introduced to represent the surface of the water in the can. These lines should be parallel, the same thickness throughout and the same distance apart. The depth or tone of the shade may be altered by increasing or diminishing the distance between the lines, or by making them heavier or lighter.

ARTHUR J. READING.

OUR modern novelists are trying to escape the uniform use of "said," "answered," "remarked," etc., by using intransitive verbs in an active sense, with a clause in quotation marks as object, or by a still more awkward device. I note several examples from a single writer of some reputation in the *Century*, November, 1885: "'If I look comfortable, my looks belie me,' he *sighed*," p. 62. "'What business had he with the records?' Mr. Newbold *interrupted*," p. 69. "'I knew you would say that,' *laughed* Mrs. Craig," p. 70. So it goes, through all our latest stories: "'I am tired of this,' *yawned* Tom." "'Get out of my sight,' *frowned* Dick." "'Sheer cant,' *scuffed* Harry." In sensational novels, these absurdities appear on every page, and they are becoming very common in more respectable authors: This goes far to verify Addison's remark; "'There is scarce a solecism in writing which the best author is not guilty of.'"—*W. Collins, in N. Y. Nation.*

Methods and Illustrations

For the EDUCATIONAL WEEKLY.

PRACTICAL ELOCUTION—II.

THERE are three great essentials which every reader should keep before him, namely, *comprehension, sympathy and adaptation*. He should seek out the spirit of the author. It is not enough that he enter the outer vestibule of speech, he must search for the hidden mystery of thought within the *sacred penetralia* of the writer, and catch up the subtle coloring of his mind and the circumstances that inspired it from the spirit which holds sway over each passage and speaks in language to the intellect or the heart. Every sentiment that has been ever uttered or written or can be uttered or written is necessarily made up of a combination of the three elements, *vital, mental and spiritual*, with some one predominating. Now, if the prevailing thought be *mental*, the whole passage will be colored with the sunlight of reason such as may be found running through "Othello's Apology." And why is this? Because it is a piece of special pleading in court, Othello being the pleader—pleading in behalf of himself, justifying his conduct, and refuting the charge that he has decoyed Desdemona from the paternal roof by the power of "drugs, charms, conjuration and mighty magic." No person can read the opening lines of the "Apology" without feeling the atmosphere of the court surrounding him—it may not be a modern court with judge, crier, council and jury of twelve, but you feel the dignity of Othello's *mental* task in the very words:—

"Most potent, grave, and reverend Seigniors:
My very noble and approved good masters:
That I have ta'en away this old man's daughter,
It is most true; true, I have married her;
The very head and front of my offending
Hath this extent; no more."

When a reader has within him a full comprehension of the sentiment which he is about to interpret to his audience through the medium of language *expression*, the *giving out* of the sentiment will reflect the color of thought as truly and accurately in the voice as the glassy tide of a placid river at eventide in farewell parting to the sun mirrors in its bosom the floating cloud, the dreamy hill-top, or the wavering bird on wing. And let it be remembered that the *true principles of reading* hold alike for the schoolroom and the most dignified schools of elocution and oratory. But one word expresses the basic, central and crowning element, of correct reading, and that word is *naturalness*. No art, be it never so highly cultivated, will fittingly take the place of the character of nature, whose soul is the image of God, the Divine Creator of all Beauty. THOS. O'HAGAN.

For the EDUCATIONAL WEEKLY.

WRITING.

THIS is a subject that I have not seen touched upon in your valuable paper. It is one that receives very little attention from our teachers, and they apparently ignore further proficiency in the art than to write a legible hand. Few there are who overstep the limits of the ordinary and handle the quill with ease and freedom.

The qualities required in the writing of the present day are: (1) Legibility (2) Rapidity (3) Beauty. The acknowledged system of America is that founded by the Spencers, father and sons, and known as the Spencerian system of penmanship.

The system of writing used in England is the old round hand, the principles of which are the old "pot-hooks and hangers" which loom up before the memory from the days of yore, like a forgotten relic, over which many a helpless juvenile has received an old-fashioned caning, as was the custom in those days of unphilosophic pedagogy. This system has in America been consigned to the tomb. Another style that should have its funeral rites performed is (with all deference to our fair scribes) the pointed or angular hand, whose only good quality is its regular ruler-like picket-fence appearance. It is devoid of the graceful beauty and flow that is so much admired in fine writing.

These are the extreme styles of writing. Now, the Spencerian is a happy medium which combines regularity, system, graceful beauty, and capability of rapid execution, combines legibility, rapidity, and beauty. The turns, instead of being as round as an arch as in the English system, or pointed as a steeple as in angular hand, are made with a small medium turn to connect a straight *down line* with a curved *up line*, as in a *u*, or *vice versa*, as in *m*. This, with many other equally sensible modifications from what is called the semi-angular hand, has been developed by the Spencers, and is taught in every business college on the continent.

Writing owes almost all its extra proficiency to the business colleges, which are the fountain heads of all extra instruction in the art. Our system of education, so perfect in many things, is sadly deficient in turning out writers of even ordinary ability. The system given by the Education Department is the Spencerian, as in our authorized copy books, but the worthy axioms there laid down are not carried into practice, and what seems more hopeless for the cause of good writing, there are no efforts put forth to have them put in practice. What is wanted are teachers capable of executing, and of setting an inspiring and living example. It is not too strong to say that not more than one teacher in fifty can write a copy-line on the blackboard and explain the principles involved as readily as he would a

problem in arithmetic, yet one is on as fixed and lucid principles as the other. I had lately the pleasure of examining the addresses of fifty or sixty teachers, and must say that only two or three showed the slightest vestige of a knowledge, a practical knowledge, of the underlying principles.

Many say, "They can't write," "I would never be a writer," "I have not a steady enough nerve," etc., *in infinitum*, but I ask these persons to review their past, and find if they ever made an effort that lasted a month. I can confidently say they did not, or else in that time the hallucination would have vanished. Others say that a man is born a writer. He is not more born a writer than a man is born a preacher, a teacher, or a ploughboy. The idea of people being born with special abilities in any one narrow direction, and of being inwardly impelled in that direction, is becoming more and more an exploded idea. The atmosphere of the circumstances in which we breathe and which supports the germ of life born with us, does more to mould and adapt the mental drift and calibre of the mind to its life work than any inborn propelling power.

I would like to follow up the subject of writing in a more practical manner, but such is impossible in an article like this. Many points could be touched on, such as the philosophy of movement, the management of the hand, the various principles underlying execution, and the practical application of all. But space will not allow such in detail at present. L. H. GRAHAM.

HALF-MERITS.—Many teachers give to their pupils, who have been good children during the day, a merit. When the child has earned ten or twelve merits, these are returned to the teacher, and a card that is to be kept is given in exchange. The objection to this custom is this: If temptation proves too strong for the little pupil in the morning session, he is apt to think there is no use in trying to be good in the afternoon, since he has lost his merit. When he goes home at noon, he is apt to think it will be a long time before he can try again to earn a merit, for a few hours seem as long to a child as a few days to his teachers. The child naturally becomes discouraged; the afternoon is no happier than the morning, and if the whole day is a failure, there is no bright promise for the next. To remedy this difficulty are the half-merits, half the size of the whole merits, and of a duller color. When the child has earned two half-merits, he can exchange them for a whole merit, and so receive a short object lesson on fractions, as well as a reward for well-doing. Some one has said: "The glory is not in never falling, but in rising every time we fall." Blessed half-merits, if they can help the children to rise quickly from their naughty deeds to good endeavor!—*American Teacher*.

PRIMARY READING.

BY THE EDITOR OF THE "EDUCATIONAL WEEKLY."

READING is the most important branch taught in elementary schools; it is also the most difficult branch for both teacher and pupils, requiring long and continued application and much practice on the part of the pupil, and intelligence, skill and patience on the part of the teacher. So impressed was President Hill, of Harvard, with the magnitude of the task of learning to read, that he said, "There is no man living, in England or America, who has learned, or can learn to read the English language; that is, to pronounce correctly at sight anything and everything written in it." Teaching to read in a skillful way involves so much of instruction and mental discipline as to fulfil almost the whole purpose of elementary education; so that, by the time a child has learned to read well, his faculties have received a large amount of training, and he has in possession the key that unlocks the storehouses of knowledge.

A superficial analysis of the process of learning to read shows it to consist mainly of three things:

1. Learning to see words accurately and quickly.
2. Learning the meaning of words singly and in sentences.
3. Learning to utter words in sentences with distinctness and expression.

Since a true method of teaching is always based on the natural method of learning, we have, corresponding to these, three things involved in the teacher's part of the work. It must be his aim,

1. To train the eye to see.
2. To cultivate the intelligence.
3. To train the vocal organs and cultivate expression.

This analysis enforces what has just been said, that to teach reading in a skillful way, involves so much of instruction and discipline as to accomplish almost the whole purpose of elementary education.

Seeing is a chief function of the mind; complete seeing is the foundation of all valuable mental attainment; and training children to see should be the chief business of elementary teachers. It is said that there is a school in Paris for the training of thieves. Much of the training has reference to sharp seeing. The pupils are practised in enumerating and describing objects seen in passing along the streets, until they are able to make an inventory of the articles in a dry goods window, after passing it rapidly but once.

The child that can see sharply will usually make rapid progress in learning to read; and all exercises which tend to beget the power of ready and accurate seeing may be considered auxiliary in the work of teaching reading, while at the same time a right

method of teaching a little child to read is a most excellent means of begetting in it the power to see.

There are three principal methods of teaching young children to read, namely:

1. The a b c method.
2. The word method.
3. The phonic method.

The first of these, though time-honored, has little to recommend it. On the contrary, it is surprising that a process so stupid and stupefying should hold its place so long, and still continue to hold its place in many schools, as this does. It consists in teaching the child to recognize at sight the twenty-six arbitrary characters which are used as signs of the elementary sounds of the language, and to call each by a name which has little or no resemblance to the sound or sounds for which it stands. Then he is taught arbitrarily that certain combinations of these characters represent certain words. In any given case, the child has not the slightest clue to the word in either the letters themselves or the names by which he has been taught to call them. Alphabetic spelling, so far from being an aid to the proper pronunciation of words, often leads directly away from it. For examples, the alphabetic spelling of the word *leg* gives *elegy*; *fig* gives *effigy*; and the first syllable of *ditty* gives *deity*.

But for the pronunciation of the teacher of every word as spelled by the pupil, learning to read by this method would be an utter impossibility. As it is, by dint of almost endless repetitions, the pupil begins, in the course of time, to discover that the same letters are constantly recurring, and unconsciously to attach to each its appropriate phonic value; so that the alphabetic method of learning to read is, in short, a very clumsy way of acquiring the sounds of the letters. The letters themselves are of no value to the pupil in making out new words until he knows what sound is represented by each.

The *word method* consists in teaching pupils to call words at sight, without any regard to the elements that compose them. In Great Britain and Canada it is often called the "look-and-say" method. Its advocates claim that it is natural, and analogous to the universal method of learning spoken language. In learning to talk the child always begins with words, not with letters nor with their separate sounds. It is also claimed that the word method affords more interest to the pupil, and so excites his powers to more rapid acquisition. But the satisfaction the teacher derives from the rapid progress of the pupils in the knowledge of a limited number of words, should not blind him to the fact that the analysis of words into their elementary sounds is only postponed, and must be accomplished before his pupils can be said to have learned to

read. The method, after all, is only another and a more indirect way of learning to associate with each letter the sound or sounds for which it stands. After learning a considerable number of words as wholes, the child begins to discover that the same letters are constantly recurring, and at length comes unconsciously to attach to each letter its appropriate phonic value. He is at last in possession of the key to the language, that lay conspicuously before him at the outset. He has reached the process of analysis and synthesis, but later than necessary, and with little of value to show for the time spent and the loss of the disciplinary benefits which might have been secured.

The *phonic method* consists in teaching the pupil the sounds of the letters instead of their names, and to combine these sounds so as to form words, thereby furnishing him with an instrument which he can use himself in gaining a knowledge of a large majority of words in the language. The irregularities of our language present some obstacles to the successful use of this method; but when we consider that these irregularities must receive special attention, no matter what method is pursued, and that the child that knows the sounds of the letters has a key to nineteen-twentieths of the words in the language, these obstacles sink into insignificance. It cannot be denied that this method well carried out does furnish the child a key to the great majority of words, and reduces the stumbling-blocks to a minimum. Some teachers are so skillful in the use of diacritical marks and other devices in connection with the phonic method, that the obstacles presented by our irregular spelling almost entirely disappear.

The chief objection which has been urged against the exclusive use of this method is that it is unnatural and unphilosophical. In learning spoken language, the child does not begin with elementary sounds, but with spoken words—the units of language; and this, it is thought, suggests the natural method of learning written language. To my mind it indicates the way of approach, the starting point; but it has little weight against the conclusion, drawn from observation and experience, that the safest and surest, as well as the shortest road to good reading is through a knowledge of the elementary sounds of the language and their corresponding symbols.

I desire to say, however, that the wisest and best teachers of this day do not confine themselves strictly to the phonic method, nor to either of the other methods described. A union of what is best in all the three methods is found to be most in accordance with correct educational principles, and to produce the best results; and this gives rise to what may appropriately be called the *eclectic method*, the principal features of which I shall endeavor to state.

1. Its starting point is to teach the child to recognize at sight words with which he is already familiar in spoken language. He knows words as sounds; he now begins to know words as forms. The child at first acquires spoken language by a natural impulse which causes him to practise unconsciously but persistently, the association of ideas with their corresponding sound-symbols. The natural approach to a knowledge of written language is similar. Familiar ideas and their well-known sound-symbols are associated with their corresponding form-symbols, until each readily suggests either or both of the others. A child *knows* a word when he can pronounce it correctly at sight, and it readily suggests to his mind the idea of which it is the symbol. One reason why learning to read is often such an irksome task may be found in the failure of teachers to keep up in the pupil's mind this relation of words and ideas. Learning words as unmeaning sounds and forms is very dull work, as those of us realized who began the study of Latin by memorizing the paradigms, *hic, hac, hoc*, etc.

Thus far, we are following strictly the word method, and rightly, for the word is the natural starting point. The word is the natural unit of language. The child already knows words as integral elements of spoken language, and, on the principle of proceeding from the known to the related unknown, his next step is to learn words as integral elements of written language.

But we have already seen that a child cannot learn to read without learning to associate with each letter its appropriate sound. To this he must come directly or indirectly, sooner or later, no matter what the method pursued. It is only a question of time and ways and means. This leads me to say,

2. The sounds and names of the letters are best learned by the analysis of familiar and easy words. The practice of good teachers varies as to the time of beginning this work of analysis. Some proceed, as soon as the pupils are able to recognize a word at sight, to analyze it both by sounds and by letters. Others prefer to put off the work of analysis until the pupils have acquired a considerable vocabulary and are able to read simple sentences readily. Painstaking and persistence are necessary when it is undertaken.

3. This process of analysis should be followed soon by one of synthesis. As soon as the letters and their principal sounds are known, the child should be practised in combining them into familiar words. This is important. Sufficient practice should be given to beget facility in making out new words from the sounds of the letters composing them. This gives him practice in using the key which he now has in his

possession, and of this he should have abundance.

4. As soon as the pupil gets fairly started at reading, it is important that he have an abundant supply of easy and entertaining reading matter. Conning over for a whole year the lessons of a single first reader does not furnish the necessary conditions of good progress. There should be many repetitions of the same words in different relations, to fix them firmly in the mind, the subject matter being as interesting as the repeated use of a few words will permit. A class, while mastering the first reader, could use profitably at least five times as much matter as the reader contains, provided few, if any, words not found in the reader are introduced. A few hundred words thoroughly learned by practice of this kind would contribute a sure foundation for excellent reading. It is a well-known fact that, as a rule, pupils that have plenty of suitable reading at home, advance more rapidly and read more understandingly than those who have not. Children learn to read by reading; and to become good readers in a reasonable time they must read a great deal.

5. An essential part of reading is to get the sense. The pupil must understand what he reads. In the early stages, every new word should be thoroughly mastered, both as to its meaning and its pronunciation, before there is any attempt to read a passage in which it occurs. Advancing, the reading lesson becomes more and more a language study. The meaning of words must be learned, the significance and force of phrases and sentences must be understood. In the light of such an ideal, what wretched work goes on in the schools! What stumbling and bungling, and drawling and mumbling come of pupils attempting to read matter for which they have had no suitable preparation!—sometimes matter entirely above their comprehension!

There are clearly two distinct exercises which must be carried on simultaneously in order to the fullest success in learning to read. One is thorough drill on a limited amount of matter, such as the pupil can master fully—not only to be able to call the words at sight, but to understand and appreciate the thought and sentiment. The other is practice in reading entertaining and instructive matter, entirely within the pupil's comprehension and calculated to form his taste and beget the habit of reading. The first of these will require most of the teacher's time and effort; the other may be done largely out of school, but under the teacher's direction.

6. It is scarcely necessary to add that the pupil should be trained from the start in the right use of his voice. No drawing nor ear-splitting tones should be tolerated. Natural-

ness and ease of manner and pleasant conversational tones are preferable to studied attitude and utterance.

CORRECTING MISTAKES.

"A TEACHER should not allow a word to be mispronounced, or an error in grammar to be made, without correcting it at once."

The author of the above probably meant the right thing. In our judgment he has been misunderstood by many teachers. Suppose a pupil is asked to explain the following problem: A can do a piece of work in four days, and B can do it in three days. If they both work together, how long will it take them to do the work?

The pupil says, "Sense (since) A can do the work—" Here he is called to a halt by the teacher and fifteen swinging hands. He wonders what has happened. A pupil is given permission to tell him. He is informed that he said *sense* for *since*. He starts out again: "Sēn—*since*," and he has put so much force on the pronunciation of the word that he has almost forgotten what he intended to say, but presently he rallies, in spite of his teacher's encouraging remarks, such as, "Well, hurry. We can't wait all day." He starts again: "Sēn—since A does the work in four days, one quarter of the work is wat (what) he —" Up go the hands, and the teacher allows some pupil to correct him, after which he is told to try again. He does try again, but he is getting disgusted. He begins to weaken. He begins at the beginning with his mind fixed on *what*. He is hoping to get under such headway by the time he reaches the *what* that his momentum will help carry him over. He says, "Sence A can do —" He has stranded on *since*. After correction, he tries again, and just as he got under headway he struck the word *of*, which he called *uv*. This produced more consternation. He still survived and tried again, but his explanation had passed out of his mind, and he said some *curious* things and gave the queer answer that they could both do the work in seven days. *This* did not seem to trouble the pupils any, but they noticed that he crossed his legs and stood on one foot and said *is* for *are*, *wat* for *what*, *uv* for *of*, etc.

These habits of bad pronunciation were acquired before he entered school and are of long standing. They cannot be broken up at once. They must be broken up as they were made—little by little. Allow him to explain his problem without interruption. Give him credit for his work. Then criticise the mistakes in pronunciation, grammar, etc. Simply correct him and see whether he *can* pronounce the words correctly, and that he sees why his grammar was wrong. "Learn to labor and to wait." Teachers are often unwilling to *wait*. They usually labor enough.—*Indiana School Journal*.

Correspondence.

QUESTIONS AND ANSWERS.

[All communications for this department must be accompanied by the name and address of the writer, though not necessarily for publication; they must refer to the work of education; their language must be definite and terse; they must be on slips of paper separate from all other correspondence; and they must be so written that they can be sent directly to the printer. No other communications can be taken notice of. Correspondents answering or referring to any question are requested to give the number of the question for convenience of reference.]

No. 1. Q.—Could a teacher, holding a Second Class "B" obtained 15th March, 1883, and getting over 70% in the aggregate and over 70% for teaching (in the Normal course) have a right to ask for a Second Class "A"?—F. M. H.

A.—He certainly has the right to ask for it. But the practice of raising the grades of certificates on account of excellence during the Normal School course has been in vogue for only a short time; and as in future Second Class certificates are to be of one grade only, it is not likely that the question would be considered at all. However, write to Education Department.—ED. E. W.

No. 2. Q.—I should like to have your opinion of the relation of—"of its own birth"—in the following quotation, ll. 56-58, *Dejection*:—

"And from the soul itself must there be sent
A sweet and potent voice, of its own birth,
Of all sweet sounds the life and element!"
Should the phrase be taken with "soul," "voice," or "life and element"?

By answering the above you will oblige.—A SUBSCRIBER.

A.—The phrase relates to "voice," but "its" refers to "soul."—ED. E. W.

No. 3. Q.—Can you keep a boy from school, or rather, dare you punish a boy whom you have promised to punish, in November of 1885, if he comes back to school at the beginning of the following year? The boy committed an offence in November. I went to punish him and he ran from school. On leaving I told him I would punish him when he came back. He came back in December but ran away before I got the chance to give the punishment. Since then I have been engaged for another year. If the boy comes back next January dare I give the punishment? If not, what steps might be taken with him?—A TEACHER.

A.—You have the same right to punish the pupil that you ever had. But as the case is a difficult one we should advise you to see the boy's parents, and make confession of wrong-doing and promise of amendment conditions of his return. Then receive him with pardon.—ED. E. W.

No. 4. Q.—A gives B 150 lbs. of wool to card and spin on the following terms: B is to spin it at 11c. per lb. of yarn, and take his pay in wool from the 150 lbs. at 35c. per lb. How many lbs. of yarn should A receive and how many lbs. of wool should B keep in payment, there being a waste of 13½ lbs. of wool on every 12 lbs. of yarn manufactured?—C. P. C.

No. 5. Q.—How can a teacher, preparing for the First "C" examination, pursue the study of experimental chemistry profitably if he does not attend a high school?—MIDDLESEX.

A.—We know no way. It is intended that a First Class teacher shall attend some school where chemistry is properly taught before he shall receive his certificate.—ED. E. W.

No. 6. Q.—Required the simplification of:

$$16 \left(\frac{1}{5} - \frac{1}{3} + \frac{1}{5^3} - \frac{1}{5^5} + \frac{1}{5^7} - \dots \right) - \frac{4}{239}$$
 —L. K.

A.—In the statement of this question our correspondent made two errors. In its corrected form we leave it to our readers.—ED. E. W.

Educational Intelligence.

THE Aylmer High School teachers are all re-engaged.

A TWO-STOREY wing is to be added to the Chesley Public School.

MR. J. W. SILLI has been appointed head master of the Vittoria School.

MR. ROBERT GRANDY, teacher in Lifford, has been re-engaged.—*Whitby Chronicle*.

WALKERTON High School is to be raised to the rank of a collegiate institute.—*Paisley Advocate*.

MR. NELSON SMITH, of Calton, succeeds Mr. D. J. Hunter as principal of Port Burwell Public School.

THE services of Mr. Archer have been secured for the Smith's Falls School.—*Smith's Falls Independent*.

MISS MARY R. SPRINGER has been appointed third assistant teacher in the Goderich High School.—*Huron Signal*.

MR. HOPPER, head master of Brighton High School, has been re-engaged at same salary.—*Brighton Ensign*.

MR. W. M. LOGAN, B.A., Toronto University, is to be classical master of Aylmer High School at a salary of \$800.

MR. A. W. WRAY, who taught in Dalrymple during 1885, has been engaged for Dunsford School.—*Whitby Chronicle*.

MR. ALLEN THOMPSON, of Granton, has been engaged as mathematical master in Hamilton Collegiate Institute at \$800.

MISS J. ABEL, of the Windsor High School, won the gold medal presented by Mr. Donald Cameron.—*Amherstburg Echo*.

MR. W. J. CHISHOLM, B.A., medallist of Toronto University, is to be modern languages master of Ingersoll High School at a salary of \$800.

MR. R. A. THOMPSON, B.A., medallist of Toronto University, is to be mathematical master in Hamilton Collegiate Institute at a salary of \$800.

MISS MAGGIE GILLIES has been appointed to the vacancy in the Galt Central School staff, caused by the resignation of Miss Linton.—*Galt Reformer*.

MISS JENNIE L. ROSS, late of Gananoque Model School, has been appointed to the position of mistress in English and Mathematics, Brantford Ladies' College.

MISS FITZGERALD, retiring from Dundas High School, was presented by her pupils with an address and a magnificent jewelled ring.—*Dundas True Banner*.

MR. N. KELLET, of Vigo, County of Simcoe, is engaged as second assistant teacher of the Petrolia High School. Mr. Brebner is appointed first assistant.—*Petrolia Advertiser*.

MR. SIMPSON, of Vienna, has been appointed assistant in Dundas High School and Miss Clark has been engaged to fill a vacancy in the public school staff.—*Dundas True Banner*.

THE pupils of the model school, at the close of the term, presented their teacher, Mr. George Sharman, with an address and a photograph of the class, taken in a group.—*Norfolk Reformer*.

MR. W. J. HAMILTON, teacher of the senior division of the model school, has been presented with a handsome inkstand and pen-rack, surmounted by a beautiful calendar clock.—*Cobourg World*.

MR. S. NEILLY, principal of Hanover Public School, has resigned. His pupils presented him with a silver-headed cane. Miss Barthrop, who is also leaving, was the recipient of a jewel case.—*Hanover Post*.

MR. M. N. ARMSTRONG, principal of Orangeville Model School, was, at the close of the late session, presented with a valuable set of Dickens' works and a framed photograph of the students.—*Dufferin Advertiser*.

MR. C. W. WILLIAMS, of the Ridgeway High School staff, has resigned, to take a position as general agent for the British American Insurance Co. Mr. J. H. Little, of Smith's Falls, will succeed him.—*Chatham Planet*.

THE following have been re-engaged for the Omemece Schools, viz.: J. A. Tanner, H. M., H. S., \$850; Miss Moore, assistant, \$400; J. H. Sheppard, H. M., P. S., \$525; Miss Blewett, assistant, \$275.—*Omemece Herald*.

MR. R. MOIR writes to say that he has been classical master of Caledonia High School, during the last term, and not modern languages' master as has been stated in these columns. Mr. Moir's present address is Rochester, N. Y.

THE St. Catharines Collegiate Institute Board at their last meeting voted the necessary funds to put up a suitable gymnasium, to equip the physical department, also \$100 as a nucleus of a library. Mr. Gamble's salary was increased to \$900.

THE Minister of Education has decided to continue the Vienna High School until next midsummer to give the people of Bayham another opportunity to ask the county council to withdraw their order.—*Correspondent of St. Thomas Times*.

MR. J. B. GANTON, who has been teaching in Nassagaweya, was recently offered an increase to remain for another term, but thinking the offer not large enough he declined. Mr. G. has accepted a salary of \$450 to teach in an adjacent section.—*Milton Champion*.

MULVEY School, Winnipeg, was in danger of being destroyed by fire lately. The floor under one of the stoves became ignited and the fire would soon have been beyond control, had it not been discovered. It was extinguished without aid from the fire brigade.

MR. A. G. HENDERSON, of Whitby Collegiate Institute, lately received an offer from the Collingwood Collegiate Institute Board, of the position of commercial master at a salary of \$900—but has

decided to remain in Whitby. His salary is to be increased—*Whitby Chronicle*.

ON Monday afternoon Miss L. K. Henderson, teacher of grade five, Orillia Public School, was made the recipient of a handsome silver napkin ring, engraved, and an address, presented by her scholars, on the eve of severing her connection with the school.—*Orillia Packet*.

THE following teachers are engaged for next year: at St. George, Mr. J. C. Elliott, Miss Webster and Miss Thompson; Harrisburg, Mr. Thos. South; Papple's, Miss Connor; German's, Miss Anderson; McLean's, Miss Hundy; Turnbull's, Miss Vair; Bruce's, Mr. F. Smith.—*Galt Reformer*.

THE following teachers are engaged for Carleton Place Schools: Miss McCallum, Miss Empey, Miss Sinclair and Miss Wilson. These, with those previously engaged, viz: Mr. J. A. Goth, principal, Mr. McDonald, Miss Burk, Miss Girouard and Miss Dryman will comprise the staff for this year.—*Carleton Place Herald*.

MR. E. C. ARTHUR, until lately modern language master of St. Mary's Collegiate Institute, has been presented with a very fine edition of Chambers' Encyclopaedia and a handsome dressing case. Presentations have also been made to Miss Verth, Miss Cruttenden and Miss Watt, of the public schools.—*St. Mary's Argus*.

MR. H. BEWELL was, on Thursday afternoon, Dec. 17th, presented with an address and a beautiful gold-headed cane, suitably inscribed. Such genuine expressions of esteem from the scholars must be gratifying to Mr. Bewell, who is about to leave them, and we are sure will be very much appreciated.—*Carleton Place Herald*.

AS an illustration of the fact that school attendance during epidemics largely contributes to the spread of infectious diseases, it is stated that during the late serious outbreaks of diphtheria in the ironstone villages of England the closing of a school proved in every instance an effective means of bringing each local epidemic to an end.

MR. A. CRICHTON, B.A., head master of Waterdown High School, has accepted an offer of \$900, as classical master of Owen Sound High School, which is soon to become a collegiate institute, and Mr. W. T. Evans, B.A., his assistant, has secured a position as mathematical master of Sarnia High School, at the same salary.—*Milton Reformer*.

A MOVEMENT has been started to request the Government to erect a normal school in Kingston, seeing that the Ottawa institution cannot afford the necessary accommodation. Some years ago the Federal Government granted a piece of land to Mr. Mowat on which to erect a school, but it was never built, and consequently the land has been lying idle since.

THE Young Men's Christian Association in connection with the Toronto University is progressing encouragingly. The new building in course of erection will soon be finished, and the ladies connected with the city churches have undertaken to raise the necessary funds for its complete equipment and furnishing.

THE Philadelphia School of Industrial Art, devoted to textiles, is being enlarged. The fees are \$50 a year for day classes, and \$15 for evening

classes. Several leading manufacturers have presented the school with various kinds of machinery. If such an institute were established in Canada, similar assistance would no doubt be given by some of our public-spirited textile manufacturers.—*Canadian Journal of Fabrics*.

DR. BRYCE has received from Hon. Donald A. Smith the handsome donation of \$500 for the purpose of obtaining necessary additional appliances for the teaching of natural science in Manitoba College. The additional apparatus was ordered some weeks ago, and may be expected to arrive from London, England, during the month of January, and so will be available for the present session of the college.—*Daily Manitoban*.

ON Friday afternoon, Dec. 18th, the pupils of the Orillia High School assembled, at the close of the term, to bid Mr. Stewart, late second master of the school, farewell in a suitable manner. They presented him with an address and with four medical works, chosen with a view to their usefulness to Mr. Stewart in his profession, also with nicely framed photographic views of the town, school, and pupils of the school.—*Orillia Packet*.

A SHORT time ago Mr. Walter Amos, who is at present teaching school near Guelph, lost the sight of one of his eyes, although it had not to his knowledge received any injury. An expert in Toronto was consulted, who pronounced the case a most singular one. The loss of sight, so we are informed, was caused by the bursting of a blood vessel in the eye through the ravages of a small insect. The expert took the eye out and removed the blood, which had the effect of restoring the sight.—*Galt Reformer*.

THE closing exercises of the Cobourg Collegiate Institute, held on Friday evening, Dec 18th, were very interesting. The programme consisted of addresses, music and the presentation of prizes. The principal gave a detailed statement of the work done by the school in the last twelve years. Besides a large number who had obtained a good general education, about 640 had been fitted for the work of teaching, matriculation in arts, medicine, law, pharmacy, dentistry, theology, and commercial life.

THE interesting experiments of the effects of gymnastic exercises on students, which have been made at Amherst College of late years, are turning out admirably. Dr. Hitchcock has compiled a paper of statistics taken on six hundred and ninety-one students. "The mean results are classified according to ages, and show a gradual and steady increase in physical growth from the youngest to the oldest. When a man leaves college he is, on the whole, in a much better physical condition than when he entered it."

WE understand that the six trustees of the Beeton School (referred to in our editorial of November 26) have determined to act corporately until their successors are appointed, which will probably not be until after the appeal from the decision quashing the by-law of incorporation has been decided in the higher courts. As the appeal case has been commenced, by a curious law fiction the corporations (school and municipal) which were thought to be defunct after the previous judgment are resuscitated, and continue "live" until by the next decision their existence is either confirmed or again extinguished.

A MUSICAL and literary entertainment was given on the evening of Dec. 18th in the Collegiate Institute Hall, by the St. Catharines Coll. Inst. Musical and Literary Society, in aid of the piano fund. The musical programme was perhaps the finest ever given in the city. The whole was under the direction of Professor Read, of the Leipzig Conservatory of Music; Miss May, of the Boston Conservatory of Music and teacher in the Institute, maintained her excellent reputation. Miss Abell, as Snow-white in the cantata "Little Snow-white," by Franz Abt, was simply unsurpassed. Her conception of the character, and suitability to the rôle she assumed, were admired by all.

AT the last meeting of the County Board of Examiners the following resolutions were passed: 1st. That the secretary be instructed to delay, for a period not to exceed one year from the 31st of December, 1885, the issue of certificates to candidates failing to obtain schools, provided they request such delay on or before the 31st inst. 2nd. That candidates for admission to either county model school notify the principal not later than the 1st of September, that applications be accompanied with satisfactory proof of age, and that no candidate be admitted who will not be of legal age to obtain a certificate on the 1st day of January following the date of his admission.—*Paisley Advocate*.

MISS MAGGIE THOMSON, of the Telfer School, East Middlesex, was recently appointed to a vacancy on the staff of the Ottawa Model School. On the occasion of her closing examination at the exercises during the day, the large and commodious schoolhouse, No. 7 London Township, was uncomfortably crowded with visitors, several of whom were parents residing in adjoining sections. A number of teachers and model school students were present; the former conducted the examination of the classes. Unstinted praise was given the teacher on every hand for the efficient teaching and skillful management that the classes exhibited. She will be much missed both in the part of the township where she taught and in the Teachers' Association, of which she was a member. She is a gold medallist of the Toronto Normal School.

AT the Mitchell High School entrance examinations 12 candidates were passed; Paris High School, 17 were passed; Brampton High School, 34 were passed; St. Thomas Collegiate Institute, 55 were passed; Whitby Collegiate Institute, 22 were passed, 15 were recommended; Lindsay High School, 20 were passed, 4 were recommended; Oakwood High School, 40 were passed, 3 were recommended; Galt Collegiate Institute, 19 were passed, 5 were recommended; Grimsby High School, 17 were passed; Ridgeway High School, 9 were passed, 10 were recommended; Cornwall High School, 15 were passed, 7 were recommended; Stratford Collegiate Institute, 36 were passed; Bowmanville High School, 21 were passed; Belleville High School, 47 were passed; Newcastle High School, 13 were passed; Millbrook High School, 13 were passed; Port Hope High School, 29 were passed; Milton High School, 20 were passed; Perth Collegiate Institute, 26 were passed; Windsor High School, 21 were passed; Essex Centre High School, 48 were passed; Omemece High School, 20 were passed.

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