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THE CANADA
EDUCATIONAL MONTHLY
AND SCHOOL MAGAZINE.

OCTOBER, 1895.

TRANSCENDENTAL FREEDOM.

BY DR. WM. T. HARRIS.

IT seems to me that the subject can be best approached from the following standpoint: All things may be classified as independent or dependent beings. Things which are in a chain of causation and which have antecedent causes outside of themselves, and which are in the process of passing over into effects which they produce, are dependent beings and possess no permanent individuality. Such beings can have no will whatever; the activity in them is derivative and belongs to something else. Dependent things are mere manifestations of some other being upon which they depend.

With the idea of dependent being we can have no question of the will. Whatever force a thing is manifesting now, whatever energy it is exercising does not deserve the name of will, because it is a force that comes from beyond; it is an energy which is derived and not originated by the thing in which it appears.

A person who believes in the absoluteness of evolution, as Miss Forbes describes and defines it in your September number, certainly has no place for a will at all; all energy which the human being or the animal or the plant manifests is a part of the

chain of causation and comes from outside into the being which manifests it. The plant, animal, or man does nothing to this energy to make it his own. Nothing is originated, everything is derived.

Another kind of being, however, is possible, namely, a self-determined being, an independent being, a being which originates its forms, creates ideals for itself, changes its real into its own ideals; proceeds or moves outward from itself to act upon its environment and to modify its environment by its own act. Independent being, if there is any such being, originates its own determinations. It is a living force which does not receive and transmit forms, but originates new forms.

Now, a being that can originate new forms, can change itself, and can change other things, is a will power, or at least a living individuality.

Now, once admitting this classification we are able to identify objects in the outer world corresponding to one or the other of the two classes. We regard a stone or a quantity of water as dependent, as inert, as receiving and transmitting energy, but not as originating energy. On the other hand we regard a plant as

originating energy and as causing modifications in its environment with a purpose or end of its own, namely, the assimilation of matter into its own form. We look upon the animal as originating a power, and at the same time as reflecting upon itself, or feeling its own unity, in this action. Man reflects in a deeper sense upon this origination of force, and possesses abstract intellect.

It is possible, of course, for a person to say that even the inorganic, the stone, the water, the air, possesses in some degree self-determination. I should be glad to admit that there is nothing in time and space that lacks entirely self-determination. But the amount of self-determination is so small in what we term "the inorganic" as to escape ordinary observation.

While the plant manifests self-determination it does not manifest a consciousness of it. But the animal seems to approximate self-consciousness so far as to have a self feeling in its action. Man may be said to have that degree of consciousness of his personality which makes him a responsible will. I have no quarrel with the followers of Schopenhauer, who recognize self-determination in the plant and animal as will power. But, of course, a responsible or moral will is a wide step of advance beyond the self-determination of the mere animal or the mere plant.

Recognizing the existence of beings which can originate changes of form and bring into being what is essentially new, we are now prepared to understand the transcendence of the will. In the inorganic, the individual being has no transcendental activity, because its energy is all borrowed; because it originates nothing or adds nothing to the forces which it transmits. In the plant or the animal or the man, the self-activity adds new forms of determinations, and in so far as it does this it is transcendental;

it alone is responsible for the addition, whatever it is.

Transcendental therefore every will and every act of self-determination must be, because it adds a new determination to its environment or to itself, independently of any force or impulse received from without—its action is not mere transmittal of force. Here we may discriminate two kinds of transcendental activity. There may be mere spontaneity, which is self-determination without conscious motives. Above spontaneity there is conscious volition demanding the intellectual action of grasping motives and the separate volitional action of realizing them. Spontaneity, however, as well as free volition, possesses a transcendental element; namely it originates modifications and does not simply transmit energy.

Turning our attention to conscious volition, we may now see that both the intellect and the will belong within the sphere of self-determination. The action of the intellect possesses always the character of a reaction against the objective being; the intellect refuses to accept a being such as it offers itself and insists on classifying it. The first act of sense perception is an act of classification. "This object is somebody, or some action of somebody, or some relation," etc. By such act of classification the intellect degrades, or subordinates the object before it and discounts its pretensions. By classifying it as an individual in a general class it assumes that it has been produced or has become through a general process, and at present it is an unstable and transitory state or condition of that general object. In the language of Plato, "The present object before me participates in a more general object," it is an are of a larger circle, it is a part of a larger totality.

It will be seen that this very act of

intellectual seizing of the object reveals an ideal whole which contains much more than the particular object present before the observer. Out of many potentialities which the general class of the object contains, only one is realized; the mind seeing other potentialities may prefer some one of those potentialities to the one which is realized. Hence, the act of seizing a particular object by its general or universal is an act of creating an indefinite number of motives for the will. The spontaneity of the intellect has discovered the limitation of the particular existence, and has perceived many other possible forms in which the object has existed, or may exist. Now, the will may realize one of these potentialities, preferring it to that which is already realized in the actual existence before it. Thus the intellect and the will jointly may perceive the raw materials of food and convert them into food; it may perceive the raw material for building or clothing and realize the potentiality which it associates with them; it may perceive a geological stratum and recognize past potentialities and future potentialities, seeing the exact place of this stratum in the history of mineral development. The will in this last case may not act to realize a new potentiality in the actually existent. The will may or may not act in this case. It may stop with the theoretical contemplation; or it may, for instance, proceed to burn the limestone and create quicklime; it may change whatever object it finds.

It is evident that the motive which is perceived by the intellect is a creation of the self activity of the mind because the motive has its essence in the perception of potentiality or possibility. The real, just as it is, is no motive. The motive is found in a perception of a possibility which is not yet realized, but which may be realized. A change of this reality

into some other form which is possible to it, may adjust it better to me, the beholder.

Here we come to another side of the motive. All self activity manifests not only efficient causality but also purpose or design. Purpose or design, or end and aim, is called "final cause" in the language of the Scholastic philosophy. Loose thinking confounds efficient cause with final cause; it confounds force or energy with motive; it denies freedom to a reasonable being because that reasonable being in order to be reasonable will act according to motives. It does not perceive that the motive is, as I have just shown, a product of the will which has abstracted from the real and discovered some unrealized possibility which it prefers to the potentiality which is realized in the existing thing.

In other words, a motive indicates a transcendent will power. It indicates a subject which transcends the object before it, and is able to determine itself in the presence of that object. The will can abstract from the being presented to it by its senses as existing, and it can transform the thought of the object that exists into a thought of some other possible object of existence. This idea of some possible object of existence, it, by a further act of will, may impose on the reality which exists before it and change it into something useful to the soul or ego. All inventions are of this class and every human being and every animal invents in some slight degree every day, or perhaps all the time, for it does not merely impose forms that it knows already or has seen upon the object, but in every case it creates some new modification, however slight, in each new act upon its environment. An originating force continually invents or brings into being determinations which did not exist before.

The educator who ignores the characteristics of independent being, and sees only in the world dependent being which transmits without modifying the forces which come to it, will always misunderstand essentials in education, for he will always translate the really spiritual action, which is always self-activity, into mere processes such as exist in nature. This is the difficulty with Herbart. He takes ordinary causality as the only causality. Ordinary causality receives and transmits force without adding any new elements to it.

This he shows in the most glaring manner by his fundamental theory of psychology, namely, that the mind does not form its ideas but possesses ideas already formed. These ideas act upon each other and produce modifications the one on another, much in the manner that fragments of rock, mountains of ice, and streams of water within a glacier produce modifications the one upon the other, and round pebbles and much else result. So, according to Herbart, the ideas from without collide with the ideas which are already stored up in the mind and new mental pebbles, so to speak, result. This, you see, is the concept of the ordinary causality applied to mind. It is a fundamental and radical misconception of the facts of consciousness, as anybody may perceive if he will practice reflection a sufficient length of time to get said facts of consciousness before his mind.

For ideas are universals and not particular objects in space and time. An idea must be held in the mind; may be recalled, always can be reproduced in the mind; it is a different order of being from the existent objects which the senses contemplate. Even the senses cannot contemplate the objects of nature without the aid of universals; even the animals, however little they may be

conscious of general ideas, have to use general ideas in order to perceive any object whatever.

This will be evident if we consider that a perception marks off a particular reality on a background of universal possibility. Any object, every object, is a limitation of this general possibility. It is this particular limitation and it excludes all other different forms. It is a rock and not a tree or a cloud; it is a bird and not an ox or a whale. On every object perceived or felt, or in any way apprehended by man or beast, there is a fringe of potentiality, a very deep and wide fringe perceived by man, a narrow one perceived by the animal. Even the earth worm of the garden perceives a margin of potentiality because he at once acts and proceeds to assimilate what he can of the elements of the soil. If he did not feel that there was an opportunity for modifying something he would not act. Even the worm, perhaps endowed with only one sense, that of feeling or touch, acts because of his ability to transcend in his feeling the actual limits of the object; for it is a potentiality perceived or felt and not a reality perceived or felt, which constitutes the basis of desire. The animal does not desire what is, but what is not; he desires a modification of what is, and could he not transcend the actual existence of his environment and feel or think some potentiality not yet realized, he would never desire at all.

Herbart, therefore, in admitting desire (*Begierde*) admitted a transcending self-activity in the soul; but he thought that feeling is a product of the interaction of ideas and not a manifestation of self-activity. Hence, although he did not deny desire he did deny will, because he saw that in admitting will he must admit self-activity.

Self-activity (*Selbst-Thätigkeit*) is

often spoken of by Herbart, but always in the superficial sense. It is a sort of concession of Herbart to the common-sense view of the world, which attributes self-activity to man and animals in the form of spontaneity. He has everwhere, in all his metaphysics, denied self-activity to absolute or essential being. It belongs (self-activity, or the appearance of self-activity), according to him, only to the realm of phenomena. The inherence of properties in a thing, the change of one thing to another, and consciousness of identity under various moods and various ages, all these things are phenomena, but not absolute realities. They are illusions of time and space. Hence, Herbart sees nothing in them that is transcendental, nothing in them that is permanent (see Herbart's Introduction to Philosophy, 1813, and his Encyclopædia of Philosophy of 1831, § 226, and the remark that follows it). Herbart would admit nothing transcendental to the will or to the feeling or to the thinking. Had he perceived that the phenomena of feeling and volition which he enumerated presupposed the transcendental being of the self or personality, and the will, he would have made a different psychology.

In conclusion, I wish to say, with all due emphasis, to the reader of this article, that he should examine himself and ask whether he admits independent self-active being, or whether he considers as admissible only dependent being, or being in the chain of causality which only transmits force without modifying it. If the reader finds himself in the latter class, I advise him earnestly not to deal with the question of free will, because he is not in a condition to admit will of any kind. The object does not exist for him as yet. He has a mental blindness to the spiritual which he should correct first by

thinking out the question of dependent and independent being. Perhaps he will be helped by considering it in this way. My first clearing up of this subject in 1863 arose from considering the three possible results from the following hypotheses, namely: Things are either dependent or independent. If dependent, they demand other being as essential for their existence, and any whole system of being must be independent being, because there is nothing for it to depend on outside of it. Now, all being, whether dependent or independent, must be either determined by itself or by something else. That is to say, it must receive its nature or constitution from some other being, or else originate by its own activity its several traits of character. If originated by another being, and supported by that other being, it is dependent, and it belongs to the independent being which creates and supports it. Independent being or any whole system of being therefore implies self-determination, self-activity, as its only possible form.

Hence we may conclude logically that all being, real or possible, in the universe, is either self-determined being or a result or product of independent being and dependent upon it.

Having settled this, that all ultimate and true being is self-determined being, one is certain that anything or any process in the objective world is a manifestation in the last analysis of self-determined being.

Then one may investigate the forms of self-activity, admitting it wherever he observes action with design, as in the case of the plant, the animal, and man. Plato made these distinctions and started this inquiry. His thought was adopted by Aristotle, and further discriminations were made in it. Great thinkers all the way down, such as Aquinas, Leibnitz, Hegel, Rosen-

kranz, and Froebel, have seen clearly this doctrine.

When one sees self-activity to be the form of all transcendental reality, he need not have any more difficulty with the transcendental doctrine of the will, because there is no other possible doctrine of the will or the feeling or the thinking. These three are all transcendental, but neverthe-

less they are not to be confounded one with another.—*The Public School Journal.*

It is not by turning over libraries, but by repeatedly perusing and intently contemplating a few great models, that the mind is best disciplined.—*Macaulay.*

THE BEST METHOD OF TEACHING PATRIOTISM IN THE PUBLIC SCHOOLS.

BY MISS BERTHA A. CAMERON, OF NOVA SCOTIA.

IN view of the fact that the future of our country depends on the boys and girls now sitting in our public schools, it must be plain that the subject under consideration is of vast importance and worthy of earnest thought and zealous work. Let us regard it as a high and sacred office to kindle the patriotic fire in the hearts of the children among whom may arise those destined to great service for the elevation of their country.

The first essential to the successful teaching of patriotism is for the teacher to be thoroughly imbued with that love of country which inspires to truest devotion.

"Thy soul must overflow if thou another soul wouldst reach."

In addition to such incidental teaching as there are constantly occurring opportunities for giving, a certain amount of time should be devoted to regular instruction in this subject. In the registration of time given to each branch, we find a column headed "Moral and Patriotic Duties." Well are they joined. No one can be a true patriot without being moral; no one can reach a high moral standard without being patriotic.

In my own department we have one lesson a week, but the amount of time given must be governed by the peculiar circumstances of each school. And I would suggest that each teacher write an outline of a course of oral lessons adapted to the pupils in his or her department. Some may feel that the curriculum is crowded, and that we have hard work to accomplish all that is required. But let us remember that if we neglect to implant strong moral and patriotic principles, all other education only better equips the pupil to be an evil to his country instead of a blessing.

And it is with gratitude that we reflect that we are not dependent on a *blind* devotion to the land in which we live. We belong to an empire whose proud boast is that "the sun never sets on its dominions;" an empire which, in all that makes a nation truly great, ranks first in the world. We own allegiance to a sovereign who is admired and revered all over the globe, both as a Queen and as a woman. And "Canada, eldest daughter of the empire, is the empire's completest type." Our country has all the elements which

invite admiration and inspire love. When we see the strength there is in even a blind, ignorant devotion to country, as witnessed in some parts of the old world, what may we not hope for Canada when all her people are fully awakened to see some of her glory and greatness. Ours be the task to array her in her fairest robes, to magnify and extol her grandeur, to place her in all her heaven-born beauty before the eyes of the youth of our land, to beget in them that intense, never-dying love which will make them not only willing to die for her, but what is of more value, willing to live and labor for her best interests.

For the purpose of instilling patriotic sentiment, one of the best means is to give lessons on the resources of our country. These will show that we have a country of which we can justly be proud, a country which we ought to prize. Admiration will be awakened, and admiration will ripen into love and devotion. Look at this "Canada of ours" stretching from ocean to ocean radiant with beauty, teeming with wealth. Do we want beauty? Here we find it in mountain and plain, river and lake. Snow-capped hills tower to the skies, prairies like great rolling oceans stretch for miles. There is nothing grand or beautiful in natural scenery that cannot be found in our Dominion. Do we want wealth? Take just a few items from last year's statistics. The value of the exports from our forests alone was over twenty-six million dollars. Then consider that we have about twenty-five millions acres of woodland and forest. Is that of so little value as to be beneath our notice? Of fish we exported nearly nine million dollars worth, while the value of our mining exports was over five millions. The exports of agricultural products amounted to over twenty-two million dollars, and from animals nearly thirty-two million

dollars. Look at her great wheat lands, her fur regions, her public works, her shipping. But it is unnecessary in this paper to mention in detail all her resources. The thoughtful teacher will easily find ample material for lessons. Draw attention to the undeveloped wealth in field and forest, in the ground and under the sea. Through these lessons always give the impression that this great wealthy country is ours, that every boy and girl has a part in it, and has something to do in making it better and more valuable. Every schoolroom should be furnished with a cabinet. Encourage the pupils to collect botanical and mineralogical specimens of our own land. Some time during the winter months probably every teacher will give lessons on the minerals of Nova Scotia. Do not stop with the description, properties and uses of the minerals, but locate them as nearly as possible, and give the approximate quantity and value mined last year.

Teach patriotism also through our history, and the biographies of brave and noble characters who have devoted themselves to their country. We have our battlefields which mark the triumphs of right over wrong, spots sacred to the memory of those who spilt their blood for their country. Tell of the brave deeds which have helped to lift our land to a higher plane. We have men of whom we are proud, men who with hearts aflame with true patriotism have labored for freedom, education and advancement. Tell the children the stories of their lives. Children are always interested in people, and I have noticed that they like a story of something which really happened, much better than mere fiction. Our early history is replete with tales of heroism and patriotic self-sacrifice. Later, where can we find anything in history more noble than the voluntary

removal of the United Empire Loyalists from the rebel colonies? Can we not speak with pride of the action of Canada during the war of 1812? But not only in battle have we had our heroes. Other patriots have we, no less great, who have not wielded the sword, but who, in times of peace, have loved and served their country with equal devotion. Not only through the ear, but also through the eye must we appeal to the emotions and sympathies of the children. They are always greatly influenced by their surroundings, and pictures make strong impressions. Therefore I would have in every schoolroom a portrait of our Queen, and portraits of those noted for their devotion to their country.

Third.—Give lessons on our government, beginning with the government of our own town. Try to interest the pupils in all public affairs. True patriotism lays the axe at the root of all selfishness. Lead them to see that none of us lives to himself, but that each must consider what is the highest good for all. Make use of current events. The new school-house will be opened in January. Who built it? For whom? What is the duty of each one toward it? etc., etc. Soon there will be an election of officers in this town. What officers are to be chosen? What is the general duty of each? Why are they needed? etc., etc. Try to overcome any feeling of indifference which may manifest itself. Make the pupils see that each one should have an interest in everything regarding the public welfare and that each one should feel jealous for the honour and good name of our town, our own province, our own Dominion, the whole British empire. Impress the fact that every individual is responsible to a greater or less degree for the existing state of things, and if anything is below the proper standard, it

is mean and cowardly to sit down and croak over it, comparing it unfavorably with some other country; that the true way is to rise in our strength and do all in our power to make things better. We have sometimes heard the remark made by strangers, "Parrsboro has a beautiful situation, but the people seem lacking in public enterprise." Let us strive to nourish such a public spirit in our own town that any such statement will fall for want of even a grain of truth for support.

Fourth.—Let the pupils memorize stanzas of patriotic poetry in the lower grades, and in the high school, extracts from patriotic speeches of great statesmen. This will be found a valuable help in awakening enthusiasm. We want the patriotic sentiment to be a joyful, living, stirring thing. A few weeks ago I read something in a magazine to the effect that Canada had no poets; that there were some pretty versifiers. Though not presuming to be a judge of poetry or a critic, yet I affirm with confidence that we have poets. For poems suitable for memorizing, I would like to direct your attention to two small volumes, "Canadian Poems and Lays," and "Later Canadian Poems." In them will be found pieces of pure, fine, rousing patriotism, and some most exquisite gems descriptive of Canadian scenery. Less than a dollar will purchase both of these books, so they are within the reach of every teacher. Before I learned better by experience, I used to allow a part of Friday afternoon for recitation of poetry, or more properly rhymes, allowing the pupils to make their own selections. I no longer do so. Now I select the piece and teach it to the whole school in concert. This makes a good lesson on patriotism through all lower and middle grades by selecting such a piece as "Canada to England," an anonymous poem in one of the above

mentioned collections, or Prof. Roberts' "Canada."

Fifth.—Teach patriotic songs. Everyone knows something of the influence of music. There is no more rapid or more sure way of spreading any sentiment than through the voice of song. Numbers of instances immediately flash through our memories. What army ever marched to victory without music? What great movement ever gathered its followers without its own peculiar songs? Song will find a lodging place in the hearts of both old and young when other methods fail. Nothing more quickly touches the sympathies, nothing makes more lasting impressions. Gather up songs in praise of our country, songs commemorating great victories in battle, songs in honor of our flag. And we will find that the children will not forget

"What the song has fastened surely as with a golden nail."

We take it for granted that our national anthem is sung in every school. We have a book entitled "National and Vacation Songs," which is very good though limited in quantity and variety. But it contains several fine songs suited to the schoolroom, such as "The Maple Leaf," "Fair Canada," "My Own Canadian Home," and others. As far as I know, we have very few good patriotic songs for primary grades. We need something attractive and simple in language and melody that the children will take to readily with the same kind of delight as they do their simple Sunday-school hymns. But until we get this let us make the best use of what we have. In connection with patriotic songs and recitations, it would be a good plan occasionally to have an afternoon devoted to patriotism. Gather up what has been learned on the subject during the past months and make out a pro-

gramme. The teacher might get up a special review lesson, the older pupils have short essays on some of our heroes, while the younger ones could have appropriate recitations, the whole interspersed with rousing patriotic songs.

Sixth.—Make much of public holidays. We have not so many of them but that we can afford to celebrate those we have. Just before a holiday is a good time to spend a few minutes talking about it. Explain what the day commemorates, and why we should mark it by something different from other days. Just as celebrations of birthday anniversaries draw all the members of the family together to their joy, so does a national holiday form a great bond of union, and bring us all nearer in a common brotherhood; and this feeling of brotherhood we want to foster: brothers in one great nation, true children of the great motherland.

Seventh.—Honor the flag. Fling it out to the breeze on every public holiday, and on all occasions for special rejoicing. Let it float half-mast for a common sorrow. Hundreds of noble lives have been laid down to do homage to that piece of bunting, our own old English flag, and to save it from dishonor. Shall we not hold it in reverent love? Show that the flag represents not only our Queen, our government, our people, but all the great and good deeds done beneath the protection of its colors. In addition to a large flag to be hoisted outside of the building, every room should have a British ensign with the Dominion coat of arms on it. The Union Jack itself is a fine subject for a lesson. There is a great deal of interesting matter in connection with its history. When and how did it originate? Why is it so called? How is it modified to suit the Dominion of Canada? What emblems represent the different provinces?

What is its meaning and its value to us? Why should we be proud of it and love it, etc., etc.

In the above I have aimed at being suggestive rather than exhaustive in any one point. A ready made lesson is of little value to any teacher compared with one on which individual time and energy have been expended. In the teaching of patriotism, as in any other subject, one must have an unwavering conviction of its value, and a definite idea of what to teach,

after that a live teacher will find ways and means of accomplishing the object. If I have succeeded in giving any new ideas, or helped to inspire any teacher with fresh enthusiasm in the teaching of patriotism, I shall be satisfied. With faith in our God and faith in our country, let us labor—

“So in the long hereafter, this Canada shall
be
The *worthy* heir of British power and British
liberty.”

—*The Educational Record.*

GIRLS AND MODERN EDUCATION.

BY ELIZABETH A. S.¹ DAWES.

THE subject “Girls and Modern Education” is so wide that it is difficult to compress it into a paper which is only to take about ten minutes in the reading; I can therefore only make a few brief and somewhat abrupt notes on the subject, which, from its deep importance, demands a wider and more serious treatment and consideration than we can bestow upon it here. It is difficult to draw a line of demarcation between the old and the modern, indeed we may say that this is impossible, for the basis of education remains the same and so does its object. The basis of education is the training of the mind to think, and, if possible, to create new ideas, the object of education is to fit children for life; the two coalesce into one and we can say the aim of education is to train the mind and character of human beings, to fit them to become useful members of society—this, of course, applies to both sexes. But demands and circumstances of life change, and thus different demands are made on the members of society, and during

the present generation much more has been required from women, and therefore the great change in their education. I myself, prefer this view to saying that the education has been the cause and the demands made on women the effect.

If it be asked how the modern education of girls differs from that of, say, fifty years ago, this can briefly be answered by saying that less time is now devoted to accomplishments; the number of subjects taught is increased; the course of studies is more nearly approximated to that of boys; the teachers are better prepared for their work; and more attention is devoted to their physical education—various outdoor games are encouraged, such as tennis, hockey, and cricket, and there are better gymnastic and drilling classes. What has, however, most tended to widen and elevate the education of girls is the opening of the Universities to them. This advantage has been made use of to such a degree that they have been able to take a high rank in all the subjects studied at our Universities, and in

many cases have distinguished themselves above their male competitors, and this even in branches which were a short time ago not considered as coming at all within the range of girls' studies; for instance, high mathematics, science, and medicine. Thus a most important revolution has slowly and surely come about which has been effective in developing the intellectual faculties of our girls and, we may hope, will make them more liberal-minded, reasonable, and sympathetic members of society.

As to the merits of this new departure, there are divided opinions; and we have scarcely had time to judge accurately of its general results though we may clearly discern it in particular instances. I may, therefore, mention what some would call its disadvantages, and then note the decided advantages of the change which has taken place in the higher teaching of girls. Some may consider that there is danger of this higher training narrowing a girl's mind by concentrating it too much on the mere subjects of examination and making the teaching consist merely in piling up data and facts for the purpose of passing brilliantly some examination but without sufficient breadth of study. It is the temptation of the day to work for results—to gain scholarships, distinctions, and to outrun others in competition, to secure some brilliant effect too often at the expense of thoroughness.

From this point of view examinations do not appear to be advisable for the majority of girls; those who intend to teach and who wish to gain good positions as teachers must necessarily prepare for and pass examinations, and I see no objection to them for girls who have a natural inclination for them and who can meet them without fear. Such examinations as the Junior and Senior Locals, which do not require more than can be

reasonably expected from any healthy girl who has enjoyed some years' good teaching, not solely devoted to the examination subjects, may be used as a help rather than a hindrance, provided always that the girls are not crammed with a view only to gaining distinctions. Even for these examinations no girl who is nervous, delicate or backward should be allowed to enter; examinations wrongly used destroy all possibility of a wide education of culture, and drive both teachers and taught into a narrow round of a certain limited set of subjects, and are destructive to the education and often to the health of the girls.

Secondly and consequently upon the first objection is the fear of too little individual attention being bestowed upon the character and powers of each separate girl—and this especially in the very large schools and those whose course is essentially determined by examination requirements. For girls who are not self-assertive or quick at book-learning often grow depressed and are overworked through their conscientious efforts to grasp and excel in subjects, which are to them most difficult and uncongenial, either from the nature of the subject or because of the way in which it is taught.

There is also a tendency to neglect subjects which are, it would seem, especially suited for girls, and subjects of a practical value, viz., needlework. Music and drawing are subjects which for a time at least should be obligatory on all girls, though one or the other or even both should be abandoned, if after a year or two of good training in them, the pupil shows no aptitude. Again literature and general reading, which alone can give breadth of view and enlarge the sympathies, are too often thrust aside, and French and German are too often taught grammatically and not

conversationally, more as dead than living languages. This is a mistake if we wish girls to grow into women of mind and refinement, to adorn and give a good tone to their surroundings. If a girl on leaving school spend a holiday on the continent and should have the opportunity of going into society there, she would prove of little interest to others and feel extremely chagrined herself if unable to converse in the language or the country and find herself quite ignorant of its literature and history. The power of talking well in at least two or three languages is difficult, but a good education should provide sufficient for a good commencement.

Lastly I can only just refer to what may do harm to girls though in a quite opposite direction; this is that pleasure and games are, in some cases, made the prominent feature—constant theatricals, cricket and tennis matches foster the modern craving for excitement and lead girls to dislike a quiet, healthful life.

I will now pass on to the pleasanter part of my task and speak of the good points of modern education. Amongst these the best is undoubtedly the fact that the education of the average has been much raised, the schools, methods of teaching have been vastly improved, and the girls are rendered fitter for mental work because they have more physical exercise of various kinds.

Girls are also taught many more subjects, which allows the various powers of their intellect to expand simultaneously and gives them an opportunity of discovering which branch of learning they like best and could adopt as their special study if they proceeded to college or continued their studies at home. Elocution and recitation are receiving much attention now and are invaluable as a means of training girls to have a clear and distinct enunciation and to read with sense and expression.

This wider education in which many so-called "boys' subjects" are included, though it should not be to the exclusion of the useful "girls' subjects," is giving girls a totally new and infinitely higher position in the eyes of their male relatives and friends, who are now bound to confess that girls are capable of other things as well as playing scales and hemming dusters. Sisters and brothers are able to mutually help and encourage each other in their studies, and girls who have received a good modern, all-round education gain in self-respect and dignity by feeling that they stand on a footing of equality and can grasp and sustain an intelligent conversation with thoughtful, well-read men.

But perhaps the greatest innovation within the purview of girls' modern education is the opening to them of the Universities and the consequent establishment of women's colleges where they reside for the same time, receive the same tuition, and enter for the same examinations as men. It is much debated whether a college education is to be advocated for girls of mediocre ability, and who will in all probability have to spend their future lives mostly at home and occupy themselves with the ordinary duties of mother or daughter, or whether it is only advisable for those who display exceptional ability in some particular branch of learning and are likely to come out well in an examination.

"Is it not likely to make them too independent and dissatisfied with their home-life afterwards?" is also a question frequently asked and variously answered. The latter is difficult to answer, as it depends so much upon the character of the individual girl and on the home-training she has received whether she will profit by the advantages now offered to her and realize what an inestimable boon

her parents confer on her by sending her to college.

With reference to the college, as well as the school life, girls should be repeatedly taught and reminded that examinations are not the real end and aim of life but only secondary to the true object of education, self-culture and development of the intellectual and reasoning faculties, and moreover that it is quite as imperative a duty for them not to neglect their health as it is to work hard. Girls are, as a rule, industrious and ambitious, and since it is always unpleasant to fail in what one undertakes, very many at college are incited by their fear of failing in the final examination to study far too hard and to take but little share in the social recreations, thus making their life one continual drudgery and notreaping all the benefit they should from their environment.

But for those girls who avoid this extreme and try to keep a sound mind in a sound body, I can conceive of nothing more delightful than the three years' course, or less if by any reason they are notable to go through the whole.

It opens to them a totally new field of experience, and as various kinds of experience are useful for enlarging the mind and sympathies, especially at an age when the character is beginning to definitely mould itself for life, the contact with others who perhaps hold views and cherish aims and aspirations very different to their own, must considerably widen the horizon of their mental vision and counteract any tendency to taking limited and one-sided views of life and its possibilities. In after-life, whether it be one of comfort or chequered by cares or it may be sorrows, the bright days of college life will arise in the mind and may often soothe and will certainly be a joy forever—a bright light in the past which will shed a flickering ray to the end of life.

Another great advantage of college

education is that it carries on the work begun at school and thus prevents the total abandonment of study which so often occurs in the case of girls who have just left school.

The college course concentrates the attention on some special study chosen by the student herself, and is thus likely to arouse in her the desire to continue it afterwards, and thus to always give her mental activity and a taste for profitable reading. Thus it seems to me that there can be no doubt but that our women's colleges perform a very desirable and useful work in higher education, as they enable the students to obtain the best teaching in any of the subjects she may choose from the curriculum now followed in our best schools. The college thus becomes the finishing stage in the course of education.

A great number of women in England do not marry, hence it becomes increasingly important for women to be equipped with the means, not perhaps of gaining their own livelihood, as that may not be necessary, but of furnishing them with resources that shall enable them to lead an interesting and useful, and consequently a happy life.

On the other hand those who do marry, must be much better fitted and prepared for becoming wives and mothers by the higher and more liberal education which girls are now able to obtain. Girls who have had these advantages, ought to be able to enter sympathetically and intelligently into the interests of their husbands, and to help in and guide the education of their children aright, both during their earliest years when a mother's influence is all in all, and during the later years of school life, when a teacher's work is so much assisted by the active co-operation of a well-educated mother.

In conclusion, I should be very sorry if it were supposed that by urg-

ing a long and liberal education for girls in school and college and the choice of definite pursuits, I in any way encouraged the longing now too common among girls to absorb themselves in some work or profession which, if it does not take them away from home, anyhow occupies their time and energies to such an extent that they entirely overlook all the claims which, as members of a family, their homes have upon them. Of course, many are obliged to leave their homes to seek work, while in large families it is often advisable that some of the members should find employment, perhaps only temporarily, away from home; but apart from these cases a girl ought to take

her right place in her home as well as find time to cultivate her mind by some pursuit of her own choice.

It has been aptly said that many a corban is now offered to God "which He will never accept; self chosen work done at the expense of duty; work outside done to the neglect of our own proper work; work done at the entire expense of home and social duties."

However, we trust that this feature is but transitory and that our girls will soon recognise that the greater intellectual advantages given them by modern education will not be put to the highest use unless first devoted to shed brightness and happiness in their own homes.—*Educational Review.*

ARITHMETIC IN THE REPORT OF THE COMMITTEE OF FIFTEEN.

By FREDERIC L. BURK, SUPERINTENDENT OF SCHOOLS, SANTA ROSA, CAL.

THAT which a child should be taught in school is a ratio between what he will naturally learn, as determined by internal conditions of his development, and what it is profitable to teach him, determined by demands of his world of environment. There is work for a committee to determine the terms of this ratio in the matter of arithmetic, for the subject is evidently in a state of confusion, lacking clear theory, facts, definite system, and acknowledged ends.

Let us take a rough superficial survey of the matter, using as data the common and current texts and methods of instruction. Let us see if the report has really touched any of the issues where difficulty is superficially manifest. Let us see if quantity is really the problem with which pupils so vainly struggle for eight or nine years.

In the first place, the traditional grading of arithmetic instruction is not upon a basis of quantity. First come the fundamental operations, which indeed deal with counting and are soon mastered in some fashion; then we deal with wholes, and next with parts of wholes. The difference between a whole and a part, as it appeals to the child, is certainly qualitative, not quantitative. He will count halves of apples as readily as whole apples, provided he can see or imagine the halves clearly. The chief difficulty in the schoolroom, as will be later pointed out, is neither with quantity or quality, but with confusing symbols of arithmetical language; and this is an affair of language, after he obtains clear mental pictures of parts. There is certainly nothing new introduced, as a matter of quantity, when we pass from adding three apples and

five apples, to adding three-sixths of an apple and five-sixths of an apple, provided the child is made as familiar with the qualities of the sixths as he is with the wholes. Then we pass to denominate numbers, dealing with feet and inches, quarts and gallons, hours and days, etc. It is true that inches bear a certain quantitative relation to inches, but there is no ground in experience for the assertion that this is where the difficulty comes in. Nothing new quantitatively has been introduced. He has already dealt with problems about three rabbits and four rabbits in each pen. Has there been a new quantitative conception introduced, in changing the word "rabbits" to "quarts," and "pens" to "gallons," when we ask how many quarts there are in three gallons if there are four quarts in one gallon? The change is in quality and language. The child must learn the qualities of a pint, gallon, inch, etc.; he must build up a mental picture of these objects in their qualitative relations, associate with them names of language which will call up these mental pictures, and then, as we all know from schoolroom experience, the problem is solved. In percentage and phases of business operation, again, no new idea of quantity appear; three hundredths of a certain sum of money and five hundredths of it make eight hundredths, provided the child gets a clear qualitative image in his mind of the sum of money and its divisions; just as surely as three rabbits and five rabbits are eight rabbits, once he can picture the rabbits. This subject is difficult to him, for it is an entirely new world of quality to him, and it is difficult for him to form images; so it is with astronomy, for the same reason exactly. Quantity is no more an obstacle here than it is in acquiring a conception of the slopes of the Amazon valley in order to determine in which way the water

flows. Passing now to mensuration, which has become incorporated in the term arithmetic, the difficulty is in associating relations of space. To find the surface area of a cylinder offers no difficulties, once it occurs to the child to lay out the surface as a rectangular plane. There are no new quantitative relations to be learned whatever; the difficulties are mainly those of quality in the matter of shape and disappear when mental images in apperceptive relation are formed.

In short, before a child can become expert in exercises which go under the head of arithmetic in the school, he must—at least in mental imagery—learn to saw wood, dig ditches, whittle with a knife, weigh with scales, and do a general banking business. His main difficulty is with the qualitative considerations pertaining to the technique of these special occupations, and the accompanying language study in learning terms of quality. It is no wonder that it takes him a long time, for an adult generally spends his lifetime in mastering one of the occupations. Quantity is a matter which holds an infinitesimal place in the exercise which we call arithmetic in the actual school. It might be unkind to remark, in passing, that this view of the matter is favorable to the existing tendency away from the ancient dogma of formal discipline.

The field of real difficulty with arithmetic, as it is in the school, is in the preparation and arrangement of various quantitative elements so that they can be counted. Are there not grounds for question if quantity has any place in the elementary school whatever?

But our friends of the number closet may maintain that this work is not arithmetic, and may draw dictionary upon us in proof. But the fact stands that this mixture of qualitative work and language in their relation to numbered objects is what the school

calls arithmetic, whether we choose to term it arithmetic or Choctaw.

Or do they who so loftily ignore all but quantity in arithmetic do so upon principle, maintaining that we are commencing at the wrong end of the matter when we deal with quality first? Do they maintain that the subject should be taken up from a conception of an abstract unit as a basis, and from this quantitative abstraction developed first a science of pure number, which we might thereupon turn about and apply to objects in their various qualitative relations? This is certainly a very taking suggestion and seductive theory. It has the exactness, system, and beauty of a mathematical conception. Moreover, this view is already deeply imbedded in our existing system, but in such an unsystematic manner that, even if it were admitted to be the right method, there is necessity of reconstruction. Many of the texts do indeed commence with the definition, "Number is a unit or collection of units." Manifestly there are two theories of procedure in the field, and it is nothing but reasonable to suppose that in an unsystematic, haphazard conflict in the minds of teachers, in texts, and methods of instruction both child and subject are sufferers. Shall we start with quality and deal with numbered objects, or shall we start with abstract number? There are two horses in one pasture and three in another; how many altogether? Shall we teach the child to drive the horses together, either in reality or imagination; see that there are five horses; and then go about teaching him the arithmetical language to express this operation? That is one way and in one world. Or should we do the business in an entirely different world; commencing, *ab novo* with the conception of an abstract unit, proceed by the *a priori* laws of thought, learn that two units and three units are five units—horses or no

horses—and then apply these abstract units to the sensuous concrete, after having demonstrated the philosophical theorem of the universal validity of transcendental principles, etc.? This much is certainly manifest: there are running out from every problem two sets of reasoning processes, one into the objective world where quality is predominant, and one into the abstract world of pure number science where quality is not. And these two lines of reasoning run parallel throughout all arithmetic, the one ever duplicating the other at every point—to the delight and dispute of philosophers from Hume through Kant to Hegel and Herbart.

Let the philosophers fight it out upon whatever adult grounds they will. But what are we going to do about it in the matter of arithmetic in our elementary schools? What shall we do about it in the minds of children from five to fourteen years of age? Shall we train our children to hunt in the field for qualitative objects or in the world of abstract relations of still more abstract units? In which field *can* we train them? In which field *must* we train them?

The report declares that common fractions should be presented before decimals. It is easy to see, from the adult standpoint of mathematics which is in the author's mind, his reason for this. The symbols are something more than mere language symbols of relations in the objective world, and bear in themselves a rational relation, mathematically. But it has not been decided as yet that this is even a possible condition of the child's mind. If we look upon arithmetical symbols as an expression in language of operations in the world of sense—as, in the absence of evidence to the contrary, we may assert the child must regard it—it is clearly a matter of indifference, whether we present common or decimal forms. Both are merely language

forms. Five tenths of a dollar being placed before a child, he *sees* them, and it is now of no material importance whether we teach him the symbols of decimal or of common fractions.

Still, the mathematicians may be right, even pedogogically. It is a question upon which all of us will hold different views until the matter is thoroughly and intelligently sifted. I would simply point out the source and cause of many of the difficulties in

arithmetic. A step toward systematic establishment of order would be the determination of the following :

1. Is it possible for children, five to fourteen years of age, to use intelligently the symbols of abstractions in the world of pure number science?

2. Is it possible to deal with arithmetic symbols in the elementary school merely referring to objective relations, and thereby accomplish all utilitarian ends?—*Educational Review.*

CHRIST'S METHOD OF TEACHING.

BY C. S. COLER.

IN my last article to the MONTHLY I discussed "Nature's Method of Teaching." It is my purpose in this to present "Christ's Method of Teaching."

Teaching is an art as well as a gift.

Some teachers succeed better than others because they study methods and strive to fit their teaching to the individual and to the circumstances under which they work. They have that element of success called tact, and tact is, as we know, just as important as talent.

The teacher who thinks that "method" is of no importance is laboring under a great mistake. To be a successful teacher needs first of all a heart yearning for the good of others. Let us consider briefly some of the methods of teaching employed by the Great Teacher, the model of every teacher who would achieve success.

CHRIST'S METHOD OF TEACHING.

1.—He taught by illustration. The mind is so constituted that it readily comprehends analogies. All great teachers have been apt at illustration.

Moody, the evangelist, always carries a notebook in which he jots

down thoughts and incidents to illustrate his sermons.

The parable was Christ's favorite method of illustration. He performed miracles for the same purpose also. The raising of the dead, the healing of the blind, the withering of the barren tree, the calming of the troubled waters—all these were intended to illustrate great spiritual lessons. Notice, too, with what aptness He uses as illustrations the most common facts and incidents. The preserving quality of salt, the leavening of the dough, the door of the fold, the net for catching fish, the lost money, the lost sheep, the virgins and their lamps, the candle, the pearl of great price—all of these could be readily understood by everyone who heard Him speak. He drew largely from nature also. The seed cast into the earth, the fowls of the air, the lily by the wayside, the field of waving grain, the weeds, the vine, the grass beneath our feet, the wind, the clouds; it was from these that Christ delighted to draw the great lessons of life.

He used no text-book, and He seldom referred to the sayings of

others as authority to substantiate His doctrines.

He was a keen observer and no object or phenomenon of nature was beneath His notice.

2.—He first created interest. The person who can secure and hold the interest of a class can hardly fail as a teacher. I have heard of a missionary who won a whole race of savage people because he could play well on a violin.

I have seen a school of rude boys subdued and brought under control by a little woman who had wonderful ability in telling stories.

Read and note the instances where Christ first did something to create an interest and secure attention and then proceeded to teach some great lesson. This in my opinion was one of the principal reasons why He performed miracles.

3.—He appealed to the heart more than to the head. Christ appealed directly to the heart.

Socrates, Plato and other great teachers had sought to turn men from their wicked ways by appealing to reason. They could reach only the scholars, the thinkers, the educated, the rich.

Christ appealed directly to the heart and in this way He was able to reach the poor and the most simple minded. He chose His disciples from the lowly, the uneducated, thus showing clearly that "God chooses the foolish things of this world to confound the wise," that "the power is not of man," and that "no flesh should glory in His presence."

It is this heart teaching that should especially characterize the primary school. My dear teacher, do you reach the hearts of your pupils? Here is the true test of your work.

What manner of spirit are you of? This, as Page says, should be the question of first importance to the teacher. Some teachers seem to

think that if they are good looking, dress well, and smile sweetly, nothing else is necessary. Somehow the spirit shines out through the body, through the eye, through the voice and through our every act.

Soul communicates with soul, and just so much virtue as there is in us, just so much may we influence others for good.

There is a contagion of spirit as well as of body.

Enthusiasm is contagious.

Earnestness is contagious.

Cheerfulness is contagious.

Love of truth is contagious.

Envy is contagious.

Jealousy is contagious.

Hatred is contagious.

Hypocrisy is contagious.

Selfishness is contagious.

Next to the spirit of the teacher is the importance of thorough preparation for teaching the lesson.

He must take note and think up ways and methods of illustrating points and creating interest.

4.—Positiveness. Positive assertion was another characteristic of Christ's teaching. You may call it courage if you please. He spoke as one having authority. Thirty years spent in preparation was thirty years not spent in vain. He knew what had been thought and done before His day, and He knew His own mission well. "Ye have heard that it has been said by others thus, but I say unto you this." A new era had come. Humanity had taken a step forward.

Upon the grave of the dead past stood the new teacher, this new man of truth with radiant face not bowed to the earth, but looking upward and forward. As the coral builds upon the remains of dead coral till at last it reaches the light of the shining sun, so humanity at last stood in the divine light of the spirit world. The kingdom of heaven had indeed begun.

No wonder that He who was first to feel and realize this great truth should say, "I come not to destroy, but to fulfil,"—not to tear down the foundation that was laid from the beginning of the world, but to build thereon a beautiful structure with mansions for all, and to make the desert blossom as the rose.

5.—He exercised great patience. "Repetition is the mother of studies." Every great teacher emphasizes the essential points of his doctrine, and dwells day after day and year after year on these.

Love was the keynote of Christ's doctrine—love to God and love to man. The patience and the perseverance with which He taught has no parallel in history. Some sent to Him to ask whether He was indeed He that should come, or whether they should look for another. He referred them to His works. Even His own disciples were slow to comprehend. "Have I been so long with you and yet ye understand not these things?" Thomas and Peter were such pupils as would test the patience of any teacher. But the Master never complained.

6.—He showed great originality. It is doing things for the first time that shows the true mark of genius. It is wonderful how many discoverers of America there were just after Columbus made the first voyage across the Atlantic.

Christ's methods of teaching were original, always fresh, always suited to the circumstances and to the occasion. He did not wait for the people to come to Him. He walked abroad and taught those that he met by the way. He appealed to the individual and suited His words and His illustration to the person whom He addressed. He made Himself familiar with the experiences and with the home surroundings of those whom He would reach.

He trusted to the spontaneity of His own nature. He told His disciples to fill themselves full of the work and of the Spirit, and then go forth in faith and without anxiety and it would be given them what they should say.

They were led by the Holy Spirit, they lived in the Holy Spirit, and when they spoke it was not they that spoke, but the Holy Spirit that was in them.

In the pioneer days of our country, when the traveler became lost in the woods, he would throw the reins upon his horse's neck and the animal would take him safely home.

So Christ taught that if we are in God and God in us, the Divine Spirit will direct and carry us in the way we should go.

7.—He manifested great enthusiasm. Enthusiasm was another characteristic of Christ as a teacher.

God in Him and He in God, this is what the word enthusiasm implies. Thirty years of preparation and only three years in which to do the greatest work that any man has ever been able to accomplish! No wonder He should say, "I must be about My Father's business." No wonder He should be enthusiastic.

The character of Christ has been criticised by many because of this enthusiasm. They say that quietness and repose are essential to body and soul, but that Christ was a fitful enthusiast, rushing here and there, never content, always interfering with the affairs of others, and laboring for a utopian state of society which could never be practical in this world. That if everybody should live such a life as he lived, the whole world would be in turmoil from morning to night. But we pause and ask such critics to cite to us any great and lasting good that has ever been accomplished for humanity without enthusiasm.

The patient plodder is not without his use. But when it comes to the

work of the soul there must be a glowing fire within, or but little good can be effected. The mind and heart of man are hard like iron and it is only when wrought up to a white heat that they can be freed from dross and drawn out or moulded into new shape.

Show me the teacher, whether in day school or in Sunday school, who is without enthusiasm, and you show me a person who has missed his calling.

You have seen a fire smouldering under a pile of green logs while the sap oozed out of the ends, and the smoke blinded the eyes. Such is a class whose teacher lacks enthusiasm. Take the same conditions and add enthusiasm and in a moment everything is aglow, and great good will result.

Paul prayed all night and worked all day.

Peter the Hermit started the crusades.

Luther carried forward the Reformation.

John Wesley hardly took time to eat his meals.

The world stands as it is to-day because of enthusiasm manifested by a few persons, now known as heroes, martyrs, and reformers.

Renan says :

"The finest things in the world are done in a state of fever.

"Every eminent creation involves a destruction of equilibrium, a violent condition for the being who produces it."

But enthusiasm does not mean a house afire.

The best kind of enthusiasm is that which acts quietly and patiently and shows itself by its results.

8.—He showed great liberality. Christ showed great liberality in His teaching.

There was nothing narrow, nothing dogmatic in what He taught, "If ye salute your brethren only, what do ye

more than others? Do not even the Publicans the same?"

When told by some of His followers that others not of their numbers were casting out devils, He did not leave His work to investigate.

He said let them alone. They who are with us are not against us. God will judge of their work.

Christianity is anything but narrow. A scheme designed for the greatest good of humanity in all ages and for the people of all nationalities, living under all climes and circumstances, must necessarily be broad, flexible and progressive.

9.—Christ had great faith. Great faith is necessary for every undertaking of life. Great faith, when found in a strong and ambitious character and not accompanied by other Christian graces, gives rise to fatalism, such as was shown by the character of Napoleon.

Faith is the little seed that will spring up and rend the solid rock that obstructs our way.

If a class should be formed by a competent teacher for the purpose of studying faith for a whole year, I should like to enroll my name among the first.

According to thy faith so be it unto thee. To no one does this apply so truly as to the teacher.

Faith even as the grain of mustard seed will remove mountains.

Whatsoever ye shall ask in my name, believing, it shall be given you.

If any man lack wisdom, let him ask of God, but let him ask in faith, and it shall be given him.

Paul sows and Apollos waters, but it is God who gives the increase.

It is a great consolation for the teacher to know that this is true. But faith without works is dead. Let us, in faith, prepare the ground and sow the best seed, and in due time, if we faint not, we shall gather golden sheaves.

We recall the little girl who, when her parents went to church to pray for rain, insisted upon taking an umbrella.

We all need such faith as this.

10.—He had great sympathy. The good teacher must have great sympathy. He must understand the difficulties that beset his pupils and then meet them with a great heart and a strong desire to aid them in every way possible.

No one knew what it is to feel the pangs of hunger and of thirst more than did Christ himself.

And when he saw the multitude weary and hungry, he commanded them to be seated and they were fed.

Find the shortest verse in the Testament. Two words only, "Jesus wept." But these two words furnish the key to the success of the Master's work.

Sympathy!—a feeling of soul with soul, a thrill that stirs the depths of our inmost being, so tender, so effective that it is beyond our power of expression. Words fail us and tears become its symbol.—*Ohio Educational Monthly.*

BUSINESS TRAINING.

By S. S. PACKARD.

A TRAINING for business is a training for life, for none of us who amount to anything, or who desire to amount to anything, can evade our responsibilities as citizens and promoters of the public good. That, I take it, is "business" of the most serious kind. Among people who do a great deal to promote the public good are ministers, lawyers, doctors, teachers, merchants and street cleaners,—each responsible in his way for the faithful discharge of his duty, and all necessary for the comfort of mankind and the promotion of the highest ideals of living. To promote the best results in all these different callings, except perhaps the last, there have been and are regular schools established, wherein the highest principles are laid down and enforced, and such practice as is possible to clinch the instruction is had. The minister preaches his lay sermon; the doctor carves dead bodies, and sometimes live ones; the lawyer practices in his moot court, and the

merchant sharpens his wits in various ways, and is taught—even in the schools—how business *should be done*, if it is not; and I should be doing injustice to Colonel Waring if I should admit even for one moment that even street cleaners should not be "trained" to the high functions of their profession.

The particular part of this educational work which has fallen to me during my mature life relates to the qualification of men and women for the duties of what is known as business. Should I attempt here to say what many fervent and over-zealous teachers do say, that through any processes, real or imaginary, we succeed in making merchants and bankers and experienced publicists off-hand, I should say what any thinking person would know to be untrue. If I have learned nothing else in the nearly fifty years which I have given to this work than that education at the best is fragmentary, I do not consider the time wasted. The most that schools or teachers can

do is to inculcate principles so strongly that they shall become the guiding rules in after life. The practice necessary to enforce those rules, in the broadest and most effective sense, can never be given in schools. It can be begun there and sufficiently enforced to show the value of the principles. The efficient banker, merchant, lawyer and doctor become so after leaving school; and while there are occasional men who by some stroke of genius, or through some remarkable natural gift reach these high functions, as Minerva sprung from the brain of Jove, they are rare exceptions, and known to be so. Most of us are plodders and we should be proud of the designation. But there is a difference in plodders, and that difference arises mainly from what may properly be called education. If a man plod, regularly and surely, in the right direction and towards the right end, he need never be discouraged, and that he may do so, schools are established and teachers live. The business colleges of this country have come into a glorious patrimony. Some of them know it and are sufficiently thoughtful and reverent to use their knowledge wisely and conscientiously; others there are, as in all professions, who take advantage of the public sentiment which has grown through faithful devotion to principle, and trade upon that sentiment by putting forth a base imitation and calling it genuine. And the difficulty is that the "public"—that strange compound of trustfulness and suspicion, has neither the time nor the means for discriminating, and in the general condemnation of the poor work done the competent and faithful suffer with the rest. There are, in fact, no other educational specialties in which it is more difficult for a superficial observer to judge between the true and the false. Commercial schools and fall grades are just what their projectors choose to make them.

They are under no superintendence from the state; are subject to no limitations or requirements, and cannot be called to account for any derelictions. So far as interference from any quarter is concerned, their work, as judged by themselves, alone, is final and it is only when the graduates put their qualifications to test in the counting room and the bank, that the genuineness of the instruction is determined. If this test is satisfactory, the particular school gets the credit; and if not all schools suffer. There is a special temptation which besets business schools. Necessarily, their work is restricted to a few studies, and these of the most practical sort. Nobody has ever defined a business education, nor can anybody set its bounds. The main thing recognized in it is "hand-writing." Even the typewriter has not been able to rule out this sublime accomplishment. It is the one thing in education that attracts attention because it can be seen, and because everybody can judge of it. And thus has it been from the first movement in commercial education until now that penmanship has been the leading card. And there is another and more potent reason for this. There is no other class of schools in which there is such vivid and intense competition. Young people must be attracted to the competing schools, by whatever devices can reach them—and nothing is more potent than a display of penmanship, and the more florid and impractical, for this purpose, the better. So, the prospectuses of the schools, and the flaring advertisements of various kinds they send out, must revel in ornate conceptions of flourished forms of beasts, birds and flowers—all beautiful to the eye and all as far removed as possible from any bearing on the practical duties of accountantship, which is the special work of "business" schools. Another fad has recently struck a certain class of

would-be business educators, and is having its run. Its main boast is that it does away with education and with study of all kinds, and at once puts the would-be accountant at work. It has various designations, the most "pat" and seductive of which is "Actual Business from the Start." Its shibboleth is a war cry of extermination on text-books, and the substitution therefore of drawers and traps and an expensive outfit to be furnished at a fair margin of profit by the promoters of this Squeers method of knowing things. This patent system, like the "whole arm movement"

that revels in impossible birds and crawling things has the charm of novelty. It touches the ear as does the othe., the eye, and so helps to confuse the mind as to the real meaning of business education.

Let it be remembered, once for all, that education of whatever kind requires the healthful use of the mind, and that the most that educators can do is to so direct the mind that it may work freely, constantly, and logically to the best results.

Business education is no exception to this rule. — *The School Journal*.

HOW MATCHES ARE MADE.

IN the beginning of this century chemists found that chlorate of potash was decomposed and set fire to combustible substances as soon as it came in contact with concentrated sulphuric acid. The first practicable match was based upon this observation; a stick was covered at the end with a coating of sulphur, and over this was spread a mass of gum and chlorate of potash. When the head of the match was dipped in concentrated sulphuric acid, the chlorate of potash detonated and set fire to the inflammable sulphur, which imparted its flame to the wood. These were the dip matches, which were introduced in 1812, and were very popular. Another property of chlorate of potash was discovered shortly afterward. Mixed with various substances—sulphuret of antimony, for example—a combination was produced which exploded, with issue of flame, on being rubbed. This mixture was first applied to matches by Johann Friedrich Kammerer in 1832.

The use of phosphorus was the next improvement. Experiments

had been made with this substance at the beginning of the century; but the first phosphorus matches were crude and unsafe. Kammerer, not being fully satisfied with his first composition, tried a few ones containing phosphorus as well as chlorate of potash. This match, too, had its defects. The mixture of phosphorus and chlorate of potash exploded with such force as to be available for filling bombs. The burning sulphur emitted an offensive odor: to obviate this, paraffin was introduced in the place of sulphur as the substance in which the sticks should be dipped before finishing their heads. A more serious objection was founded on the poisonous nature of the vapor of phosphorus.

A curious coincidence occurred in 1845, when the attention of Lorinser in Vienna was first directed to phosphorus poisoning, and Romer, of the same city, discovered the amorphous or red form of phosphorus and the method of converting white phosphorus into it. This form of the element, taking fire at 250° C., is not poisonous. Romer and Freschel found that a mix-

ture of chlorate of potash, sulphuret of antimony, amorphous phosphorus would take fire readily through friction on a rough body, but the same result followed which Kammerer had experienced with his first mixture. The mass exploded with a violence that sent burning bits of the stuff hissing all over the room. About 1850 the German chemist Bottger introduced a novelty which marked the beginning of a new era in the match manufacture. He made the substance of the head of the match of a mixture of chlorate of potash and sulphuret of antimony, using gum to bind them, and prepared a special friction surface consisting of a coating that contained amorphous phosphorus. When the head of the match was drawn over this substance bits of the amorphous phosphorus were kindled here and there by the friction, which ignited parts of the match-head, producing the explosion of the whole mixture.

The "Swedish safety matches" were made in many German shops from Bottger's recipes about 1850, but they could not compete with the phosphorus matches. The great value of the German discovery, however, became known abroad about 1860, when the Swedish engineer Lundstrom founded the famous factory in Jonkoping. The material of the match-head and the friction surface remained as before, but the Swedes devised a practicable method of boxing, putting the matches in the little convenient slide-boxes, and the chief hindrance to the spread of the invention was removed. The "Swedish matches," as they are now generally called, do not light of themselves so easily as the phosphorus matches, and are therefore safer; and they are, further, unpoisonous. Still the match has not yet reached its highest stage of perfection. A third period of development looms before it. The safety matches can still be lighted only

on the prepared surface of the box. An unpoisonous match which will light as readily as a phosphorus match is not yet found.

Not less important than the chemical constitution is the mechanical preparation of the little fire-bearers. The favorite wood for matches is the poplar; but as this can not supply all the demand, pine and fir woods are also used. In the early days of the manufacture, the work of cutting the blocks and forming the sticks was performed by hand; but now the machines are so perfected that a single one can turn out as many as 6,000,000 sticks in a day of ten hours. The ordinary cut stick is not adapted to matches the heads of which contain no sulphur, and the Swedish matches are prepared by a new method, in which the sticks are obtained by a peeling process. There are machines which, worked by a man and a boy, will turn out 28,000,000 sticks a day. The boxes for the Swedish matches are likewise made by the aid of machines, a description of which involves too many technicalities to be given here.

We return to our sticks which we left in the drying room, and which are yet to be furnished with the inflammable heads. Before this is done the tips of the sticks are smeared with some substance that will take fire readily—sulphur, paraffin or stearin. No one has succeeded in inventing a machine for coating the heads with the inflammable matter. That has still to be done by hand. When the heads are fixed, the matches are returned to the drying room, where they remain till they have parted with all their moisture; then they are taken out of the frames, laid together, and packed in boxes. This part of the work, which is attended with danger of fire, was likewise till only a short time ago, performed by hand; but machines have now been devised capable of extracting from the frames

from two to three millions of the sticks a day, with far less danger of fire than when the work is done by men. Still more recently the Swedish Lundgren, who is famous for his box-making machines, has devised another machine, which fills the boxes and delivers them closed. Nothing more needs to be done than to fill the receiver of the machine with matches and boxes, and to draw from it 25,000 well-filled boxes in a working day.

Thus we see that the little match,

which passes away so quickly, has a famous history, and is really one of the most wonderful achievements of the human race.—*Exchange*.

STANDARD TIME.—Toronto, 1.15 p.m.; Pekin, 2.05; Cairo, 8.20; Cape Town, 7.20; San Francisco, 10.00 a.m.; Chicago, 12.20; Tokio, 3.31; Vienna, 7.15; Paris, 6.24; London, 6.12; St. Petersburg, 9.11; Calcutta, 12.03; Australia, 9.50; Victoria, B. C., 9.58.

NOTES FOR TEACHERS.

EDUCATION AND CIVILIZATION.—Prof. Flinders Petrie, the eminent anthropologist and Egyptologist, criticises the usual mode of spreading our so-called civilization among other nations. He contends that climate, occupations, and race-conditions cannot be set aside. He says:

“We may despotically force a bald and senseless imitation of our ways on another people, but we shall only destroy their life without implanting any vitality in its place. No change is legitimate or beneficial to the real character of a people except what flows from conviction and natural growth of mind, and if the imposition of a foreign system is injurious, how miserable is the forcing of a system such as ours, which is the most complex, unnatural, and artificial that has been known, a system developed in a cold country, amid one of the hardest, least sympathetic, most self-denying and calculating of all the peoples of the world. Such a system, the product of such extreme conditions, we attempt to force on the least developed races and expect from them implicit subservience to our illogical law and our inconsistent morality.”

“The result is death. We make a death house and call it civilization. Scarcely a single race can bear the burden, and then we talk complacently about the mysterious decay of savages before white men.”

“The general impression in England is that reading, writing and arithmetic are elements of education. They might be so to us, but they assuredly are not so to other races. The exquisite art and noble chit-

ture of Mycenæ, the undying song of Homer, the extensive trade of the bronze age, all belonged to people who never read or wrote. Some of my best friends in Egypt are happily ignorant of such accomplishments, and assuredly I never encourage them to any such useless waste of their brains. The great essentials of valuable character, moderation, justice, sympathy, politeness, and consideration, quick observation, shrewdness, a keen sense of the uses and properties of things, all these are qualities on which I value my Egyptian friends, and such qualities are what should be evolved by any education worth the name. No brain, however humble, will be worse for such education, which is hourly in use, while in the practical life of a simple community the accomplishments of reading and writing are not needed perhaps for a week or a month at a time.

“The keenest interest is taken by some races, probably by all, in geography, modes of government, social systems, and in most countries the element of hygiene and improvements in dwellings and in the arts of life may be taught with the best results. There is, therefore, a wide field for the education of even the lowest races without throwing a great strain on their mental powers.”

These utterances before the British Association produced a profound impression. He said the Europeanized Egyptian had, like a piece of blotting paper, absorbed some of the features of our civilization—often the injurious. The reading, writing, and arithmetic thrust on him had made him silly and had undermined his health.

SOME MATTERS DISCUSSED BY QUEBEC INSPECTORS.—At the request of the Education Department of Quebec a conference of inspectors has been held at St. Hyacinthe, the results of which may be profitable to others. It would seem from the proceedings that salaries of teachers are much lower in Quebec than in the Maritime Provinces. Some of the wealthiest districts there paying not more than one hundred dollars per year. To remedy this state of affairs it has been almost unanimously recommended by the inspectors to fix a minimum salary for teachers, varying in accordance with the resources of the district and the license held by the teacher.

The inspectors deplore the employment of untrained teachers, of whom there seem to be a great number; the lack of uniformity in the instruction given in the schools, and the disinclination to give reliable statistics on the part of many districts receiving state aid.

They recommend that the inspector's first visit in the year be devoted to calling together and instructing the teachers of the municipalities in their work; that the number and efficiency of the normal schools be increased, and that more complete and accurate statistics be required from all schools receiving provincial assistance. They further recommend that special bonuses be given to teachers according to the class of their diploma, the report of the inspectors and their years of service, as a means of encouragement and of keeping in the profession a larger number of competent teachers.

The idea of a minimum salary seems to be a good one. The state regulates the amount each teacher shall receive according to fixed conditions. Why should not the amount to be raised for school purposes by each district be also determined?

It is understood that the Board

of Education in New Brunswick contemplates making a regulation that no district possessing property above a certain valuation can employ a third-class teacher. It has not transpired what this valuation may be, but it should not be higher than that of a poor district. It might be well also to enact that a minimum salary be paid as is done now in the case of superior schools. There is no doubt but that it is implied in the Schools Act, that teachers suitable to the needs of the district are to be employed; but there are always teachers of all classes willing to work cheaply.

The bonus system does not seem to be a good one. Would it not be preferable to substitute pension for bonus under the same conditions?

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The unfortunate and perplexing circumstances attending the failure of the Omaha Board of Education to reelect Dr. Marble as superintendent of schools have been made widely known through the press. Dr. Marble bore himself with great calmness and dignity throughout the trying ordeal, and nothing that has occurred has weakened his position or influence as an educational leader. Superintendent Cooper, of Des Moines, declined to become Dr. Marble's successor, because of the treatment accorded the latter.

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A PLEBISCITE ON BIBLE READING.—The baneful results of a secular system of education in the colony of Victoria have aroused public attention to the need of teaching sound religious principles if education is to serve its end. We learn that in response to a very influential deputation, comprising representatives of all the Protestant churches, Mr. Turner, the Premier of Victoria, has consented to support a plebiscite throughout the colony on the question of reintroducing Bible teaching in the State schools.—
Evangelical Churchman.

PUBLIC OPINION.

EDUCATION AND CRIME.—Since 1870 the number of children in English schools has increased from 1,500,000 to 5,000,000, and the number of persons in English prisons has fallen from 12,000 to 5,000. The yearly average of persons sentenced to penal servitude for aggravated crimes has decreased from 3,000 to 800, while juvenile offenders have fallen from 14,000 to 5 000. Some enthusiastic believers in the theory that as education is enlarged crime is decreased insist that the smaller percentage is due to the greater percentage of persons who have enjoyed the benefit of the instruction imparted in the schools.

The experience on one side of the English Channel, however, is curiously at variance with the experience on the other side. In France the criminal statistics and the statements of the magistrates show that as schools have been opened prisons have been filled, and that the diffusion of education has been accompanied apparently with an increase of crime, especially juvenile crime. Keeping children in school ought, apparently, to some extent keep them from the commission of petty offences by lessening opportunity; but if this be the case, the same effect should be produced in France as in England. A French journal offers the explanation that in France, as under the republic, education is simply intellectual instruction, while in England there is not only instruction but training; moral and religious influences are brought to bear upon the minds of the young.

There is not much soundness in Victor Hugo's contention that when you build a schoolhouse you close the door of a jail. The people of no other country spend more money for education than the people of the

United States; but crime has more than kept pace with instruction, and it is worth our while to consider whether this result may not be in some measure due to the quality of the teaching.—*Minneapolis Times.*

PHYSICAL TYPES IN CHILDREN.—The discussion on "Physical Deviations of Children" at the British Association has been illustrated by a very painful object lesson at the Old Bailey. Whatever be the degree of moral responsibility attaching to the unhappy lad there found guilty of matricide, there seems no doubt that physically and mentally he is not as others. The legal examination brought to light facts bearing on his mental condition that required no very close psychological observation to discover. Evidence was given that the boy was very clever, but unusually excitable, the periods of extreme excitability, according to the medical officer of Holloway Prison, lasting about five days. There were marks indicating long-standing pressure on the brain. The headmaster of a school from which the boy ran away in 1893 stated that he had often complained of headache. It was said, too, that he had a morbid craving for the literature of crime. It does not appear that all these most significant facts were known to the same persons. The teachers knew of the headaches, probably not of the pressure; most likely they observed the excitability, but not its recurrent character. There is, in fact, at present no machinery in our schools for observing, recording, and dealing with such exceptional cases.

But, without going to any extravagant length, it seems reasonable to suppose that a medical expert, or even a schoolmaster who has been trained

or will take the trouble to train himself to observe the physical types, in his pupils, might be able to separate those whose presence in a class, or even in a school, cannot be for their own advantage. He would easily detect the hopelessly dull, those who suffer from recurrent headaches, the ultra-nervous, over-irritable children, whose defects, though not so immediately discernible as those of the blind and deaf, are really quite as incapacitating. Placed in small classes, and taught by teachers who have studied the problem, such children might have a chance of development on healthy lines. Such discrimination is probably easier in a good private school than in the greater public schools, because the classes are generally smaller, and the system is less rigid. But there are signs that much fuller and more exact discrimination may be soon regarded as our duty. The weighing machine, the measuring rod, carefully noted observations of colour, shape, movements, habits, will have to take their place alongside the written and oral examination, and may prove more influential factors than it in determining the character of the discipline and education to be given.—*The Educational Times.*

“TOO FUR”.—Education may be all very well in moderation, but in agricultural districts it is apt to go “too fur.” Such is the view (says the *Westminster Gazette*) of a certain farmer in one of the Eastern counties who, before his eyes were opened to the fact, was a member of the local School Board. One day he told a very intelligent lad in his employment to ask some man in the village to come over and measure “a bit o’ barley.” The lad, while about to set out, remarked that he should like to do the measuring himself. “He nearly took my breath away,” exclaimed the farmer, in recalling the

incident. “What, you measure land!” said he to the lad; “when did you ever measure land?” The youth answered that he had never measured land, but knew how it was done all the same. Asked who it was that taught him, he named the Board School teacher. “What!” said the farmer, “you don’t mean to say as they teach ‘em to measure land at the Board school?” The lad answered that the master had asked those who would like to learn to stay after school for that purpose. “Well, what land did he measure?” “He didn’t measure any?” replied the lad. “Then how did he teach you?” “He taught us on a blackboard.” “Now, none o’ your lies,” said the farmer severely, “don’t you try to tell me as you can measure land on a blackboard! Now, look you,” he continued, “you’re just a deal too clever for me. My sons, as was educated at the boarding school in—, was never taught to measure no land. So you’d best just look out for another place, and tell me as soon as you get it.” The farmer, who himself related the incident, rounded off the recital of his grievance by complacently asking his listener, “And don’t you think I was right, sir?”

We can easily conceive of all the bare *materiel* of instruction being conveyed into a school-room through a mechanism of pipes in the wall. Every teacher approaches to that metallic regimen who lets his office degenerate into a routine. Such people dwarf down the whole wondrous majesty and mystery of our being, to a contemptible carving mill, turning out so many blocks or blockheads from so much timber. But the wrong done is never more disastrous than when it falls on the buoyant, the impressible, the affectionate and aspiring soul of childhood. Pray and strive to be saved from the doom of a routine teacher.—*Bishop Huntington.*

HIGHER PAY AND A BETTER TRAINING FOR TEACHERS.—It is conceded in America, but in a very general way, that one of the first duties of parents and citizens is to provide for the proper education of growing children. I say that this concession is made only in a very general way, because neither as parents nor as citizens do the men and women of America display any really great concern as to the education of their children. In sentimental fashion they will glow over the benefits of education, and the Fourth of July orator can always be sure of applause when he declares that that land will always be free from whose every hilltop may be seen a school-house and a church—twin sentinels of intelligence and piety. But this interest is only superficial except in a few favored localities where education has been esteemed at its true worth. It is wrong, to be sure, that school-teachers should be held in social and industrial disesteem; but at present it is not entirely unfair to the great body of teachers of primary and grammar schools in the United States, for, generally speaking, neither their attainments nor their ideals entitle them to a much higher regard. Without training or preparation, without taste, and without love for what should be the highest and most sacred calling for men and for women, they have adopted the profession of teaching and have degraded it to a trade upon which both tradesmen and artisans look down.

But we should not visit our condemnation on the poor teachers alone. They have become what they are in obedience to the immutable natural law of supply and demand. There was a demand for teachers and there was no supply of properly trained teachers, so the incompetents secured the places. The fault for this lay with the citizens, the taxpayers, and their representatives, who have

failed to see that no one except a specially trained man or woman should ever be put in charge of a class room. These citizens, these school commissioners, these school trustees, have not seen that there was a necessity for a higher type of teachers; and so long as petty politicians are permitted to monopolize these offices there is little likelihood that these officials will see anything more than their own inflated importance and the opportunities to "put up jobs," with the aid of the publishers of school-books, so as to defraud the public treasury.

It were idle to speak of these things unless at the same time a remedy were suggested. Already it has been affirmed with unhesitating positiveness that nothing can be done for the betterment of our public schools until educated men are put in control of the school boards. Without such a reform and unless teaching is made an honorable profession, in which distinction might be gained, and an easy competence be acquired, we can never expect that it will attract the same class of persons as those now drawn to the law, to medicine, to engineering, to the pulpit, and to business. In these pursuits great rewards are to be gained, great prizes won—wealth, fame, and social position. But by teaching, under present conditions, poverty is the portion of even the most successful. And as for the other things that men think are worth striving for, they are out of reach from the beginning. The business man is not considered to have begun to succeed until his income is more than \$10,000. But the teacher in New York has earned all he can ever earn when the \$3,000 mark has been reached, and even this may be cut down if for any year there are fewer than a certain number of pupils in his school. The salaries paid in New York are a very fair average of the salaries received by teachers in other

Eastern cities. The amounts are slightly higher in New York but in other places the cost of living is so much less that the salaries are actually better than in the metropolis. The average of compensation for teachers is below \$1,000 a year, so that in compensation a New York school teacher is not put on a par with a good bookkeeper, a stenographer with a knowledge of spelling and grammar, or with a skilful cook.

In the country, whether in the East or West, North or South, the compensation to school teachers is so small that it seems wonderful that those who receive these salaries can live on them. These salaries range from \$100 a year to \$900 a year. The average for a school year of about seven months is \$318.36 for men and \$262.92 for women. Most country schools have only one teacher, and that teacher is required to instruct children of all ages and in all branches up to grammar and algebra. Those of them who have thought about their calling, and who have ever been moved to feel that great responsibilities devolved upon them, have realized that the conditions were such that they could do next to nothing and usually they have given over any efforts to secure a change in school administration. This inefficiency of the country school has resulted in what might quite properly be called "the American peasantry" being as illiterate and unlearned as any class of people in any civilized state in the world. They can read and they can write. But they do not understand what they read, and, never having been taught how to think, they are the easy victims of every bustling demagogue who promises to give them something for nothing. The American farmer of two generations ago was a better educated man than is the American farmer of to-day. No one would ever

have thought of calling him a peasant, he did not suggest such a thing in his manner of life, poor though it was; nor yet in his manner of thinking, though that may have been narrow. There is no use in refusing to look facts squarely in the face; and the fact that country people—agricultural people—are growing more ignorant generation by generation is so patent that instances need not be recited to prove it. The mere spending of more money on country schools will not effect any reform. The States, for awhile at least, must take the schools in rural districts under control.—*Exchange.*

Spelling is an art, and the artist is born rather than made. Some very clever people have spelt indifferently to the end of their lives; and some unintelligent people rarely spell a word wrongly after it has entered their vocabulary. Of course there is such a thing as learning to spell, just as the born artist may profit by learning what are called the rules of art. But few schoolmasters, nowadays, have much faith in the venerable Butter, or in the moderns who prepare spelling-books of the same pattern as Butter's. There was an interesting conversation at the annual meeting of the College of Preceptors on the best mode of testing the spelling of candidates in examinations. Almost everybody objected to the setting of catchwords purposely mis-spelt; and the difficulty of arranging for dictation to fifteen or sixteen thousand candidates is manifest. It may be doubted whether there is any better plan than to mark every candidate according to the accurate or inaccurate spelling of his papers as a whole. This might entail some additional labour on the examiners of the written papers; but it would have the advantage of being thoroughly natural and just.—*The Educational Times.*

GEOGRAPHY.

FAST TRAINS.—The run of the experimental train on the New York Central and Hudson River Railroad, September 11, from New York to Buffalo, though not being accomplished in the short time attempted by the management, was the fastest time for so great a distance ever before made on any railroad in the world, beating the great record recently made in Great Britain. On the run from London to Aberdeen, on August 23, 1895. 540 miles were covered in 512 minutes, the average of speed for the entire distance being 63.282 miles per hour. In the run on the Central-Hudson road yesterday 436½ miles were covered in 407 minutes, the average speed for the entire distance being 64.348 miles per hour. The Central Hudson engines, therefore, drew their train at the rate of 1.068 miles per hour faster than the record made in Great Britain. This breaks the world's record.—*Troy Press.*

REMARKABLE LAKES IN BRITISH COLUMBIA.—Little Shuswap Lake is stated to have a flat bottom, with a depth varying from 58 to 74 feet, measured from the mean high-water mark. The deepest water found in the great Shuswap was 555 feet, about six miles northward from Cinnemousun Narrows, in Seymour Arm, though the whole lake is notably deep. Adam's Lake, however, exceeds either of the Shuswaps, as its average depth for twenty miles is upwards of 1,100 feet, and at one point a depth of 1,900 feet was recorded. In the north-west corner of this lake, at a depth of 1,118 feet, the purpose of the scientific explorers was defeated by the presence of mysterious submarine currents, which played with the sounding-line like some giant fish, and prevented any measurement being

taken. It is a complete mystery how the currents could have been created at this depth, and scientific curiosity will no doubt impel either public or private enterprise to send a second expedition to the scene this summer to endeavor to solve the riddle. As the height of the surface of this lake is 1,380 feet above the sea level, its present bed is, therefore, only 190 feet above the sea, although distant 200 miles from the nearest part of the ocean. Dr. Dawson and his associates believe that the beds of some of the mountain lakes in the region are many feet lower than the sea-level.—*Vancouver World.*

AUTUMN'S HERALDS.

MARY CHANDLER JONES.

I

Just a bit of traced gold
In my pathway lying,
Fallen ere the wind's a-cold
And the snow a-flying.

II

Just a crimson banner flung
Out upon the breezes,
Autumn's victor signal, hung
O'er each tree he seizes.

III

Just a cricket, piping shrill
In the dry brown grasses,
And a haze above the hill
Tell me Summer passes!
—*In the Boston Commonwealth.*

With silent, soft and mighty pressure, the sight of the Sufferer's holiness and the gratitude for the Sufferer's pity . . . has drawn the depths of men's lives on the nature of the Sufferer.

EDITORIAL NOTES.

UNIVERSITY SENATE ELECTION.

The following are the members elected to the Senate of the University of Toronto last month: Chief Justice Meredith, Professor Baker, Hon. Mr. Dickey, Aylsworth, Coyne, Mr. Justice Falconbridge, Dale, Hutton, Houston, Ballard, Ellis, King. There was considerable interest taken in the election; the vote cast being 1,070, the largest vote ever polled at a Senate election. By the retirement of a few members of the late Senate and the addition of a corresponding number of new men the complexion of the new Senate differs widely from the last. The difference in its policy may be more than might be expected from the change of members. We are given to understand that the result of the election has surprised and given a good deal of dissatisfaction to many who followed the contest with intelligent interest.

THE EMPIRE.

A Society has been formed in Great Britain, called "The Seeley Society." The aims of the Society are to bring home to all minds the importance of the British Empire; to tell the story of British enterprise in every part of the world; to teach those achievements of order and justice which have put a crown of glory on the British rule in India and elsewhere, to show that upon co-operation throughout the Empire depends the continuance of that supremacy at sea, without which our commerce, the life-blood of the whole, cannot be permanently secure; finally to impress upon the public conscience the greatness of the responsibility now confronting the British race in its imperial inheritance and to discuss the means whereby this

joint responsibility can be best met. In this discussion, the word "colony" should receive some attention. It seems to us that the word should be dropped, when applied to the outlying parts of the Empire. The subjects of the British Crown born in those parts are as much subjects of Her Majesty and as loyal, as if they were born on the "bonnie" hills of Scotland or the rich land of England. It is high time to drop the word colony when speaking or writing of the British Empire. It would be difficult to imagine a more fitting memorial to the late Sir John Seeley than the work done in this connection, by this body of lecturers. Branch societies are being formed in the cities and towns throughout the United Kingdom.

PROFESSOR WILLIAMSON — "By the death, on September 26th, 1895, of the Rev. James Williamson, M.A., LL.D., professor of astronomy and Vice-Principal, one of the fathers of the university has been called to his rest. His work, so unprecedented in length, so laborious and varied, is over, and the sons and friends of Queen's everywhere are mourning. His arduous duties in Queen's for 53 full sessions, his wide and ready scholarship, his paternal interest in his college boys, his simple, sweet and generous disposition, are well known. Those of his first students who are now alive are grey-headed and talk about him to their grandsons. To the last he was willing to sacrifice himself for the sake of the college which he had helped to nurse and rear. All his days he feared God, and the spirit of childlike reverence penetrated his entire work."—*From the Minutes of the Senate.*

SCHOOL WORK.

SCIENCE DEPARTMENT.

—
J. B. TURNER B.A., EDITOR.
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CHEMISTRY.

Examiners: R. R. Bensley, B.A.;
C. A. Chant, B.A.; A. P. Knight,
M.A.

1. Describe how you would separate alum from a mixture of powdered alum and blue vitriol.

2. (a) Compare the action of hot iron on steam with the action of sodium on warm water. Give equations.

(b) Define *chemical equivalent* and show how your definition applies to the two foregoing reactions.

3. Describe experiments to show how you would distinguish between finely powdered charcoal and manganese dioxide; between a jar of carbon monoxide and one of hydrogen; between a jar of hydrochloric acid gas and one of sulphur dioxide.

4. The average composition of coal gas is: hydrogen 45%; methane 35%; carbon monoxide 7%; olefiant gas 4%; butylene (C_4H_8) 2.4%; sulphuretted hydrogen 0.3%; nitrogen 2.5%; carbon dioxide 3.8%. What volume will the products of the combustion of 100 litres of such a gas occupy at $20^\circ C$ and 750 mm. pressure?

5. Explain, using equations, what changes take place in the following experiments:—

(a) Dry sulphuretted hydrogen is passed over iron filings in a glass tube.

(b) Sulphur dioxide is passed into a vessel containing nitrogen peroxide.

(c) Carbon dioxide is passed over ignited sodium.

6. Ferrous sulphide (FeS) is heated strongly in a hard glass tube open at both ends. Express the reaction which takes place by an equation.

7. The percentage composition of a gas is nitrogen 46.67, oxygen 53.33. Its vapor density ($H=1$) is 15. Calculate the formula of the gas.

8. (a) When 50 c.c. of hydrogen and 30 c.c. of chlorine are exploded in a eudiometer, what are the volume and the composition of the resulting gas at standard temperature and pressure?

(b) 50 c.c. of hydrochloric acid gas are placed in a eudiometer over mercury; some sodium amalgam is then introduced and the lower end of the tube is firmly closed with the finger and the whole inverted a number of times so that the gas may come freely into contact with the amalgam. The tube is again inverted over mercury and the volume measured. What changes have taken place? Explain.

(c) Show the relation of these experiments to the statement that "hydrogen is represented by the symbol H_2 ."

9. Sketch the chemistry of iodine.

I.

CHEMISTRY FOR THE JUNIOR LEAVING EXAMINATION.

The course in this subject as outlined in the curriculum that was in operation in our High Schools during the last five years was generally admitted to include more work than could be satisfactorily done in the time that is allowed for the junior Leaving examination. Not only was the course too long but influences, which were at work, principally the character

of the examination papers, made the work of preparing candidates for this examination drudgery of the severest kind. An attempt has been made to lessen the amount of work necessary for this course by reducing the number of elements prescribed for study. This is one way of overcoming the difficulty, but it is very doubtful if it is the best way to do so; at least, it is open to question whether in reducing the number of elements a better selection could not have been made. A clear idea of what work may reasonably be expected under the circumstance will enable us to arrive at a satisfactory conclusion as to what is the most suitable course of study. The maturity of the minds of the students and the time that can be allowed for the subject in the schools must largely determine the course of study in any subject. Keeping these two points in view there is, in the opinion of the writer, far too much being attempted to have it done in such a way as to be most advantageous to the student. Chemistry being an inductive science, it is absolutely necessary that the beginner should be made acquainted by experiment with the facts upon which the theories and laws of chemistry are based.

The experiments should be so arranged as to bring before the mind of the student the facts of chemistry in an orderly way, not as isolated facts, but as facts related to one another; and special pains should be taken to emphasize these relations. Comparison of the properties of the elements should also receive a great deal of attention. The course that is now prescribed renders comparison as a factor in teaching the subject almost impossible; this is the great weakness of the present course.

The course indicated above would relegate the teaching of theory to a later stage in the pupil's advancement, an end that will be admitted as desir-

able by those who have experience with young beginners on the subject. It would do away with much of the mere memory work that is in vogue in connection with the subject at the present time and bring into action those faculties of the mind which are now permitted to lie dormant for the want of opportunities for exercise in connection with the proper study of a subject so well suited to their development as chemistry.

II.

The arrangements of the fibro-vascular bundles in the stem of a plant has long been looked upon as being a characteristic distinction between the dicotyledons and monocotyledons. If the readers of the MONTHLY will take the trouble to examine a cross-section of the stem of the *Podophyllum peltatum* they will find an interesting example of an arrangement of bundles quite different from what would be expected in the case of a plant which occupies the place in the vegetable kingdom which this one does.

COMPARISON BETWEEN "ODE TO THE NORTH-EAST WIND" AND "TO THE EVENING WIND" A PUPIL'S ANSWER IN A PRIMARY FORM.

A.—Style and Spirit.

I. Resemblances :

- (1) Metre regular in both.
- (2) In both poems the wind is welcomed and commanded to do something.

II. Differences:

- (1) In 1st there are no distinct stanzas, while the 2nd is regularly divided into 5 stanzas.
- (2) Fewer feet in a verse in the 1st.
- (3) In 1st the wind is in contrast to glare of summer; in 2nd to heat of day.
- (4) 1st treats of autumn and

winter sights and sounds; 2nd of summer sights and sounds.

(5) One could tell immediately, on reading 1st poem that the writer was an Englishman, because the style and spirit is so essentially English.

(6) A breezier, fresher air runs through 1st than 2nd.

B.—Subject or Narrative.

I. Resemblances :

(1) Both poems addressed to a wind.

(2) Effect of wind given in both.

(3) Both poems mention the place where the wind comes from.

II. Differences:

(1) In 1st a strong contrast is drawn between the north-east wind, which is the subject, and other winds.

(2) 2nd poem has more figures in it than the 1st, and in that way may be more beautiful, but it has not the strong crisp air that 1st has.

(3) The 1st ends with a final, stirring address to the wind, while the second ends in a stanza, which preserves the unity of the whole, but does not make as good a climax as in first.

General Remarks :

(1) Effect is healthful and strengthening in each poem.

(2) Each poem is characteristic of its author.

(3) In both poems the author is not alone in his welcome.

(4) The wind is of a very wild and boisterous character in the 1st, while in the 2nd it is of a gentler nature.

(5) Kingsley's poem has more life in it than Bryant's—it is more energetic and stronger.

SENIOR FOURTH BOOK.

GRAMMAR.

(a) The conductor *did not take* the red tickets *which* you offered *him*.

(b) " 'Tis *sweet* when *harvest's* glories shine,

When *glowing* clusters load
the *vine*,

When *bows* the heavy tree,
and pours

In *Autumn's* lap its juicy
stores."

1. Select the phrases and subordinate clauses of the passages, and classify them. (10)

2. Analyze the passages. (15)

3. Parse the words in italics. (10)

4. Re-write the following sentences correctly :—

(a) Those sort of people are always complaining.

(b) Will we do this one the same as we done the last ?

(c) The oldest of the two is about as tall as him.

(d) He didn't do nothing to nobody.

(e) They were real glad when they seen us. (5)

5. Give the principal parts of the following verbs :—Am, fly, ring, shrink, sit, set, know, lie, lay, sew. (10)

6. Arrange the following nouns in columns, according to the class to which they belong :—Bible, family, pity, goodness, love, Toronto, committee, jury, damsel, earl, aunt. (10)

7. Make a tabular statement showing the masculine and feminine gender of the following words :—Duck, duke, damsel, belle, emperor, heroine, nun, niece, prince, witch, patron, teacher, Jew, marquis, czar, ewe, manservant, maid, bachelor, aunt.

OPTIONAL QUESTIONS—Answer any three of the following questions :

8. Classify the following adjectives :—That, those, seven, second, pretty, living, every, some, a, their, all. (10)

9. Define and give an example of each of the following :—Sentence, complex sentence, clause, phrase, coordinating conjunction. (10)

10. Distinguish between the meanings of the same preposition in the following sentences :—

(a) By. He sat by the fire. By skill and daring he succeeded. We judge of the future by the past.

(b) Of. The palace of the king was seen. The rays of the sun warm the earth. I will think of it.

(c) For. We did it for fun. He couldn't go so I went for him. The mixture is excellent for colds. (10)

11. Change the following sentences into (a) one compound sentence; (b) one complex sentence.

The lad was playing baseball. He hurt his finger. He went to his home. His mother bathed it with water. The water was cold. (10)

12. What verbs have voice? Name and distinguish between the two voices (a) in respect to meaning; (b) in respect to form. (10)

JUNIOR FIFTH BOOK.

GRAMMAR.

Pupils will answer the first six questions and any six of the remaining questions.

(a) *There* at the foot of yonder *nodding* beech,
That *wreaths* its old, *fantastic*
roots *so high*,
His listless *length* at *noontide*
would *he stretch*,
And pour *upon* the brook that
babbles by.

(b) If this will not suffice it must appear that malice bears down truth.

1. Define clause. Select all the dependent clauses in the passages. Classify and give the relation of each. (15)

2. Fully analyse (b). (14)

3. In what particular does a phrase differ from a clause? Select all the phrases of the passages; classify and give the relation of each. (10)

4. Parse all the words in italics. (15)

5. Form sentences using a partici-

pial phrase, a noun phrase, a verb phrase, an adverb of degree or quality, a demonstrative pronoun, a subordinate conjunction, a noun used as a verb, an adjective. (16)

6. Define and give an example of a compound sentence, a complex sentence, an assertive sentence, an imperative sentence, an interrogative sentence, a predicate noun, a transitive verb, a personal pronoun, a relative pronoun, a co-ordinate conjunction. (20)

7. Explain what is meant by (a) direct object; (b) indirect object, and illustrate with two examples. (10)

8. Give the simple past tense and perfect participle of:—Lie, lay, sit, set, know, am, fly, ring, shrink, tell. (10)

9. Give the plural of each of the following:—Canto, quarto, zero, monkey, wharf, foundry, staff, appendix, datum, animalculum, t, 8, brother-in-law, spoonful, axis, forget-me-not, i, I, this, that. (10)

10. Give the possessive forms of:—Woman, women, boys, boy, men, man, lions, lion, Jack-the-Giant-killer, Queen of England. Put the name of the thing owned after each possessive, as "bird's nest." (10)

11. What verbs have voice? How is the passive voice formed? Write a sentence with the verb in the active voice, and a sentence with the verb in the passive voice. Change the voice in each of these sentences. (10)

12. Correct where necessary, the following sentences, giving reasons:

(a) My duty and not my interest prompt me to act thus.

(b) I cannot run no farther.

(c) An honest man's the noblest work of God.

(d) Will I tell him you wants him if I sees him?

(e) Whom shall I say called? (10)

13. Give the present emphatic,

past progressive, pluperfect future perfect progressive, and the imperfect participle of "give" and "play." (10)

14. Where does a verb get its number? Where does a relative pronoun get its number? Illustrate answer with examples in sentences. (10)

SENIOR FOURTH BOOK.

ARITHMETIC AND MENSURATION.

Pupils will take the first, and any eight of the remaining questions in section A; also any two in section B

A.

1. Addition and Multiplication time test. (See special paper.) (10)

2. A's money is $\frac{5}{6}$ of B's, but if A had two dollars more he would have $\frac{7}{8}$ of B's. How much has each? (10)

3. If 17 men in 6 days earn \$178.50, how much will 13 men earn in 15 days? (10)

4. Add without reducing to vulgar fractions:

63.5, 7.06, 16.09, .815, and .1357. (10)

5. A merchant buys 640 yards of cloth at 80c. a yard. He sells $\frac{1}{4}$ of it at $12\frac{1}{2}$ per cent. advance on cost, and the rest at 10 per cent. advance on cost; find his entire gain. (10)

6. My income tax at $16\frac{1}{2}$ mills on the dollar is \$33. On what part of my income do I pay tax, if \$400 is exempt from taxation? (10)

7. A house is valued at \$3,000; furniture, \$1,500; library, \$900. I insure the whole for $\frac{2}{3}$ of their value at $\frac{3}{4}$ per cent. What is my annual premium? (10)

8. A broker sells 800 barrels of flour at \$6.52 $\frac{1}{2}$, and remits the net proceeds, \$5,089.50. Find his rate of commission. (10)

9. At how much a month should I rent a house, which cost me \$6,400, that I may receive 6 per cent per annum on my outlay? (10)

10. If 5 lbs. of tea at 78c. a lb. be mixed with 8 lbs. at 65c. a lb., and the mixture be sold at 80c. a lb. Find the gain per cent. (10)

11. A and B run a mile race. A gains one rod on B in every 176 yards. How far will he B be from the winning post when A arrives there. (10)

B.

12. How many yards of satin, $\frac{3}{4}$ of a yard wide, will it take to line a wardrobe 9 ft. high, 6 ft. wide, and $2\frac{1}{2}$ ft. deep. Find its cost at \$1.50 a yard? (15)

13. How many cubic yards of earth must be removed in digging a cellar 12 ft. long, 10 ft. wide, and 5-2-5 ft. deep? (15)

14. What would it cost to paint the outside of 10 boxes each 3ft. 6 inches long, 2 feet 6 inches wide, and 1 ft. 9 inches deep, at 12 cents a square yard? (15)

15. How many square yards of plaster in the walls and ceiling of a room 18 feet long, 15 feet wide, and 12 feet high, leaving out 3 windows 8 feet by $4\frac{1}{2}$ feet, two doors $8\frac{1}{2}$ feet by 6 feet, and a base-board 1 ft. wide? (15)

JUNIOR FIFTH BOOK.

ARITHMETIC AND MENSURATION.

Pupils will work the first, and any eight questions of section A; also any two questions of section B.

A.

1. Addition and multiplication time test. (See special paper.) (10)

2. A can do a piece of work in 15 days, and B in 25 days. A works alone at it for 3 days, then B

works alone at it for 5 days, after which they both together finish the work. How long was the work under contract? (15)

3. How long will it take a train $\frac{1}{16}$ of a mile long, going at the rate of 10 miles an hour, to cross a bridge $\frac{1}{2}$ miles, 80 rods long? (15)

4. What must be the marked price of cloth that cost \$1.50 a yard, so that the seller may reduce his price 10 per cent. and still make a profit of 20 per cent.? (15)

5. A note of \$750 amounted to \$759 from January 1st to March 14th, 1892. At what rate of interest was the note drawn? (15)

6. At 18 mills on the dollar, a man pays \$27 income tax, when 20 per cent. of his income is exempt from taxation. Find his income? (15)

7. How much money must be invested in stock at 80%, paying an annual dividend of 5 per cent., in order to realize an income of \$720 per annum, brokerage being $\frac{1}{8}$? (15)

8. A merchant sends his agent \$9,009 in flour, to sell on a commission of $3\frac{1}{3}$ per cent., and instructs him to invest the balance in apples on a commission of 5 per cent. Find his total commission, and the number of barrels at \$2 per barrel which he remitted. (15)

9. A note of \$730, dated August 3, payable in 3 months, is discounted September 15 at 7 per cent.; find the proceeds. (15)

10. The sum of two numbers is 156, their common factor is 13; the difference between the other two factors is 2. What are the numbers? (15)

11. Express in the form of a vulgar fraction the average of $1\frac{1}{5}$, $\frac{7}{8}$, $\frac{38}{9}$

4, $3\frac{1}{5}$, $4\frac{5}{9}$, $16\frac{2}{3}$, $001\frac{1}{9}$. (15)

B.

12. A map is drawn to a scale of half-an-inch to a mile, how many acres are represented by a square inch on the map? (20)

13. How many more yards of fencing will it take to fence a 10-acre field, which is 80 rods long, than to fence a square 10-acre field. (20)

14. A plate of gold 4 inches square and $\frac{3}{4}$ of an inch thick is extended by hammering so as to cover a surface of 12 yards square; find its proper thickness. (20)

15. The area of an equilateral triangle described on a side of a rectangle is equal to the area of the rectangle. One side of the rectangle is 16 feet; what is the length of the other side? (20)

CONTEMPORARY LITERATURE.

George Eliot's "Silas Marner" is the latest issue in the *Longmans' English Classics* series. It is edited with notes and a specially good introduction by Prof. Herrick of the Chicago University. Those who dislike to find alterations in the text of standard works will be pleased to know that this is a reprint from the English authorized edition by the

permission of Messrs. Blackwood and that no changes have been made in the story. Advice as to the way "Silas Marner" should be read in secondary schools will be found in the "Suggestions to Teachers and Students." A good reproduction of Rajon's etching of George Eliot is given as a frontispiece. Altogether this will be found a satisfactory and

valuable addition to the list of fiction for school reading.

Responsive Reading. Selected from the Bible and arranged under subjects for Common Worship by Henry Van Dyke. Ginn & Co., Boston, U. S. A. It is stated in the preface that this book was originally prepared by request for Harvard Chapel, where it is still in use. Those passages of Scripture which most people are specially desirous of keeping in mind are here selected and arranged in a felicitous manner under such headings as "The Spirit of Life," "The Law of God," "True Religion," and many more equally appropriate titles. The taste and beauty of the volume are such as would have been expected from so eminent a literary man as Dr. Van Dyke. Teachers will find the book of great assistance in preparing their daily religious exercises for school.

Le Nabab. By Alphonse Daudet, abridged and annotated by Prof. Wells of the University of the South: Ginn and Co., Boston, U. S. A. This book is issued in a form worthy of its publishers, and that is saying all that is necessary of its style and binding. The notes are to the point and not too voluminous. There is a thoughtful preface dealing at some length with Daudet's style as well as giving particulars of his life.

The Academy Song-Book. By Charles Levermore and Frederick Reddall. Ginn & Co., Boston, U. S. A. This is the most pleasing collection of songs for use in schools and colleges that we have seen for some time. Great care and taste has been shown in selecting the words and music, and, while there is a liveliness throughout the book that cannot fail to be pleasing to students, there is also a satisfactory showing in the way of good music in every sense of the term. It is a book which cannot

be exhausted in a short time.

Old Testament History for Junior classes by the Rev. Dr. Stokoe. At the Clarendon Press, Oxford. This is the first part of a valuable work on *Old Testament History*, which is to appear in three parts and is intended for instruction in Preparatory Schools. The history is grouped round the leading personages of each period, and care is taken to illustrate the events by quoting largely from other parts of the Bible. Maps taken by permission from the "Oxford Helps" to the "Study of the Bible" are added. A book such as this would be of benefit in our schools.

Selected Essays from Sainte-Beuve. With introduction and notes, by John R. Effinger, University of Michigan. Ginn & Co., Boston, U. S. A. In this little book may be found such of Sainte Beuve's works as the essay on "Chateaubriand," "Madame Recamier" and "Alfred De Musset." There are seven essays in all given, and this with the introduction, notes and a bibliography make up the book. The Notes are explanatory of references in the text rather than of difficulties in translation.

Science Readers. By Vincent T. Murche, Book IV. MacMillan & Co., London and New York. Toronto: The Copp, Clark Co. This is more advanced than the other books of the series, but the same methods of instruction are followed and care has been taken to make the more difficult subjects interesting. From the same firm we have received the second and third parts of the series on *Word-Building* containing simple exercises in transcription and composition.

"Keats" is perhaps the distinguishing note of the *October Century*. There is an article entitled "Keats in Hampstead" by Kenyon West, illustrated by particularly fine portraits

and pictures, also one on "The Influence of Keats," by Henry Van Dyke. "Casa Braccio," the most recent and, while exceedingly powerful, certainly the most depressing of all Marion Crawford's serials, is concluded in this number. From it one learns a great part of the history of one of Crawford's most interesting characters, Paul Griggs. Two among several short stories may be mentioned, "An Earlier Manner," in George Hibbard's best vein, and "Sonny's Schoolin'," by Ruth McEnery Stuart, a fit continuation of a very charming theme which has been twice before drawn on. It is to be hoped that no one will miss E. W. Kemble's drawing at the end of the magazine, "On the Whole He Prefers the Bucking Horse."

St. Nicholas for October opens with an article on J. G. Brown, "The Child Painter." It is illustrated by fine reproductions of his paintings. That exciting serial "A Boy of the First Empire" is brought to a conclusion in this number. Brander Matthews contributes a paper on "James Russell Lowell." Among the jokes may be mentioned some baseball pictures by Kemble, which would do any boy's heart good.

The October *Table Talk* contains a valuable paper on "Diet in Diabetes." This magazine is eminently sensible in all its advice; if house-keepers can be convinced that they hold the health as well as the comfort of the family in their hands, a great advance will have been made. Those who have any difficulty with servants, and unfortunately almost everyone has, should read an article entitled "How to Make Good Servants." All the usual departments are full and interesting.

"The Ethics of Translation" is an article which will bring an assent from the majority of scholars who have at

various times been grieved by strange expressions appearing as equivalents of something that they thought everyone understood. This article appears in the October number of *MacMillan's Magazine*, and is followed by one on that remarkable and lively personage, Moll Cut-Purse, who was celebrated in one of his comedies by Middleton. There are two interesting short stories in the number, one entitled "Margaret Ward, Spinster," and the other "The End Of It."

The Attorney General of Manitoba makes an important statement in the October *Review of Reviews* concerning the "School Question." He says that the question is purely one of policy, and that the courts will decide as to the jurisdiction of the Dominion and Provincial authorities. All the present issues of the day are dealt with by the editor in *The Progress of the World*. As might be expected, Africa receives a large share of attention, Cecil Rhodes' portrait forming the frontispiece.

Little's Living Age for Oct. 5 contains one of Bliss Carmen's poems from the Athenæum, called "The Moon-Dial." There is a very funny short story by Rosaline Masson from *Chamber's Journal* and a charming one entitled "My Maid of Honor" from *Blackwood's*.

One of the most noteworthy articles of the month is "The Party of the Loyalists in the American Revolution," by Prof. Tyler, which appears in the first number of the *American Historical Review*. It is remarkable, not only for its interesting treatment, but for the historical accuracy and fairness with which it reviews this subject so closely associated with all that is most dear to Canadians. The selection of such a subject shows a breadth of view which promises well for the future of the new magazine.