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THE TEACHING OF HISTORY.

PROFESSOR MEIKLEJOHN.

FOR the purposes of discussion, I may, perhaps, be allowed to divide the subjects taught in schools into studies of interest and studies of discipline. This is a rough, but it is perhaps a not unuseful division. History may be taken as the type of the study of interest, and mathematics as the type of the study of discipline. It is true that the one may merge into the other. For example, in the study of the sources of history, one comes to the weighing and valuing of evidence, which is one of the most difficult studies that can occupy the human faculties. Again, the study of mathematics, faithfully pursued, may become, when it reaches the higher spheres, a pure and intense pleasure.

If we ask ourselves what history is, we are referred to great authorities, of whom I will only quote two. The first, Bacon, in his "Advancement of Learning," says: "It is the true office of history to represent the events themselves, together with the counsels, and to leave the observations and conclusions thereupon to the liberty and faculty of every man's judgment." Then we have Lord Bolingbroke, who

quotes from a Greek writer, and says that "History is philosophy teaching by example." Now, if we take either of these definitions of history, we must at once come to the conclusion that history cannot be taught, that is, it cannot be taught in schools, but must be left as an after-study for educated persons, when they have to face the real business of life.

But history is taught, and has to be taught, in our schools; and it is, probably, the most interesting subject that is studied, either in school or at college. It is the most interesting, because it treats of men and women exactly like ourselves, who act and feel in circumstances into which any of us may be, at some time or other, introduced. What Pope says is perfectly true: "The proper study of mankind is man"; and he does not use the word "proper" in the weak and washed-out sense in which we now employ it. The right English word for *proper* is the good old word *kindly*. It is used by Tennyson in its first and fullest meaning in his line about King Arthur—

"A kindly man, moving among his kind."

It is employed in the same sense by Newman in the well-known verses—

“Lead, kindly Light! amid the encircling gloom.”

The light is a “kindly light” because it is the light out of which we were born, into which we have been born, and which we have to follow for ever and a day. The word *proper* with Pope is a literal rendering of the Latin *proprium*. The word *proprium* means what is *near to us*—what, in the language of Bacon, “comes home to men’s business and bosoms.” To translate this word adequately, I should have to fall back upon the language of English brides, and to run the adjective “own” through the gamut of comparison: “my own,” “my ownest own,” “my very ownest own.” Again, Matthew Arnold tells us that the purpose of all culture and education is that we may know ourselves and the world. If this is so, it follows that history is the shortest, and, probably, the surest road to the best mental culture.

Now, what is the problem of teaching history? It is (1) to introduce several hundreds or thousands of persons, and several hundreds of events, to an age that knows nothing, except by the power of sympathetic or anticipative imagination, of men or of things; (2) to make each person introduced an individual and real character; (3) to show the connection of cause and effect between great events.

Now, this is a terrible problem—and one that calls for great knowledge in the man who faces it, as well as great skill, literary skill, in the person who attempts to solve it. The main difficulties in teaching history are, in the first place, to keep the proper historical perspective, and to see that the foreground is not filled with insignificant figures; secondly, to make the right selection of persons and events; thirdly, to secure the neces-

sary amount of exaggeration, so as to make certain of the lasting existence of the more prominent persons and events in the memory.

The best analogy we can find for the teaching of history is the teaching of geography and the drawing of geographical maps. In the teaching of geography, one of the problems is to leave out as many names as we possibly can. We have, also, to leave out of maps as much detail as possible, and to present the larger features, such as mountains and plateaus, with a highly disproportionate exaggeration. So exaggerated, indeed, must they be, that if the mountains in nature were as high as they look to us in the map, they would be about five hundred miles in height. And Humboldt tells us that it is only “maps that appear empty that take a firm hold on the memory.” So it is only histories that are not overcrowded with the names of persons and events that print themselves clearly and strongly in the mind and heart.

The fact is, we are all accustomed, both in history and in geography, to stand at the wrong point of view; and it is only of late that this fundamental error in the stand-point has been gradually becoming clear to the mass of thoughtful teachers. The gazetteer and the mapmaker try to cram into their maps as much information as they possibly can; and they ask the child to waste time in finding out names that ought, if they are there at all, to leap into his eyes. In the same way, the historian or chronicler tells, with as much fulness as he can, the story of his country; and for him who has studied the original sources, and read or consulted hundreds of books on each epoch, every name brings up a story, every name shines with the light of past enquiry; but, to the learner, the names, whether they are names of persons or events,

are only names, and nothing more. Now the writers of school histories have followed the greater historians in endeavouring to crowd as much as possible into their canvas; only, having a smaller canvas to work on, their persons and events are drawn on a much smaller scale, and have generally no human expression in their faces. With the fear of the examiner and the schoolmaster before their eyes, they have not the courage to omit the most insignificant person or the most niggling event. The result is a strain upon them as writers, and a greater strain upon the young students as readers.

Let me give you an example, taken from a History in daily use in many schools:—

“At the same time the Protestants of Enniskillen routed the Irish army at *Newtown Butler*. Early in August William III.’s general, Marshal the Duke of Schomberg, one of the Huguenot refugees from France, landed with 10,000 men in the North of Ireland, and took Carrickfergus. On June 14th, 1690, William landed at Carrickfergus with a powerful army of English, Dutch, and Germans, and, on July 1st, encountered and totally defeated James at the *Battle of the Boyne*, near Drogheda. On William’s side Schomberg and the heroic Walker, of Londonderry, were killed; James II. fled to France, to appear no more in any part of his former dominions. William III. then entered Dublin, took Wexford and Waterford, but was repulsed at Limerick, and returned to London in September. The Dutch general, Ginkell, drove James’s commander, Sarsfield, from Athlone in July, 1691; in the same month he defeated (at Aughrim, in Galway) the French general, St. Ruth, who was killed in the battle; he forced Sarsfield to surrender Limerick in October, 1691. The struggle for James II. in Ireland ended with

the *Pacification of Limerick*, by which treaty the Irish Roman Catholics were allowed to worship freely, and those who wished to leave the country were conveyed to France by the Government. An Irish brigade of about 12,000 men, with Sarsfield, entered Louis XIV.’s service, and fought fiercely against England in his cause. The terms of the treaty of Limerick were not carried out by the Protestant Government in Ireland, and new penal laws of a cruel character were enacted against the Irish Roman Catholics.”

Now, in this extract we have twenty-five facts stated in twenty-two lines. To any one who knows the history of Ireland at that time, the facts are all aglow with the reflection of courage, both active and passive, with loyalty, with noble heroism. But look how this “History” has managed to squeeze everything that is human out of the narrative. Marshal Schomberg is a mere name; the Rev. Obadiah Walker, who took upon his shoulders the help and the rule of starving thousands and fought a trained army with townsmen and mechanics, dwindles down to a name and an epithet; the terrible battle of Aughrim, in Galway, and the deeds of the general, St. Ruth, are petty items in a dry catalogue; and the hideous sufferings of the Irish Roman Catholics are passed over in nine words: “New penal laws of a cruel character were enacted.”

This kind of thing is just like a series of dissolving views: before the first picture has had time to impress itself on your memory, another and another appears, and the different sets of scenery and personages become inextricably mixed and jumbled up in your brain. Moreover, it leads us to this ridiculous and even farcical conclusion and result: that the age—the age of childhood and youth—which wants and needs interest in the highest degree, gets it least, and is

fobbed off with sawdust pie, when it requires the most nourishing food. Consider, too, how bad it is for the memory, which can grow and gain strength only on what is clear, complete, and firmly held.

The whole thing is a mere catalogue—nothing but a catalogue. Any one of these twenty-five statements would take from ten to thirty minutes in the hands of a capable teacher of history to explain. It may be replied: "That is all right; the book is a textbook, and the teacher takes each of these statements and makes it the text for his historical disquisitions." To this I will rejoin: "It is all wrong; the teacher does nothing of the kind. If he attempts to disentangle the mass of confused information given in this paragraph, he has recourse to the blackboard, and puts the statements in separate lines." But there is another thing which the teacher is tempted to do, and which, I am told, is often done. The memory of the boy is close at hand; it is entirely at the teacher's mercy, and he tells the boy to get the paragraph by heart, and hears him reel it off as a "history lesson." I once knew a boy who had learned by heart and could repeat any paragraph in the whole of a History of England that had been edited by Professor Freeman. This can be done, and has been done; but the knowledge of the pupil is no greater—it is, indeed, less, because you cannot make a strong and straight stroke upon this paper, which has been blurred and blotched by mutilated, confused, and inadequate impressions.

Again, look at the hideous literary style fostered by this undue compression. The vaguest language is employed. The allusive style (the "you-know-all-about-it" style) is frequently adopted. The schoolboy—Macaulay's schoolboy, if you like—is supposed to know the allusion made, when he knows nothing. The persons introduced are mere lines and

dots, not living and breathing souls. The sympathetic imagination is never appealed to; and the pupil realizes nothing. He might be reading about fish, or plants, or pebbles. Let me give you an example. One writer says, speaking of the standing quarrel between Spain and England in the time of Queen Elizabeth: "The ambition of Englishmen in the west had been confined to an angry claim to contest the wealth and beauty of the New World with the Spaniard." Here is a carpet-bag of a sentence. The adventures of Drake, his plundering of Spanish ships, his sweeping the Spanish coast of South America of all its silver and gold; all his adventures, and those of some half-dozen or more Devon heroes, are compressed into the pale and featureless phrase, "to contest the wealth of the New World." Such writing is like an old worn coin, with no mark or superscription on it, with nothing to show its true value, or whether it is silver or pinchbeck.

Here is another fine, but I am sorry to say not rare, specimen from a book which is now in its thirtieth edition. It strains my intellect to guess how many thousands of young minds this book has puzzled, or, it may be, analyzed.

"In the vast field of religious literature, Bunyan is unrivalled. De Foe devoted his almost equal genius to political conflict, as well as to popular fiction."

That is all that is given the young reader about Bunyan and De Foe. De Foe wrote pamphlets about brick-making, printing, the tanning of leather, a "Short and Easy Method with the Dissenters"; was a Commissioner for the Union with Scotland; and was probably the biggest literary adventurer the eighteenth century saw. But all we are told of him was that he "devoted his almost equal genius" to x and y . As well write history in algebraic symbols at once.—*The Educational Times.*

REVIEWING HISTORY.

BY G. P. B.

THERE seem to me to be two distinct stages in the learning of history. The first is that in which the learner gathers the facts of history. These must be gathered and arranged in the form of a connected narrative. In constructing this narrative the pupil must be led to distinguish between the more and the less important facts. To make this distinction is one of the main purposes of a review. The general method of historical study is the same as that of the study of literature. The first step in the method of both is to gather the story, and fix it well in the memory; the next step is to interpret the story; that is, find out its meaning.

The events of history are not haphazard, the work of chance. The battle of Shiloh was a surprise to one army on the first day, and a surprise to the other on the second. But it was not an accident. We often hear it said that the fate of Europe would have been different if Blucher had not come to the assistance of Wellington. Yes, but Blucher came, and it was in the order that he should come. It is often said that God is on the side of the heaviest battalions. But it is not chance that the battalions are the heaviest. Below all seeming chance and accident it is the superior idea that wins in all historical crises. There have been, for instance, decisive battles in the history of civilization. They have been decisive not alone because a Charles Martel led the forces, but because the time had come when the idea which a Charles Martel represented was strong enough, by the assistance of the genius of Charles Martel, to overpower the opposing idea. Had a smaller general

than Charles Martel led the troops of Christendom the battle of Tours might not have been won. In that case it would not have been a decisive battle, but the decisive battle would have been postponed to a later date. The wheels of civilization never move backward, though they sometimes move very slowly and with great difficulty.

But it does not seem to me to be physiological nor pedagogical to emphasize the meaning of historical events before the connected narrative of the events is well fixed in the mind, so that the child can look forward and backward along this line. It is through reflection upon this narrative that the meaning, that is, the idea that controlled the events, becomes revealed.

If we suppose that the pupils are in the narrative stage of history study how shall the review be conducted?

It is too often the case that the pupils in the study of their assigned history lessons, during the term, have not joined the events described in these lessons into a connected narrative. They have some detached snatches, but cannot think it through as a continuous story. The chief business of the review is to enable them to do this.

To do this effectually it is probable that the review must be conducted in a different manner from the advance. The text-book lesson method, by question and answer, which is admirable for first study, should give place to the topical method, in which "historical outlines," or the method of study by "outlining," should be used. The children should be led to cut loose from the text-book in a measure, and think the entire narrative through

as a real occurrence in time. The outline, if properly constructed, will be the key-words or cues to the more important events in the narrative which the pupil is to fill out, and then connect these events with each other by the smaller and less important events that are not named in the "outline." In this way the outline may become a real aid to the pupil by becoming a series of guide-posts, as it were, to direct his thought through the story.

From a recent hand-book on "Courses of Study and Methods of Teaching," by John T. Prince, which is published by Ginn & Co., of Boston, we copy the following outline intended to direct the study of the

topic "The French in North America," and suggest that teachers examine it to determine for themselves how far it is in accord with what has been said above:—

1. The territory acquired.
 - (a) What region.
 - (b) By whom discovered and settled.
 - (c) First settlements.
 - (d) Time (relative).
2. Government.
 - (a) Kind.
 - (b) Results.
3. Loss of territory.
 - (a) Claims.
 - (b) Allies.
 - (c) Opponents.
 - (d) Parts abandoned, and when.—

Exchange.

SCIENCE BETWEEN FIFTH AND TENTH YEARS OF SCHOOL LIFE.*

W. M. STINE, PROF. PHYSICS AND CHEMISTRY, OHIO UNIVERSITY.

MANY years ago a man by the name of Robert Raikes was sufficiently far-seeing to grasp the idea that the child is the parent of the later man and woman, and went energetically to work to put it in practice by establishing a school to teach the poor urchins of Gloucester morals and letters. Encouraged by the wonderful results obtained by this humble philanthropist, the various religious sects embraced his idea more fully than had been done in the past, and developed it into the Sunday school of to-day. Recently a society of French sceptics sent a representative from amongst its members to this country to make a careful study of our institutions, and to seek, not only for the cause which has made our nation so marvellously successful,

but for the mainspring of that distinctive character which the European so much admires in the American. Upon his return he published a book on his observations, and closed it with the statement that in his opinion the cause above all others which has made the American what he is, and his nation so progressive and successful, is to be found in an institution which they call the Sabbath school and which they have carried to great perfection. It seems singular that the success in the moral training of children should not have been more appreciated from the outset by educators, and that similar principles and methods might be applied with equal success in secular education.

It is necessary in dealing with such a subject as this to define clearly the term science; to distinguish between science as a collection of classified facts with their relations and the

*Read at a meeting of the South-Eastern Ohio Teachers' Association at Marietta.

conclusions that may be drawn from them, and science in a broader and less technical sense as applied in all methods of scientific reasoning and investigation. Empirical science seeks to attain facts exactly and in sufficient number to serve as a foundation for a super-structure; then to group these correctly in appropriate classes, and finally to arrange the several classes into a harmonious system. In order to facilitate dealing with the mass of facts obtained, the uniformities observed in the various classes are summed up into general propositions, called laws. The relations of cause and effect are next sought, and thus arise hypotheses and theories. Again, science in the broader sense, or as Jevons expresses it in his *Principles of Science*, the "Scientific Method," "consists in the discovery of Identity amidst Diversity." To quote further from the introduction to this admirable work: "Nature is a spectacle continually exhibited to our senses, in which phenomena are mingled in combinations of endless variety and novelty. Wonder fixes the mind's attention; memory stores up a record of each distinct impression; the powers of association bring forth the record when the like is felt again. By the higher faculties of judgment and reasoning the mind compares the new with the old, recognizes essential identity, even when disguised by diverse circumstances, and expects to find again what was before experienced. It must be the ground of all reasoning and inference that what is true of one thing will be true of its equivalent, and that under carefully ascertained conditions nature repeats herself." Professor Huxley makes a still broader statement when he says, "To my mind whatever doctrine professes to be the result of the application of the accepted rules of inductive and deductive logic to its

subject-matter, and accepts, within the limits which it sets to itself, the supremacy of reason, is science. I conceive that ordinary geometry is science, by reason of its methods, and I also believe that its axioms, definitions and conclusions are all true." The study of the facts presented by nature is but one of the applications of the scientific method. We have the science of rhetoric, of history, of language, and in fact when any subject is pursued in the same spirit it is entitled to be called a science.

By the phraseology of the subject assigned me, I infer that more particular reference was had to the natural sciences. Perhaps it is not assuming too much to state that the relation of the natural sciences to our courses of instruction and the extent to which the distinctively scientific methods shall be applied in all branches are the leading educational questions of the day. The increased attention that is being paid to the natural sciences in our collegiate and public school courses has doubtless been marked by all. Intelligent people are rapidly awaking to the fact that an educated and cultured man, whose powers of observation have not been cultivated and who lacks the ability to make an accurate or truthful statement of facts, and is unable to draw logical conclusions from what he observes, is not educated at all, though he may be learned. How shall this be remedied? It is coming to be generally accepted that thorough instruction in the natural sciences and rigidly pursuing scientific methods in all instruction will bring about the needed reform. As years ago people realized that it was necessary to begin correct moral instruction as early as possible to produce the highest moral excellence, so now the correct instruction of young children is deemed of the highest importance.

Bain states that the powers of the

mind engaged in the acquisition of knowledge are three in number : the power of discrimination ; the power of detecting identity ; the power of retention. Here we have the problem clearly stated, and it is noticeable that the above definitions of science covers the cultivation of this entire group.

It would scarcely be wise to introduce text-book instruction in science before the child has reached ten years of age. There is no generally well known book on the market which is suitable, and from the nature of the case, it is doubtful if any such can be written. One of the best books that has so far appeared, is "First Steps in Scientific Knowledge," by Paul Bert ; yet it is likely that a child would receive many false impressions from it which would follow persistently into later years, were the attempt made to instruct from its pages. A certain amount of scientific instruction, however, is really necessary during this period, but should be given directly by the teacher. At first the endeavour should be simply to train the powers of observation, and not directly the judgment. When a child sees an object the impressions received from it are not clear, but confused, and when attempting to describe it afterwards it is apt to exaggerate and make false statements concerning the matter, for its recollections are necessarily vague as its impressions were not well defined. This is perhaps the most noticeable defect in the child age, and is one that we should use every endeavour to correct. A boy eight years of age rushed home from school one day in a state of great excitement, and said to his father that there would be no school that day, as all the children were sick with the measles. When closely questioned he could only name five who were really ill. Unfortunately this trait is not confined to children,

for it seems almost impossible for most men and women to give accurate and truthful descriptions, especially if there be any personal interest at stake. One writer puts it in this very forcible way : "Habits of inattention, of mental indolence, of surface or random thinking, of inexact statement are the source of a widespread and insidious corruption of character." If a teacher succeeds in making a child see accurately so far as its observation goes, and then give an exact description, he has done that for the child which will be of incalculable benefit to it in after life. Before the child is prepared for formal scientific instruction it must possess some facts as a basis for reasoning, and it would not be far wrong to denote these five years as a Foundation Period—the time for amassing facts.

Just at this period so many new objects are crowding upon the child's attention, that its mind is somewhat bewildered in the attempt to deal with them all, that it would be unwise to present new ones for consideration. A few facts well observed are better than a multitude half comprehended. The every-day life of the child will afford abundant scope for work, and the objects most frequently met with should be the ones to which attention be first called. For example, let such a thing as a brick be taken. The idea of the three dimensions in space can be readily impressed by pursuing this method : Cut a slip of paper of the length of the thickness of the brick and let it be applied to ascertain the length and width of the brick. This process will start the mind in the fundamental method of physical science—when a phenomenon is first presented it is carefully observed, then accurate measurements are made. More than that, it will give the child the idea of the *unit*, and then by having a crayon box measured in the same manner, that units

may have different dimensions. Let it then observe the colour of the brick and notice what other objects have a similar colour, and in this way it will be enabled to form an abstract conception. So far it has been mainly detecting identities. Now have it compare the shape of the brick with a stone or pebble and note that their shapes differ, and in some way give the impression that the brick has an artificial shape or is moulded while the pebble is natural; here will arise discrimination. If all this be carefully done there is but little doubt that the child will retain it. In all such cases it is well to keep clearly in mind that education is designed to be largely disciplinary, leaving extended knowledge to be obtained in later years. Though the leading idea is to impart discipline, yet if the objects to be studied are carefully selected, a good deal of useful information may at the same time be imparted. When a child not trained in observation has grown to maturer years, it is apt to think that there are many objects which present themselves that are not worth the while to notice, they are too trifling. This is a deplorable and injurious habit which not only deprives the person of a great deal of useful knowledge, but is apt to be detrimental no matter what occupation be pursued. There are very few men who would think to stop and count the toes on a dog's paw, yet such information as this is doubtless valuable. Teach a child to notice these things—the number of toes on a dog and a cat, the number of legs on a fly—and both the habit formed of noticing details and the facts themselves will be worth acquiring. When animals and insects are studied, the child should be carefully taught to avoid the infliction of pain, to deprive unnecessarily a living thing of that which no human agency can restore. Let it be taught to have a real reverence

for that which possesses the wonderful and mysterious thing we call life.

Just here, too, is a lesson for older people. How few realize, even in a slight degree, what Clifford so beautifully expresses in "Seeing and Thinking,"—that "In every speck of dust that falls lie hid the laws of the universe; and there is not an hour which passes in which you do not hold the Infinite in your hands."

Again, simple objects may be assigned as models for drawings, and later on the object may be given for careful inspection, and then removed and a drawing made from memory. This will result in increased accuracy of observation and is moreover imparting a training in what may be of great service in later years.

When the pupil has become apt in observational studies of objects, the attention may be directed towards natural phenomena. The action of gravitation may be selected. The child will be familiar enough with the fact that a stone will fall to the earth when not supported. Now let it be given two objects, of similar material but of different weights. Let it release these at the same instant and note that they strike the floor at the same moment. Vary this experiment until the idea is clearly grasped that all bodies fall through a given distance in the same time. It may be advisable in some cases to introduce the conception of the resistance of the air to the free fall of bodies. This may be illustrated in various ways. A sheet of paper when folded will fall faster than when spread out.

Michael Faraday was one of the most successful teachers of science to children, and his methods are worthy of study. His lectures on Chemical History of the Candle are especially suggestive of what may be taught children as they were delivered to juvenile audiences. Some of the facts which he taught the children by

the use of such a simple thing as a candle were, that the chemical actions in the flame are analogous to those going on in our own bodies, giving us the power to move and to live, that the heat of the body is produced by the same process as in a stove, and that the presence of the air is as necessary to maintain the combustion of the candle as it is to preserve life. Then, too, it may easily be shown that smoke is but unconsumed material of the matter which is burning, and that it is due to an insufficient supply of air. This will make clear the office of the lamp chimney. Another important fact to impress is that water is one of the products of combustion of most substances. If the gas given off by a flame is passed into lime water this will become turbid. The same result will follow blowing the breath through this liquid. This will add weight to the resemblance between the human body in its vital processes and a flame of fire.

A good magnifying glass or simple microscope should be in every school, for by the aid of this instrument a whole world of wonderful things will be opened up to the child's eager gaze, where it can not only observe, but be instructed and delighted as well. After having done considerable observational work with grasses, flowers and trees, the pollen of flowers, the structure of stems and other parts of plants, will offer a wide field for inspection. After considerable skill is acquired in the use of the microscope, crystals of various sorts may be examined with profit. The pupil may even be enabled to watch them form. By placing a drop of saturated solution of ammonium chloride on a piece of glass, the crys-

tals will suddenly flash out, as if by magic, when the drop has sufficiently evaporated. Then if water crystals are subjected to an examination, their beautiful structure will reveal to the eye of the child the story of the formation of both ice and snow, and they will be no longer a mystery.

The endeavour has been in this rapid survey to point out only a few of the many ways in which the child may be led into the study of the mysteries of nature which environ every human life, and learn that reverence and love for them which lies at the foundation of all nobility of character. If the coming generation be trained from the first and thoroughly grounded in the study of the laws and facts of nature so that they will use every endeavour to utilize their environment to the utmost, its progress will be amazing even when contrasted with the marvellous advances of to-day.

It will now suffice to make the statement that all the training of the child should be in accord with the scientific method. Our subject expands into not merely what specific scientific training shall be given the children, but how their entire education shall be conducted on scientific principles. There should be no hiatus between the previous training of the child and the methods employed when it begins the formal study of the natural and physical sciences. The student should be made to realize that the habits of thought acquired in the pursuit of other subjects will still be of avail, and that they will stand them in good stead not only in the school room but in the conduct of all the affairs of after life.—*The Ohio Educational Monthly.*

ASSISTING CHILDREN IN SCHOOL.

BY SUPT. J. M. GREENWOOD, KANSAS CITY, MO.

THERE are two theories in regard to the function of government in relation to the citizen: (1) That as advocated by Mr. Herbert Spencer and others, who maintain that the individual should do the most possible for himself, and the government the least possible for him; (2) Those who advocate a strong "Uncle Government" which does all for the individual, or nearly all, and the individual does next to nothing for himself. Of course there are many intermediate opinions held between these two extremes. A middle position is undoubtedly the correct one; or at least it appears to accord more nearly with human experience.

These two extreme limits, if they stopped with the semi-futile efforts of government to make the individual strong or weak, as the case might be, are duplicated in the school room. Both extremes are dangerous. There are certain things the State cannot very well do.

For instance, the State should never go very far into the "Uncle or the Aunt Business" of rearing children. In other and stronger words, the State should never undertake to act as "nurse" in any capacity, even if "bottled goods are cheap." This duty belongs clearly to the parents, and if they be dead and there are no relatives or friends to care for the orphaned, then the State, municipality, or what-not, should provide a home as the statutes governing such cases direct. As a rebuttal to this proposition, it may be replied, and with considerable force too, that since some parents are unable to take care of their children properly, the public therefore owes it as a duty to itself to

house, clothe, feed, and educate such children.

But after making all reasonable allowance for laziness, poverty, misfortune under all its forms, the fact still remains that the public is "a poor step-mother" at best, and is only a substitute when all other agencies fail. The teacher's help is not very different from that performed by the government. If the teacher does all or nearly all for the child, the child becomes a mental weakling; and if nothing or next to nothing, then only the hardiest and most robust, mentally considered, survive the ordeal and come forth strong, vigorous, and independent. The more alert, being quick of comprehension, need direction in their studies rather than help. Just as there are different aptitudes of mind, so are there variations in the degree of assistance required by persons reared under equal or similar conditions. How much help a child actually needs depends upon circumstances. The judicious teacher must be the judge. Balky horses are made so because they are overloaded before they have acquired self-confidence. No horse will ever balk if he is not hitched to a load, while he is young, that he cannot pull. The skilful horseman first trains the young horse to the harness; next to draw light loads, increasing them in weight till the horse never refuses to pull his best and as often as he is called upon. It is a matter of judicious loading from first to last. Now, what is true of breaking a young horse to pull, is moreover true in regard to the training of children. The child that starts into school and is kept doing the best that he can do well, and never becomes enfeebled

and dependent owing to too much assistance from the teacher, or is assigned work that, when putting forth his most persistent effort, he finds it possible to do, will move steadily onward in all his studies, his powers expanding and increasing in strength with every new exertion he puts forth.

Positive assistance may be given to the child in many ways outside of book-work. For instance, the teacher may help the child in his personal appearance, general conduct, his treatment of others; on the side of duties and rights—politeness, truthfulness, in short, in all those things which make life in all its varied relations agreeable, pleasant, and beautiful. This phase I will not pursue at length, because to do so would be to write an elaborate treatise on ethics. In a short compass, it means to say and to do the kindest thing in the kindest way. It is far above Herbert Spencer's nebulous definition of justice.

If we take the little child when it first enters the schoolroom, it has nearly all the school ways to learn. The situation is not so very unlike that of a foreigner just landed in a strange country where the people, manners, laws, customs, and institutions, are all strange to him. He watches and waits for fear of making a wrong move—a false step. So it is with the little child thrown into new surroundings. On what is called the form side of the school, the child has nearly everything to learn. There are certain rules for moving individuals and classes; certain little rules of etiquette to be observed in passing before or behind another. Here, "Please excuse me" is the language of the "inner-circle." These conventional forms of school-life are soon picked up by the little child as preliminary to more substantial acquisitions.

It so happens that some children upon entering school have to learn everything from books, because they have not hitherto been taught at home. In such cases it is plainly the teacher's duty to help such into the ways of learning until the child can do some work under the guidance of the teacher, the latter not helping him too much.

The teacher may show the little learner how to do the thing the first time, but after that the teacher is simply a directive agent, unless the child is very unapt; then, it is the duty of the teacher to repeat the performance till it is permanently fixed in the child's mind. Much depends upon instructing the child properly at first. Let me illustrate this remark: Suppose little beginners are set to making the nine digits. They know the figures at sight. About half the children of a class will make the figures "2, 5, 7, and 4," backwards if they have "not caught on" to the how to make them. And the same is true in regard to the small and capital letters of the alphabet. All primary teachers have observed these peculiarities or variations in children's minds. What obtains in writing, is obviously true in other respects. Of course this is met on the other side by numerous illustrations brought forward from the Japanese themselves. Travellers from that country inform us that this wonderfully progressive people do everything almost directly the opposite of our way of doing it; yet this is not a valid reason for permitting children to do things as they choose or as fancy dictates. Then, in the mechanical or technical work, the child, unless he has picked up the knack of doing a thing in the right way, must be shown at first how and how not. Automatically, he acquires the habit of working. What required slow and painful effort at the beginning, rapidly develops into the mere mechanical

routine. After that, it is an act of the organism with little expenditure of nerve-force. This is sometimes stated in another way, "We learn to do by doing;" but the wit could very aptly retort that, "We learn to chew by chewing." That is, it expresses a half truth, and even this side requires a qualification. In teaching reading, the teacher must help to place high ideals of good reading before the children in all grades by reading well herself. By this I do not mean those high elocutionary flourishes which "split the groundlings ears," but a first-class article of good plain reading in which the ideas are clearly, elegantly, and smoothly expressed.

The child must get the conception of what good reading really is, before he can read well.

In regard to all language or grammar work, whether oral or written, the teacher must give the pattern or model for putting the work into good shape. The pupil's ideas may be very crude, and guidance is quite necessary. To do his best is the ideal which should stimulate the learner. A beautiful farm kept by an intelligent and artistic farmer helps the entire neighbourhood in which he lives; likewise, if one pupil only in a school does refined work, its general effect on the other pupils is marvelous.

In every study the teacher can be a help to the pupils in the manner I have indicated. But the teacher cannot study for the pupils. They are stimulated by their own energy to do this. The teacher studies to perfect herself how to direct those under her control. The inspiration, the stimulus must be transferred from her to her pupils, rather than to lift them over every hard place in their studies.

Down in the primary grades, the teacher is compelled to do much talking in order to get the children to talk a little; but as the pupils progress in their studies, the teacher ought to

talk less and less each year. To get at the children's ideas, not at the teacher's ideas, is true artistic teaching.

Again, the teacher can help the pupils in the assignment of lessons and in the preparation of lessons. To instruct pupils how to get a lesson, how to fix the points, how to apply them, and how to retain them in after life, are the most essential things within the entire range of the school curriculum. Here, again, it will be found that children work at the same thing very differently. Many work to their own disadvantage. The least expenditure of force to accomplish the result is a cardinal principle in vital economy. A suggestion or two, well placed, will be ordinarily all the pupil needs on any one particular topic. Time is well spent in all intermediate and upper grades in ascertaining how the pupils of any particular room prepare their lessons.

Yet with all that I have thus far said, cases will arise in which the teacher must go further than I have indicated. Points may be too hard or intricate for any member of a class to understand. What is to be done? By a little skilful questioning, the teacher can soon set limits to the class' entire knowledge of the subject under investigation. If a person has the measles, he does not need treatment for all blood diseases at once. He should be treated for measles, and not be filled with all the nostrums in an apothecary's shop. One difficulty at a time, and let it be thoroughly mastered, is the only long or short route that I am aware of in teaching and learning. A cancer is a spot in the human body "gone mad," and must be cut out root and branch; so knotty or hard patches in study must be treated in the same manner. If no pupil can clear the matter up, then the teacher may stand by and skilfully direct the operation.

However, our school-books are so

well graded and new matter is so gradually introduced, that the pupil of ordinary ability, with a very little help, will make steady headway in any subject after he has learned to read.

The proper spirit to cultivate in the pupils is that of rejecting help except self-help. The most stinging rebuke I ever heard passed by a pupil on a teacher was as follows: "Our teacher recited that lesson admirably. His grade should be about 98."

The teacher may also help the pupils to organize their knowledge of a subject into a "handle-able shape."

Knowledge thus becomes an instrument that can be used effectively.

De Quincey tells us that the Cambridge Problem was: "Given the Captain's name and the year of our Lord, to determine the Longitude of the ship." Teacher, study this problem. It means more than it says, and it says more than it looks. See its limitations; then make a right application to the work in hand. Poverty of help is not a heavy and grievous burden for the pupil; but too much help renders him poor indeed.—*School Journal*.

THE STORY OF THE HUDSON BAY COMPANY.

THE Hudson Bay Company's agents were not the first hunters and fur-traders in British America, ancient as was their foundation. The French, from the Canadas, preceded them no one knows how many years, though it is said that it was as early as 1627 that Louis XIII. chartered a company of the same sort and for the same aims as the English company. Whatever came of that corporation I do not know, but by the time the Englishmen established themselves on Hudson Bay, individual Frenchmen and half-breeds had penetrated the country still farther west. They were of hardy, adventurous stock, and they loved the free roving life of the trapper and hunter. Fitted out by the merchants of Canada, they would pursue the waterways which there cut up the wilderness in every direction, the canoes laden with goods to tempt the savages, and their guns or traps forming part of their burden. They would be gone the greater part of a year, and always returned with a store of furs to be converted into money, which was, in turn, dissipated in the cities with devil-may-care jollity.

These were the *courriers du bois*, and theirs was the stock from which came the *voyageurs* of the next era, and the half-breeds, who joined the service of the rival fur companies, and who, by-the-by, reddened the history of the North-West territories with the little bloodshed that mars it.

Charles II. of England was made to believe that wonders in the way of discovery and trade would result from a grant of the Hudson Bay territory to certain friends and petitioners. An experimental voyage was made with good results in 1668, and in 1672 the King granted the charter to what he styled "the Governor and Company of Adventurers of England trading into Hudson's Bay, one body corporate and politique, in deed and in name, really and fully forever, for Us, Our heirs, and Successors." It was indeed a royal and a wholesale charter, for the King declared, "We have given, granted and confirmed unto said Governor and Company sole trade and commerce of these Seas, Streights, Bays, Rivers, Lakes, Creeks and Sounds, in whatsoever latitude they shall be, that lie within the

Streights commonly called Hudson's, together with all the Lands, Countries, and Territories upon the coasts and confines of the Seas, etc., . . . not already actually possessed by or granted to any of our subjects, or possessed by the subjects of any other Christian Prince or State, with the fishing of all sorts of Fish, Whales, Sturgeons, and all other Royal Fishes . . . together with the Royalty of the Sea upon the Coasts within the limits aforesaid, and all Mines Royal, as well discovered as not discovered, of Gold, Silver, Gems, and Precious Stones, and that the said lands be henceforth reckoned and reputed as one of Our Plantations or Colonies in America called Rupert's Land." For this gift of an empire the corporation was to pay yearly to the King, his heirs and successors, two elks, and two black beavers whenever and as often as he, his heirs, or his successors "shall happen to enter into the said countries." The company was empowered to man ships of war, to create an armed force for security and defence, to make peace or war with any people that were not Christians, and to seize any British or other subject who traded in their territory. The King named his cousin, Prince Rupert, Duke of Cumberland, to be first Governor, and it was in his honour that the new territory got its name of Rupert's Land.

In the company were the Duke of Albermarle, Earl Craven, Lords Arlington and Ashley, and several knights and baronets, Sir Philip Carteret among them. There were also five esquires, or gentlemen, and John Portman, "citizen and goldsmith." They adopted the witty sentence, "*Pro pelle cutem*" (a skin for a skin) as their motto, and established as their coat of arms a fox sejant as the crest, and a shield showing four beavers in the quarters, and the cross of St. George, the whole upheld by two stags.

The "adventurers" quickly established forts on the shores of Hudson Bay, and began trading with the Indians, with such success that it was rumoured that they made from twenty-five to fifty per cent. profit every year. But they exhibited all of that timidity which capital is ever said to possess. They were nothing like as enterprising as the French *courriers du bois*. In a hundred years they were no deeper in the country than at first, excepting as they extended their little system of forts or "factories" up and down and on either side of Hudson and James Bays. In view of their profits, perhaps this lack of enterprise is not to be wondered at. On the other hand, their charter was given as a reward of the efforts they had made, and were to make, to find "the North-West passage to the Southern seas," and in this quest they made less of a trial than in the getting of furs; how much less we shall see. But the company had no lack of brave and hardy followers. At first the officers and men at the factories were nearly all from the Orkney Islands, and those islands remained until recent times the recruiting source of this service. This was because the Orkney men were inured to a rigorous climate, and to a diet largely composed of fish. They were subject to less of a change in the company's service than must have been endured by men from almost any part of England.

The attitude of the company toward discovery suggests a Dogberry at its head, bidding his servants to "comprehend" the North-West passage, but, should they fail, to thank God they were rid of a villain. In truth, they were traders pure and simple, and were making great profits with little trouble and expense.

They brought from England about £4,000 worth of powder, shot, fire-steels, flints, gun-worms, powder-horns, pistols, hatchets, sword-blades,

awl-blades, ice-chisels, files, kettles, fish-hooks, net lines, burning glasses, tobacco, brandy, goggles, gloves, hats, lace, needles, thread, thimbles, breeches, vermilion, worsted sashes, blankets, flannels, red feathers, buttons, beads, and "shirts, shoes, and stockens." They spent, in keeping up their posts and ships, about £15,000, and in return they brought to England castor, whale fins, whale oil, deer horns, goose quills, bed feathers, and skins—in all of a value of about £26,000 per annum. I have taken the average for several years in that period of the company's history, and it is in our money as if they spent \$90,000 and got back \$130,000, and this is their own showing under such circumstances as to make it the course of wisdom not to boast of their profits. They had three times trebled their stock and otherwise increased it, so that having been 10,500 shares at the outset, it was now 103,950 shares.

In 1867 all the colonies in Canada were confederated, and whatever presumptive rights the Hudson Bay Company got under Charles II.'s charter were vacated in consideration of a payment by Canada of \$1,500,000 cash, half of all surveyed lands within the fertile belt, and 50,000 acres surrounding the company's posts. It is estimated that the land grant amounts to seven millions of acres, worth twenty million dollars, exclusive of all town sites.

Thus we reach the present condition of the company, 230 years old, maintaining 200 central posts and unnumbered dependent ones, and trading in Labrador on the Atlantic; at Massett, on Queen Charlotte Island, in the Pacific; and deep within the Arctic Circle in the North. The company was newly capitalized not long ago with 100,000 shares at £20 (ten millions of dollars), but, in addition to its dividends, it has paid back

seven pounds in every twenty, reducing its capital to £1,300,000. The stock, however, is quoted at its original value. The supreme control of the company is vested in a governor, deputy governor, and five directors, elected by the stockholders in London. They delegated their powers to an executive resident in this country, who was until lately called the "Governor of Rupert's Land," but now is styled the chief commissioner, and is in absolute charge of the company and all its operations. His term of office is unlimited. The present incumbent is Mr. J. Wrigley, and the president is Sir Donald A. Smith, one of the foremost spirits in Canada, who worked his way up from clerkship in the company. The business of the company is managed on the outfit system, the most oldfogyish, yet by its officers declared to be the most perfect plan in use by any corporation. The method is to charge against each post all the supplies that are sent to it between June 1st and June 1st each year, and then to set against this the product of each post in furs and in cash received. It used to take seven years to arrive at the figures for a given year, but, owing to improved means of transportation, this is now done in two years.

Almost wherever you go in the newly settled parts of the Hudson Bay territory you will find at least one free trader's shop set up in rivalry with the old company's post. These are sometimes mere storehouses for the furs, and sometimes they look like, and are partly, general country stores. There can be no doubt that this rivalry is very detrimental to the fur trade from the standpoint of the future. The great company can afford to miss a dividend, and can lose at some points while gaining at others, but the free traders must profit in every district. The consequence is such a reckless destruction of game

that the plan adopted by us for our seal-fisheries—the leasehold system—is envied and advocated in Canada. A greater proportion of trapping and an utter unconcern for the destruction of the game at all ages are now ravishing the wilderness. Many districts return as many furs as they ever yielded, but the quantity is kept up at a fearful cost by the extermination of the game. On the other hand, the fortified wall of posts that opposed the development of Canada, and sent the surplus population of Europe to the United States, is rid of its palisades and field pieces, and the main strongholds of the ancient company and its rivals have become cities. The old fort at Vancouver Island is now Vic-

toria; Fort Edmonton is the seat of law and commerce in the Peace River region; old Fort William has seen Port Arthur rise by its side; Fort Garry is Winnipeg; Calgary, the chief city of Alberta, is on the site of another fort; and Sault Ste. Marie was once a North-West post.

But civilization is still so far off from most of the “factories,” as the company’s posts are called, that the day when they shall become cities is in no man’s thought or ken. And the communication between the centres and outposts is, like the life of the traders, more nearly like what it was in the old, old days than most of my readers would imagine. — *Harper’s Magazine.*

THE LITERATURE OF EDUCATION.

BY ELLEN FITZGERALD, BLOOMINGTON, ILLINOIS.

THE literature of education presents an interesting study for any engaged in the work of education, and forms an important part of the great world of letters. As there are classics of poetry, of history and of art, so are there classics of education. To look at the list of philosophers, poets and essayists who have contributed to this literature, we cannot but be struck with the variety and scope, the depth and richness of this important field of study. We have the lofty idealism of Plato and the cool rationalism of Herbert Spencer. A wild, unreasoning revolutionist like Rousseau, and a philosophic, clear-sighted poet like Goethe have each formulated pedagogic Utopias. The Germans are especially noted for this sort of writing, and, beside Goethe, Richter, Rosenkranz, Pestalozzi and Froebel have written monumental books upon this subject. Men of reli-

gion, too, have made investigations in this realm of thought, and St. Jerome, Fenelon, Duponloup, Newman and Rosmini are high authorities. The best literary work women have done outside of fiction has been along the line of educational thought, and Mme. Necker de Saussure and Mme. Guizot have uttered words of such weight as to compel the deference of as great a thinker as Rosmini.

The most valued thought of these later years has been purely educational. The Sartor of Carlyle is the most noted and contains some of the pithiest and most suggestive utterances ever made upon this vital matter.

And who would not be willing to read as voluminous a work as Carlyle’s “Frederick the Great,” apart from its value as a history, for an apparently accidental thought like this: “Frederick William did not set up for a

Pestalozzi, but as a schoolmaster I much prefer him to many we have in our day; for he had learned in his dumb way that education is not a thing of vocables, but a thing of earnest facts, of capabilities developed, habits established and tendencies repressed; it is the laborious separation of the character into two elements—the one well down and deep, and earth and air and water under it, and then your boundless realms of ether above his head. It is to make of the human mind a cosmos and not a chaos, and above all it is the getting of a man to do something and to do it according to the laws of God and his universe, which is only another way of doing, and not pretending to do anything."

The most lasting of Emerson's thoughts have an educational trend, and are full of that liberal and enlightened spirit that is in itself educating.

Matthew Arnold confesses that the chief influences in his education were Carlyle, Emerson and Newman. He is a worthy disciple of these masters, and no other man of recent years had a broader grasp upon the principles and means of general education. The persistent energy with which he protested against the prejudices and narrow mental habits of his countrymen, the light in which he set forth every possible means of culture, and the thoroughly critical but tolerant spirit manifested toward all systems, made him a greater schoolmaster to his generation than his father, Dr. Arnold, of Rugby, had been to the preceding one. Akin to the essays of Matthew Arnold in which he puts forth his plea for sweetness and light, is a recent publication of Bishop Spaulding's, called "Education and the Higher Life," a noble and inspiring exposition of the worth of life and the relation of education to its completest development.

A list of educational writers would be incomplete without Ruskin, and he ranks easily with the great modern educators. Browning's poetry will be read for the pregnant thoughts concerning education that are interspersed throughout his writings, rather than for their deep poetic power. "The mind receives only what it holds," "I hold life's just a stuff to try the soul's strength on—to educe the man," "Know not for knowing's sake, but to be a star to men forever," "Why stay we on the earth if not to grow?" are words apt to stick in the mind and make us feel the necessity of personal work in education. In fact, when we consider the vast range of matter comprehended in that which we call educational literature, it is amazing to think of the indifference teachers manifest toward it. We are constantly urged to professional study, and feel that our duty is discharged when we keep abreast of current educational topics or have mastered the latest methods for presenting the subjects outlined in our text-books. Details of any sort are narrowing, and school teaching, despite its vital character, is no exception; and it is to give our minds breadth, freedom and energy that we should apply ourselves to the acquisition of the noblest thoughts of the noblest minds. It is the glory of our profession that it calls into action the highest qualities of mind and character and what more pertinent duty than to keep in touch with the thought of its noblest devotees. To catch the spirit of the great teachers, to become imbued with the high ideals for which they laboured, and above all to grasp the principles that underlie education as a science and as an art, should be the aim of every teacher. Goethe hints that one is forced to learn when obliged to teach, and says further that nothing is more frightful than a teacher who knows only what his

pupils are expected to know. A teacher must suppress the best he knows, but he must not be half-instructed. Working along the narrow lines of education as most of us are, we are apt to neglect that vigorous study that uplifts and awakens enthusiasm. Perpetual reaching down to immature minds may have the effect that it had upon Diderot, who, when he gave up teaching, gave as an excuse that while he was making men and women of his pupils, he was making a child of himself. Professional study, to be worthy of the

name, must include the science, history and art of education, and these are only arrived at through its literature. And whether we begin with a work like the "Evolution of Dodd," which puts forth the merits of a particular case, and work toward the "Republic of Plato," or begin with "Plato" in which universal conditions of education are treated in the noblest forms of classic language, and work toward the individual child, the result can only be for the student a higher enthusiasm and a deeper love for his calling.

THE DIFFERENCE BETWEEN PROSE AND POETRY.

BY W. H. MALLOCK.

WHAT is poetry as contradistinguished from prose? Coleridge answered the question in a way well worth quoting. He said that ideal prose was "the right words in the right place," but that ideal poetry was "the best words in the best place." I call this criticism worth quoting, not because it is true, but because it is typical of the manner in which critics have generally approached the subject. They have approached it from the outside. They have treated it as being primarily a question of form; or at all events it has been through an examination of differences in form that they have sought to discover and classify the difference in substance. And form no doubt has a great deal to do with the matter. Verse, and the diction proper to verse, is no mere accident of poetry. There is between the two some natural and organic connection; and in many cases they are practically so inseparable, that the way to the understanding of the latter seems obviously to be an analysis of the former.

The principles, however, which are

arrived at by this method have always landed critics in doubts, difficulties and contradictions. They have led to endless controversies over various writers of verse as to whether they are or whether they are not poets—the case of Pope is an instance—and whatever conclusions a critic may draw from them in one case, he is embarrassed by finding that he cannot apply them in the same way to another. Ordinary speech, or what, when written, we call prose, is capable of expressing, to a certain extent, man's thoughts or feelings with regard to every subject, from love or prayer to the properties of a rhomboid or a triangle. The first and most obvious difference between the language of prose and that of poetry is, that while the former is suitable to every subject, the latter is suitable to some only and not to others. It is not suitable, for instance (unless it be used in jest), to a mathematical demonstration, or a treatise on the Greek particle. Of such subjects it is needless to attempt a list, but it is easy to group them under one com-

mon definition. They are all of them subjects that lie beyond the sphere of emotion. If, however, we put these subjects aside, the domain of poetry is, so far as subjects are concerned, co-extensive with that of prose; and it will be seen that men have recourse to this exceptional form of language, not in order that they may deal with exceptional subjects, but with ordinary subjects regarded in an exceptional way. The language of prose, then, and the language of poetry, defined in terms of their uses, differ from each other thus: Prose is the language men use when expressing themselves without emotion, or with emotion which is slight or intermittent; poetry is the language they use under emotion which is exceptional and sustained. Poetry, in short, is in its essence this: it is the successful representation of life, as regarded with sustained emotion.

The more we consider this definition, the more complete and universal shall we see its application to be, and certain objections which will no doubt at once suggest themselves will really be found to illustrate and prove its soundness. The objections I refer to are these: it may be said with perfect truth, and with considerable force, that in any long poem there are sure to be many parts where no more emotion is discernible than might easily be expressed in prose; and with far more force, and with equal truth it may be said, that there are certain parts of many prose compositions—great novels, for instance—in which life is exhibited to us through the medium of an emotion as intense as any that is discoverable in poetry. This does not, however, show that the line between prose and poetry is not to be drawn in the way I have just drawn it. It shows—what is a very different thing—that, distinct in themselves as the two are, yet they are in practice constantly mixed to-

gether, so that if we estimate various passages separately, great prose works will comprise parts which are essentially poetry, and great poems, parts which are essentially prose.

Between different types of men, and between their different moods, faculties and dispositions, the differences, however great, are never sharp. They melt into each other at their confines as night melts into day or cold into heat; and when we define them, the limits which we draw in words can never rightly be sharper than the limits which exist in fact. Now there is nothing to which these remarks apply more obviously than they do to emotion; and I have said that poetry essentially differs from prose, on account of the emotion with regard to the subjects treated of, which is expressed by the one and not expressed by the other. If, however, we examine the characters of actual men and women, we shall find that emotion is completely wanting in none. The most prosaic of them, in contemplating human life never do so with continued and complete apathy. The spectacle constantly affects them to some slight degree, and sometimes, even if rarely, it is sure to affect them deeply. And again, on the other hand, those whose natures are most emotional find it much that does not affect them at all. Their critical faculties may be excited, but their emotions are untouched. In fact, if we use the words without reference to literary expression, poetry, just like prose, enters into the composition of every one. We call some natures poetical, and some natures not poetical; but the difference between them is one of degree only. It is not that the prosaic man has no poetry in him, or the poetic man no prose. It is merely a question of which element predominates; and in many cases it is difficult to tell which.—*Fortnightly Review.*

VOICE IN THE SCHOOLROOM.

BY ELIZABETH JARRETT, NEW YORK CITY.

IT is very probable that some children are more susceptible to the influence of harsh tone than others, yet there are few, I think, upon whom different tones have no effect. We all know the soothing or irritating effect which the voice of this or that pulpit orator will have on us, old as we are, and capable, presumably, of self control,—how the full, rich, round, yet unforced voice of the one will reach us and compose our minds to thought as we sit tired, almost too tired, with the week's work to give our mind to the subject of his discourse, while the voice of another will, in common parlance, give us "the fidgets," so noisy is it, so harsh and penetrating, concentrating all attention on the preacher rather than on the thought preached. Voice is, in a measure, like type, a medium for conveying thought, and though capable of conveying by its changeful tones far more than the printed word, it still should aim primarily at giving *the* thought. It should be a clear means to this end and not a hindrance. What should we think of the value of the contents of a work printed in such style that we are obliged first to decipher the very words? What, on the other hand, is the value of a thought coming through the medium of a harsh, uninteresting voice?

The voice of the teacher in the school-room is, as a rule, pitched too high. I can remember, though it is years since I have seen her or heard her voice, the shrill, high tones of one to whom, as children, we were obliged to listen day after day, week after week. Never a moment's respite from those all-pursuing tones. It

took us weeks to grow accustomed to it, and I have no doubt that to many of the children of that class, now grown and themselves teachers, the memory of that voice has outlived and overshadowed all recollection of the many very excellent qualities of that particular teacher. Voices often can be more easily recalled than the lineaments of a face, showing, it would seem, that the effect of voice is very enduring.

In direct contrast with the preceding was the voice of our next teacher. So quiet was she that for the first weeks we had a new lesson to acquire, namely, how to listen and hear. We were so accustomed to having orders and even facts shouted into our ears that we knew, noisy or quiet, we should eventually hear them. In those first few weeks our new teacher would answer our plea that we didn't hear, with "But I am speaking now no louder than a moment ago, and you hear me now, do you not? It must be that the fault lies in you. I *can* speak louder, of course, but if I do my throat will grow sore, and you know how cross a person with a sore throat can be." She has since told me what was indeed evident, that she found her ability to discipline and to hold the attention of the class improve tenfold under the influence of a quiet tone. Having begun with the perhaps unconscious but none the less disastrous notion that one's voice in the school room must necessarily be loud, she had come to perceive quite the contrary. As she had hinted to the children, constant sore throat had taught her the value, first to herself, then to the children, of more quiet tones.

While the effect on the children is, of course, the primary point to be considered, the effect on the teacher is, as just shown, debilitating. Nervous exhaustion is pretty sure to be the final outcome of this constant high tension, for a voice is a pretty safe index as to the condition of things in general. Note the querulous tone of chronic invalidism, as compared with the full, ringing voice of superabundant animal spirits, and the many shades between. It is curious to note the sudden change of key when, her charges disposed of, the weary teacher enters the dressing-room and greets her fellow-teachers in her ordinarily quiet, lady like tone. Yet it would be difficult to convince her that the same tone would answer, nay, more than answer, almost all the requirements of the class-room. Instruction, direction, reproof, praise can all be given with little if any variations in the pitch of a voice, certain differences in inflection being all the modification necessary. Reproof, especially, should never be administered in that sharp, high tone so often heard, a tone antagonistic in itself to a proper receptive attitude on the child's part, and far more likely to arouse a rebellious feeling.

It is always instructive to go through half a dozen or more class-rooms in a public school, merely noticing this one point. You will almost invariably find, as I have, that the quiet class is the one under the influence of the quiet voice, while with the higher key of the noisy teacher there exists a corresponding "undertone" of noisiness, so to speak, in the class. Necessarily so. The very noise of the teacher will shield the slight whispers of the children.

We used to recite frequently in concert for one of our teachers, who would stop us again and again, saying, "When you shout in that style you are not, you cannot be, thinking. All

your power is in your lungs and your brain is empty. Keep a little reserve power in your brains; your lungs are, as a class, quite powerful enough. Recite that again and put thought into your voices as you recite." Perhaps there was more of force than of truth in her appeal, yet nothing so effectually lowered the tones of our youthful voices as the effort to think as we recited. At the same time we learned to regard thought processes as quiet processes.

"You cannot deceive yourselves or me," the same teacher would remark. "You are old enough to observe that when one is really thinking one usually speaks in a quiet, slow, earnest voice. The noisy shouter has seldom the best things to say; if the thought is good oftentimes the sound drowns it. I heard a little child once say of a clergyman, 'He speaks so loud I cannot hear.' The angry person shouts, but we pay little attention to his words; his voice is the main thing we hear. The quiet person convinces." And she, being an embodiment of her own argument, convinced us.

A rather negative reason for an ordinarily quiet voice is the greater effect, which comes with the occasional need for louder, stronger, though not necessarily higher, tones. I remember once seeing our usually quiet teacher in a fit of righteous indignation, and it had a great effect upon the class. She had left us for a short time with a young girl as her substitute, to learn some lines from "Sir Launfal." She had herself analyzed the beauties of the poem with us, which left us no excuse for our misbehaviour. Not dreaming that she was near at hand, we shouted out the beautiful lines in hard, noisy tones far removed from the thoughtful, appreciative expression she so loved. In the midst of our shouting our teacher appeared at the doorway. We grew suddenly very quiet. In her usual

voice she asked the young lady to lay aside the book, and then she laid before us the fault of which we had been guilty in thus dishonouring the best thoughts of a noble writer. As her indignation waxed stronger, so did her voice, until it rang through the room and every word told. Though scarcely realizing then the

position she took, we did realize another important fact, namely, that she was very indignant, and nothing showed it so much as the changed voice. She had been vexed, exceedingly vexed, with us before, but never after this wise, and few of us, I think, have ever forgotten that lesson.—
Popular Educator.

CO-EDUCATION.

THE sentiment of the day demands the highest educational opportunities for women, and co-education is the only road that now leads to this goal. But that this road is one hedged in with difficulties, or that a pleasanter and a safer path might be opened to women, no observant man or woman can deny. The mistake made by the ardent advocates of co-education is in the stress they lay upon this very word. When the system was only a theory the word was used only in the sense of equal education, which the woman, who was barred out from the man's college, could not obtain. Co education was merely a means to an end, and that end was the higher education of women. To-day the word has taken on a sentimental meaning of its own, a suggestion of chivalric protection and recognition, a promise that the ladder of knowledge shall be climbed hand in hand.

Co-education is a noble theory, and in abstract practice has produced splendid results. But it has a very human side. Romance is inevitably bred wherever young men and women come into close association, and when the little winged god comes in the window study flies out. The co-educational system will exist so long as it is needed, and no longer. It has already accomplished its best and greatest work in elevating the stand-

ard of female education. The shallow training of the old-time boarding school and seminary is fast disappearing. Antiquated female colleges are expanding their scope; new ones are coming to the fore. There was a time when we had not education enough to go around. Now it is different. No better illustration of the present situation could be found than in California, where twenty years ago there were but a few academic schools for boys and a private school or two, only a little in advance of kindergartens, for girls. To-day there are two great universities. One of these is nominally in possession of a rich endowment, and with more brilliant prospects than the other. The older institution offsets the pecuniary advantages of its rival with a well-stored library and museum and a faculty which is an admirably organized body, with most efficient members, lacking only a head. Who can doubt that these two schools, so well equipped and liberally endowed, would do better work if under the roof of one were gathered all the male students, and the other opened its doors exclusively to women?

In Wellesley and Vassar, and even in some minor female colleges, women are taking splendid rank among the foremost intellects of the day, and it is safe to say that this standard is achieved with less heart burning and

disquietude than in the co-educational university, while the students preserve a sweet womanly innocence that is difficult of preservation when the girl student is thrown into close daily association with men. The girl who is in constant rivalry with a male student in the classroom, who disputes his theories in mental philosophy, where opinions ever clash and independent reasoning overturns the logic of the text books; who scores a victory over him in Thucydides and meets humiliating defeat in Conic Sections and is routed in Calculus—may be a very nice, genial little comrade and worthy of the highest respect, but something of the delicate bloom of womanhood is lost in the enforced familiarity.

To those who are puzzling over the wisdom of the co-educational plan, and honestly desire to reconcile the best ethical and mental influences for their daughters, there is a solution in the near future. Women who have themselves enjoyed the benefits of a higher education will insist upon equal advantages for their daughters. Yet a majority of mothers will un-

hesitatingly say that if equal opportunities were available in schools for girls alone they would prefer to send their daughters to them, and many single women of culture cleave to this old-fashioned idea. By means of their advanced education women all over the country are taking high positions in the professions and even in commercial ranks. Independent fortunes, of their own making, are coming into their hands. There is no one so loyal to her sex, so ambitious for its future distinction, as the educated woman. The day is near when cultured women, with the wealth they have earned, will make a splendid and concerted movement for the establishment of a great university for women second to none in the land. When one is established others will follow, and ambitious girls in all parts of the Union will have the opportunity offered them of acquiring knowledge and a sound mental training without violating their own delicate instincts or the pleasant traditions of girlhood. Until then, they must run the gauntlet of the perplexities and temptations of the co-educational university.—*Ex.*

NOTES FOR TEACHERS.

WATCH CRYSTALS.—To get the proper curvature for watch crystals, a sphere of glass about one yard in diameter is first blown, and from this the discs are cut by means of a pair of compasses tipped with diamonds.

THOSE OBSCURE VIRTUES.—The ideal Principal of a Training College will strive "to preserve from banishment those obscure virtues that our civilization, given up to restless activity and violent competition, is inclined to forget, to the great detriment of the nobility of the soul—humility,

sympathy, contentedness, patience, resignation, and converse with the things of Eternity, outside of which the things of life, and life itself, lose their value."—*M. Pécaut.*

DOVE COTTAGE.—The attempt to make Dove Cottage a memorial of Wordsworth has met with success. It is estimated that \$200 will be secured from entrance fees each year, and that the expenses will be only \$125. Between July 27, 1891, and May 23, 1892, there were 753 visitors, and it is predicted that double this

number will come when the fact that the cottage is open to the public becomes generally known.—*New York Critic*.

ARNOLD OF RUGBY.—A meeting was held in the school dining-hall, adjoining the cloisters of Westminster Abbey, on Tuesday, June 13th, to make arrangements for the erection of a monument in the Abbey to the late Dr. Arnold, the famous headmaster of Rugby. In a memorial to the Dean of Westminster, asking for his consideration of a proposal to place in the Abbey some memorial to Dr. Arnold, it was said:—"The 12th of June, 1892, will be the fiftieth anniversary of his death, and the lapse of half a century, so far from obliterating his work, has only tended to bring it more and more into clear and full relief. All who value the influence of our public schools on the national life will now agree that the great change in education which has so profoundly and beneficially affected the character of the present time, has been in no small measure due to his example and leading; and all competent judges acknowledge his great gifts as an his-

torian, whilst the influence of his Christian teaching, spirit and character is felt throughout the whole community of educated men among every English-speaking people." The signatures to this memorial were headed by that of the Archbishop of Canterbury. In his reply, Dean Bradley acceded to the request. He added:—"Scanty and steadily decreasing as is the space left for monuments of any kind within the Abbey, there is one site yet unoccupied which seems to me singularly appropriate to the purpose which those who have addressed me have in view. It is in the vacant arch of the wall arcading in the Baptistry, next to that in which is placed the bust of John Keble, and in the immediate vicinity of Wordsworth's seated statute. I need not dwell on the impressive fitness of such a spot, facing as it does the bust of his gifted son, for a memorial to Thomas Arnold." A committee was formed for the purpose of raising funds, conferring with the Dean, and taking steps for the erection of a monument; and it was resolved that the monument shall consist of a seated figure, bust, or medallion in high relief.

GEOGRAPHY.

DRAINING THE ZUYDER ZEE.—The question of draining the Zuyder Zee has for some time been occupying public attention in Holland, and a report on the subject, issued by the Zuyder Zee Commission, has just been published. The Commission, which has carefully considered the possibility of reclaiming the provinces encroached upon by the sea in former centuries, recommends that the Zuyder Zee should be cut off from the North Sea as far as, and including, the

island of Wieringen. After this the isolated part should be dyked into four divisions, and each division should then be drained off and filled up. The whole level should be that of the island of Wieringen.

THE KEWEENAW COPPER DEPOSITS.—A peninsula called Keweenaw Point, jutting into Lake Superior, is famous as the centre of a vast copper mining industry. Last year the

mines produced no less than 105,586,000 lbs. of refined copper. These mines are very ancient, and, judging from their extent, must have been worked for centuries. Who the workers were, no one can tell. They seem to have known nothing of the smelting of copper, for there are no traces of molten copper. What they sought were pieces that could be fashioned by cold hammering into useful articles and ornaments. They understood the use of fire in softening the rocks to enable them to break away the rock from the masses of copper. They could not drill, but used the stone hammer freely. More than ten cart-loads of stone hammers were found in the neighbourhood of the Minnesota mine. In one place the excavation was about fifty feet deep, and at the bottom were found timbers forming a scaffolding, and a large sheet of copper was discovered there. In another place, in one of the old pits, was found a mass of copper ore weighing forty-six tons.—*The School Newspaper.*

ROADS.—It is a historic fact with geographic significance, that the Teutish or Teutonic family of the Aryan race are not road-makers. Saxon, Dane, Jute and Angle were all equally indifferent to the quality of roads, and there was never anything better than a mud trail in Britain, until Roman legions built the first English roads. Of all nations and peoples the Romans were the best road-builders. In this work they had no peers in the wide world, and the military roads with which they gridironed all western and southern Europe are, after 2,000 years of service, the best roads in existence. We recall many a delightful ten and twenty mile jaunt in and about the Appenines over these old Roman highways. Magnificent roads they are, too. Their heavy rock foundations are laid on graded ways,

scarcely steeper than an American transmontane railway. The filling and grouting of their beds was even more carefully done than is done today in our best municipal streets, and in some of them the sides were guarded by copings of cut stone. Were they not enormously expensive, does some reader ask? Certainly they were. But it is doubtful if, in the course of twenty centuries, they represent such an outlay of money, as do our country roads in a period of a hundred years. And more than once were those same roads the salvation of the empire, when the legions went flying over them to repel an invading enemy. Indeed, it is safe to say that Rome would never have held her northern boundary almost unbroken for 1,000 years had not these roads been built; it is doubtful if she would have held any territory north of the Alps.—*Goldthwaite's Geographical Magazine.*

THE ENGINEERING FEAT AT NIAGARA.—Among the greatest enterprises in modern times is the attempt to harness the water power of Niagara to the wheels of industry. Few people are aware of the stupendous and difficult nature of this undertaking, or of the issues involved in its proposed accomplishment. The horse-power developed at the falls is said to be equal to all the steam power at present used in the world, and a practical appropriation of but a marginal fraction of this power will distribute its motor power over immense areas and to remote distances. The project, as so far satisfactorily carried out, includes the digging of a canal 1,500 feet long, at right angles to the river, at something more than a mile above the falls. A vertical shaft 140 feet deep is being sunk, and from the lower level a tunnel, 23 feet high, 18 feet wide, and 6,700 feet long, has been carried at a slope of 7 feet per

1,000 to debouch at the foot of the bluffs below the falls. This tunnel is being lined with four courses of bricks, the work progressing at the rate of 100,000 bricks per day. Hydraulic problems have been dealt with by leading engineers, both home and foreign, and the electric part of the work has been laid out by the best of experts and practical men. Part of the power is to be used in factories built directly over shafts, and also on land owned by the company, which has a perpetual right to use this power over five miles of river frontage. Railways will connect with the system of factories, the power of one being furnished by an electric locomotive. Thirty acres of land have been reclaimed from the river, and a project formulated of deepening the stream alongside the company's wharves.

The right of making a second tunnel under the falls has been secured by the franchises of property owners. All these phases of a stupendous enterprise simply antedate the founding of a manufacturing city or centre, of which some of the streets are already laid out. On the Canadian side an exclusive right to use land in Victoria park has been secured for one hundred years, by which a branch of the river going around Cedar island can carry sufficient water to utilize 250,000 horse-power, while the tunnel from the bottom of the shaft to the base of the fall will not exceed 800 feet in length. The plans, so far as carried out, have operated at a surprisingly low cost, while the energy and foresight of the directors have insured a steady and continuous progress.—*St. Louis Age of Steel.*

PUBLIC OPINION.

PATRIOTISM IN THE SCHOOLS.—A hotbed of patriotism, indeed, every school should be. In the schools the children should learn of the struggles by which the nation has reached its present freedom and greatness as well as of the evils yet to be conquered. Intelligent love of country is the safeguard of our institutions. Without it the nation must drift into the hands of demagogues and political charlatans and eventually be wrecked. The best anchor against such a calamity is the inculcation of broad and discriminating patriotism by our common schools. Every child is naturally patriotic. He finds inspiration in the flag and music of his native land, and this instinct should be trained and directed by the teachers in the way that will make each boy and girl a citizen worthy of their duties, opportunities and responsibilities.—*Cleveland Leader.*

THERE is a constantly-recurring phenomenon connected with education which at first sight seems very difficult to account for. It is presented in the cases of men who have been privileged to use the best academical aids which their age has produced, who have subsequently risen to positions of influence and fame, and who then have denounced the processes and means of education to which they were subjected in their youth as useless or even harmful. In many of these cases the men complaining have started without the advantages of birth or fortune, and have risen by the force of their own abilities assisted by the educational discipline which they were so fortunate as to secure. How is it that they subsequently attributed their success solely to their own unaided genius triumphing over the impediments of a defective system of education? It may be

in part from a desire to exalt the achievements of genius, but it is in great part due to another cause. Examples of these phenomena are very numerous, and as their words are often quoted they will easily be recalled. We do not refer to the many great masters in literature and eloquence who gained their power and accomplished their work without the aid of scholastic institutions—such as Shakespeare, Pope, Burns, Scott, Franklin, Keats, Dickens—but to critical and dissatisfied recipients of that aid, such as Milton, Locke, Wordsworth, Gibbon, Carlyle, Adam Smith, Thackeray, Darwin, Heine, Lord Sherbrooke; though we are not sure that, with the exception of the first, any of these were sufficiently educational experts to be able to point out the real cause of their dissatisfaction. There is, of course, an equal array of eminent men who have freely acknowledged their indebtedness to the school and college. "If I am anything," said Burke, "it is the education I had there has made me so." Mr. Balfour at Glasgow made similar acknowledgments. But the revolt of individual genius from the ideas and methods embodied in the education which has helped to develop it, is so frequent that it becomes natural to seek a cause. It does not follow that, because the work of a great man seems, to him self or to others, to have been uninfluenced by his early education, that it really was so. We sometimes forget the source of impulses that have been of great consequence to us, and it is not difficult to show, in the case of some distinguished critics of the educational system, that their obligations to it are much greater than they suppose. We must not allow too great a weight to the fact that so many distinguished names can be cited in criticism of methods of education. Such critics are often unfair as to matters of fact, and withhold

acknowledgments that ought to be rendered. The patient is not necessarily the best judge of the medical treatment to which he has been subjected, and similarly the pupil is rarely fully conscious of the dependence of his mental development on the educational methods which are applied to him. This is the explanation of the phenomenon to which we refer.—*Educational Times.*

TOO MANY STUDIES.—The pupils in public schools just now are busily engaged in being ground or crammed for the mid-summer examinations, and the work done is what is called going over, reviewing and repeating the lessons that have been learned in the past. In this respect our public school system is regarded by many as a failure. There are too many examinations, and too many subjects taught to make a child proficient in any of them. The time allotted to common school education is so short that at the best only a comparatively small field can be covered adequately. But the majority of pupils have even that brief time more or less shortened by necessity. With them the time is so short that if more than a very little is undertaken nothing is learned well. This fact is not sufficiently recognized in our graded system. The assumption is too general that each pupil will go through the whole forms or classes. Beginnings are made in too many things, and if the course is cut short these beginnings leave the pupil with little to show for his work, and if he leaves school, the pupil has confused ideas of everything, and knows nothing perfectly. The key to all knowledge is the ability to read intelligently. In view of the facts of life among the pupils, the first care should be to teach that art and its handmaid, writing, as thoroughly as possible in the briefest time, so that if the pupil's school course is cut short he will at

least carry away with him the instruments of self-education. Yet, as a matter of observed fact, neither reading nor writing is well taught in the lower grades of our schools, and, indeed, both are very imperfectly taught even in the higher grades. In order to learn to read fluently and understandingly one must read much. The pupils in our schools read nothing—as a rule—but fixed lessons of brief extent (and are sometimes kept two weeks and a month on one lesson), the greater part of the time being given to other things. As a result, they read badly in the lower grades, and often even when they pass for the High School. With writing the case is still worse. No person can learn to write easily, rapidly and legibly with character in the result except by much and continuous practice. The schools ought to give such practice, as a few private schools do. Instead, they set the boys and girls the task of laboriously imitating an engraved copy or a blackboard lesson for a certain time each day, and when their schooling is over the best they can do as a rule is painfully to draw an uncertain imitation of their copies as they remember them. They have no facility in writing and there is neither character nor dignity in what they do. In the teaching of

English grammar the fault is still greater, and of one hundred pupils taken from our public schools not ten can or do speak correctly. It should be the care of the schools to teach their pupils to speak and write English with propriety. This is really the sole aim of grammar. But they teach nothing of the kind to the great majority. They muddle their brains with an attempt to make a philosophical analysis of the language—a task in which no one can properly engage till after he has learned the language. The result is profitless, the time mispent. Every merchant, banker or other person who employs boys in his business knows from experience that the boys who come to him from the public schools bring very little to his service beyond more or less limber legs, with such natural shrewdness as they chance to possess. Their education has not fitted them in any valuable degree for work. In too many cases they cannot read well, write well or speak correctly. In fact there is a general lack of proficiency and thoroughness in the three Rs, especially in the reading and writing part. This is the natural result of the system which aims at cramming too many studies in too short a space of time.—*The Free Press* (London).

ASTRONOMICAL NOTES—SEPTEMBER-OCTOBER.

BY THOMAS LINDSAY.

THE very great interest taken in the study of Mars will probably now be somewhat abated, as the planet rapidly increases its distance from the earth and the tiny moons become invisible. We have not heard of their being seen in any telescope mounted in Canada, although we have some instruments which theoretically ought to reveal them.

Deimos, the outer and fainter of the two, is about equal in brightness to a star of magnitude $13\frac{1}{2}$. The relations of aperture to light gathering power in stellar observations is expressed by the formula

$$\log a = \frac{m}{5} - 1.802$$

where a is the aperture in inches and

m in magnitude, and it will be found that according to theory Deimos is just within the range of a perfect objective of 8 in. aperture, under the most favourable conditions for observing.

The brilliant Jupiter will now claim most of the observer's attention as he gradually approaches opposition, rising at sunset and attaining a good altitude for observation. The perihelion was passed in July and the disk now has an angular diameter of 46", more than twice that of Mars. The retrograde motion of Jupiter is quite noticeable, there being many small stars in his neighbourhood, and the relative position from night to night may be easily observed in even a small telescope. The evening of Sept. 15th and early morning of 16th will afford most excellent opportunities to observers who wish to note the phenomena presented by the giant planet's satellites. The transits of I. and II. and their shadows will be all visible in Ontario. On Oct. 8th also the transits, etc., of I. II. and III. may be all observed here.

The interest taken in astronomy at the present day is in some measure the result of the numerous press

notices which appear when anything of particular note is heralded from the great centres of the science. But it is much to be regretted that in some cases articles which are in part of great value, are spoiled by some fanciful ideas regarding the inhabitability of the planets, etc.

The impression is given that the power of the great telescopes of the age is a thousand times greater than it really is, and the fact entirely lost sight of that there is a limit to the effectiveness of these instruments. While it is unwise to say that some particular secret of the universe can *never* be discovered, there is, on the other hand, no credit due to the writer who, making a wild guess, declares that such and such a secret will be known a hundred years hence, without giving some definite idea of the lines along which the discovery may be made. And further, amateurs are liable to be carried away, as it were, by the mysteries of astronomy, and neglect to give some little time to the study of what is known as "exact astronomy," based upon the simplest laws of number and extension, and reached along the line of straightforward reasoning.

EDITORIAL NOTES.

SIR DANIEL WILSON.

THE late President of the University of Toronto was born in Edinburgh, Jan. 5, 1816, and was an elder brother of the eminent physiologist, Prof. George Wilson, of whom he was wont to speak with great affection and pride. In 1841 he published "Memorials of Edinburgh in the Olden Time," and in 1851 appeared his greatest work, "The Archæology and Prehistoric Annals of Scotland" in two volumes with

about 200 illustrations drawn by himself. He was appointed Professor of History and English Literature in the Toronto University in 1853, and in 1881 succeeded the Rev. Dr. McCaul in its Presidency.

Besides the works above mentioned Dr. Wilson published several other works, such as "Cromwell and the Protectorate," "Prehistoric Man," "Caliban," "Chatterton," and a book of verse, "Spring Wild Flowers," and many articles in encyclopædias, reviews, magazines, etc., all of which

testify to wide acquirements, activity, industry and rare endowments. On the Council of Public Instruction, Ontario, for a few years prior to its abolition, Prof. Daniel Wilson, together with Prof. Goldwin Smith, represented the teachers of Ontario. In 1885 he was elected President of the literary section of the Royal Society of Canada, and in 1888 he received the honour of Knighthood from Her Majesty Queen Victoria.

In the class-room he was genial and inspiring. His continuous work of philanthropy and his pronounced Christian character indicate to us all that in very many aspects of human life in its highest and noblest forms, he has left us a worthy example to profit by and follow.

SCHOOL OF PEDAGOGY.

THE Minister of Education has made important changes in the provisions for the professional training of High School teachers. What is more properly theoretical and scientific will hereafter be completed before any attempt is made to give practical application of the principles in the school-room. The next session of the School of Pedagogy will extend from the first Monday in September to the third Friday in December. Those who pass the examination at the close will receive interim certificates, which will qualify them to teach in any High School for six months. They will then undergo a final examination in practical work, conducted by the High School inspectors or other persons appointed for the purpose. On the joint report of these examiners, and that of the principals of the schools under whom the apprentices were engaged, the awarding of certificates will be determined.

It is contended that this change from the plan heretofore followed will

give more freedom to the School of Pedagogy in the selection of lecturers on methods of teaching. Instead of ten or a dozen practice lessons in the Toronto Collegiate Institutes, teachers in training will have six months regular work as ordinary assistants in a High School or Collegiate Institute. The practice teaching will be freed from artificial conditions, and the candidate for a certificate will receive advice and criticism from a principal who will, in all probability, desire to retain him as an assistant. A year's training is still required, but during the six months of practical work there will be a chance for a candidate to earn a fair salary. The knowledge of pedagogical principles required before gaining an interim certificate will avoid any objectionable experimenting on a class of pupils, and the final test will weed out in six months those who have mistaken their calling.

THE DOMINION EDUCATIONAL ASSOCIATION, JULY, 1892.

WE have kept our readers fully posted on all matters affecting the meeting of the Dominion Educational Association, which held its first Convention in the city of Montreal during the first week in July. The first session of the Association was in the afternoon of Tuesday; when able and kindly addresses of welcome to the members of the Association were delivered by Sir J. W. Dawson, McGill, Hon. G. Ouimet, Chief Superintendent of Education, Quebec, by the Chancellor of Bishop's College, Lennoxville, Principal Adams of the same institution, likewise by the Presidents of the Teachers' Association of Quebec, both Roman Catholic and Protestant. Spirited and fitting replies were made to these friendly words of welcome by the Hon. G. W. Ross, Minister of Education, Ontario, Superintendent

of Education, Nova Scotia (Dr. McKay), and of New Brunswick (Dr. Juch), and by Mr. Sinclair, President of the Ontario Teachers' Association. Dr. Bryce, Manitoba Presbyterian College, Winnipeg, spoke for Manitoba. In the evening of the same day a pleasant and well attended conversazione was held in the noble Peter Redpath Museum, the hosts being the authorities of McGill College.

The working days of the Convention were Wednesday, Thursday and Friday. During the morning sessions the General Association met for discussion introduced by some one who had undertaken to read a paper on the subject and short five-minute speeches followed. The papers read were good and the speakers who took part in the discussion were prompt and kept closely to the subject under consideration. The afternoons were given to department work, and we think we voice the judgment of the Association when we state that the most important work for the education of the country was done in the departments. The evenings were devoted to public addresses. In this capacity the Convention had the advantage of hearing the Hon. G. W. Ross on "Educational Problems and Tendencies"; Mr. Jas. L. Hughes, Inspector of Public Schools, Toronto, on "Duty of the State in Reference to Education"; Rev. Principal Grant, Queen's University, on "College and University Education," and Sir J. W. Dawson gave the closing words of advice to D.E.A.

At the Convention of the Dominion Educational Association, there met for the first time in Canada representatives of all the different grades of education, university and college,

secondary and elementary. And in addition to this the peoples in Canada were present also. It was a gratification of no mean order to meet in council as friends, our fellow-workers in the schools of Quebec. We hold it to be of the first importance to the weal of our commonwealth, that the French Canadian teachers and the English teachers of Canada should meet together in council, see each other, hear each other speak, and greet each other by friendly grasp of the hand. The possibilities within the reach of the Association for removing misunderstandings and prejudices and bringing into play a spirit of conciliation and harmony and good-will are almost boundless.

All parts of our educational force were present, the official class, perhaps, predominating. We hope the active, living, moulding part, which is in our schools and colleges, will, in future, be present in ever increasing numbers. They supply the spiritual energy which brings the people to see eye to eye. They are the living agents who show how order and beneficent peace can be got from confusion and ignorance.

We know many of our brethren felt and said that they expected a larger number at the Convention. We were pleased that so many did attend the first meeting and that only so many attended. The attendance being such as it was, and we hold it was a good attendance, gave the opportunity required for organization and appointment of committees, so that at the next Convention the work can be entered upon at once. For reports of committees furnish the very best material for discussion and subsequent progress. We hope the Dominion Educational Association of Canada will have a brilliant and influential history.

IN ADEQUACY.

JOSEPH TRUMAN.

The haste, the bended knee, the cry
With eager youth's ideal warm,
The sad love in the Master's eye
That followed the departing form :

Fine ardours quenched in caution cold,
Pure dreams that never dawned again—
A picture here, to thrall and hold
The fleeting memory of men.

O weak and melancholy doom,
To his young heart's bright festival
To bid fair guests and not find room,
For the most gracious guest of all :

To hail the Holy, greet the Just,
To ask, and crave, and still not stay,
Wistful and frank to almost trust,
Yet pass to gilded want away !

O boundless misery, dismal fate
Of minds that self but half subdue,
To reach, of loftiest life, the gate,
And valour lack to venture thro' :

To cheat the infinite desire,
To halt and falter near the goal,
To kill the spirit's mounting fire,
To save the shadow, lose the soul !

A story old, yet vital now
The vision and the voice abide,
A beckoning shape with star-bright brow
Travels our paltry lives beside ;

A voice that clear, persistent, low,
Softly persuades, and lingers long,
Breathes where the ghosts of beauty grow
From colour, music, marble, song ;

Calls in blue morn's bird-echoing air,
Murmurs amid the twilight pines,
Whispers in sighing streams, and where
The rosy globe of sunset shines ;

Speaks from shy blooms in spring that
blow,
From the still stars that beam above,
From lights in conquering eyes that glow,
And the strange charm of woman's love.

For duty's self-forgetful pain,
For stainless thought, for service high,
Still pleads the urgent inward strain
While one like God seems gliding by.

But we indifferent, deaf and blind,
In mean, contented ways drift on—
Some moment we shall start to find
The voice hushed, and the pilot gone.

—*Speciator.*

SCHOOL WORK.

CLASSICS.

QUESTIONS IN JUNIOR LEAVING
LATIN.

LATIN GRAMMAR.

(Continued from page 235.)

Exercises Based on *Cæsar, De Bell. Gall.*
B.J.

A.

Translate into Latin :
For five successive (*continuus*) days the
German leader kept his army in the camp
under the hill, and refused to fight. The
reason was this : The Germans, in accord-
ance with their custom, had consulted their

women as to whether it was to their advantage
to engage the enemy or not. The answer was
that it was not the divine will (*fas*) that their
army should win if it engaged before the
new moon. On the sixth day, however, our
general drew up his troops in three lines in
the face (*conspectus*) of the enemy, and then,
and not till then—when there was no escape
—the German leader moved out his army
from the camp.

B.

Translate into Latin :

On the same day at sunset some of our cal-
valry, in pursuit of the German horse, fell in
accidently with C. Valerius, the general's

friend, who had been taken prisoner by the enemy—a rescue which caused us as much satisfaction as did the victory itself. In the presence of all he told the story of his escape from death. When the party in charge of him observed that the army was in full flight, they dragged him away—ironed as he was—from the field, and had not paused in their flight until intercepted by our cavalry. His life had been spared in the first instance by the kindness of fortune. Three times had his captors cost lots to determine whether he should be burned at the stake (*igni necari*) or granted a reprieve; and three times had he found deliverance by the favour of the lot.

C.

Translate into Latin :

At a given signal, therefore, our whole front line advanced at a run to attack the enemy's left—the point at which he showed the least strength. But such was the suddenness and rapidity of his advance that there was no possibility of our using the pilum. It was simply a hand to hand engagement and contested with the utmost desperation on both sides. The enemy's left was beaten and completely routed; but his right—owing to its numerical superiority—pressed us hard; and it was not till the third line was advanced to our relief that he gave way. The rout then became general and the flight was uninterrupted until the river was reached. This a small number swam; a few more crossed in boats. All the remainder were cut down by the swords of our cavalry.

D.

Translate into Latin :

At about equal distances from the two camps there was a level plain of considerable length, in the midst of which stood a rising knoll of ground. This was the scene of the meeting between the Roman and German leaders. A body of ten picked horsemen was in attendance upon each general, and two larger bodies of horse were stationed at a distance of two hundred yards. The interview was held on horseback and the matters in debate between the two nations were discussed at length. But while the conference was in progress, word was brought

that the German horse was approaching the knoll, and using their lances upon the Romans. The Roman leader had perfect confidence in his men because, in fear of treachery, he had mounted certain private soldiers of the tenth legion and knew that an engagement might be hazarded without risk. Still he gave the order to retreat, for fear that—in case of the enemy's defeat—he might be charged with having betrayed them. So the conference ended.

CLASS-ROOM.

EDUCATION DEPARTMENT,
ONTARIO.

ANNUAL EXAMINATIONS, 1892.

High School Entrance.

DICTATION.

Examiners: Isaac Day, Ph.B.; John Seath, B.A.

NOTE.—The presiding examiner shall read the passage three times; the first time, to enable the candidate to collect the sense; the second, slowly, to enable the candidate to write the words; and the third, for review.

A maximum of five marks may be allowed for neatness.

He now observed before him, at a certain height in the wall, a crevice, which from the point where he stood, appeared inaccessible. Near the moulded arch he saw low dark grottoes within the cavern. The entrance to the nearest was out of the water, and easily approachable. Nearer still than this recess, he noticed, above the level of the water and within reach of his hand a horizontal fissure. It seemed to him probable that the crab had taken refuge there, and he plunged his hand in as far as he was able, and groped about in that dusky aperture.

Meanwhile Wolfe's army had reloaded. He seized the opportunity of the hesitation in the hostile ranks, and ordered the whole British line to advance. At first they moved forward with majestic regularity, receiving and paying back with deadly interest the volleys of the French. But soon the ardour

of the soldiers broke through the restraints of discipline: they increased their pace to a run, rushing over the dead and dying, and sweeping the living enemy from their path.

COMPOSITION.

Examiners: John Seath, B.A.; J. E. Hodgson, M.A.

NOTE.—Candidates will take question 1 and either question 2 or question 3. A maximum of five marks may be added for neatness.

1 (a) Write a letter to a school-fellow, giving an account of some adventure which you may have had yourself, or which you may have read about.

(b) Write out the address for your letter within a ruled space the size of an ordinary envelope. [50]

2. Give, in your own words, an account of the Capture of Quebec. [50]

3. Write an account of the last visit you may have paid to a provincial, county, or township fair. [50]

GEOGRAPHY.

Examiners: Isaac Day, Ph.B.; J. E. Hodgson, M.A.

NOTE.—Only five questions are to be attempted. A maximum of five marks may be allowed for neatness.

1. (a) When are the days and nights of equal length, and when are the former at their greatest length in the Northern Hemisphere? Tell why the days and nights are not always of the same length. [9]

(b) Of what use are the meridian lines; and lines of latitude? [4]

(c) Which is the most important meridian line; and which, the most important line of latitude? [2]

2. Tell what you know of Ontario, under the following heads: its mountains, its rivers, its lakes, and its mineral areas. [15]

3. To what countries does Canada send her surplus flour, peas, barley, eggs, horses, pigs, lumber and salt? Whence does she get her molasses, wine, silks, oysters, oranges, bananas, and cotton? [15]

4. Draw a map of the Great Lakes, showing how they are connected; on the map note the position of Kingston, Toronto,

Oswego, Buffalo, Sarnia, Port Arthur, Chicago, and Duluth. [15]

5. Give the position of each of the following cities, and state why each is so important in the commerce of the world: London, New Orleans, Liverpool, Nottingham, Manchester, Sheffield, Glasgow, Paisley, Belfast, and Londonderry. [15]

6. Where and what are the following noted for: Toulon, The Hague, Ebro, Saxony, Riga, Odessa, Hong Kong, Sumatra, Sunda, Madras, Altai, Verde, Madeira, Orinoco, Lima.

HISTORY.

NOTE.—Candidates will take any four questions in section A, and any two in section B. A maximum of five marks may be added for neatness.

A.

1. Give an account of any two of the following:—

(a) The Feudal System. (b) The Great Charter. (c) The Petition of Right. (d) The Execution of Charles I. (e) The Act of Settlement, 1701. [12]

2. Narrate briefly the career of any three of the following:—

(a) Mary, Queen of Scots. (b) Sir Thomas Wentworth. (c) John Hampden. (d) The Duke of Monmouth. (e) Lord Nelson. (f) Sir Robert Peel. [12]

3. State the causes and the general results of the Crimean War, mentioning the principal engagements. [12]

4. Give an account of—

(a) The South Sea Bubble, 1720. (b) The Repeal of the Corn Laws, 1846. [12]

5. Give an account of the Battle of Waterloo, the causes which lead to it, and the effect on Great Britain. [12]

6. Define heir-apparent and heir-presumptive. How will the death of the late Duke of Clarence affect the succession? Contrast the right of heirship to the throne of Great Britain now with that claimed by the Stuarts. [12]

B.

7. Give an account of the Capture of Quebec. By what treaty and at what time was Britain's authority over Canada confirmed? What portions of North America

are under the control of Britain as a result of this treaty? [14]

8. Give an account of the dispute which led to the Ashburton Treaty. State the terms of the Treaty? [14]

9. What are the chief provisions of the North America Act? Why is so much importance attached to this Act by the people of Canada? [14]

10. By whom is each of the following appointed: Governor-General, Lieutenant-Governor, Premier of the Dominion, Premiers of the Provinces, Senators, Judges, Mayors of Cities, Wardens of Counties, Reeves of Townships, Trustees of Public Schools, Police Magistrates, Registrars, County Inspectors of Public Schools, Sheriffs? [14]

GRAMMAR.

NOTE.—Candidates will take questions 1, 2, 3, 4, 5, and either 6 or 7.

1. State the part of speech and give the syntax of every italicized word in the following extract:

When the head of the French attack had reached within forty yards, Wolfe gave the order, "Fire." At once the long row of muskets was levelled, and a volley, distinct as a single shot, flashed from the British line. For a moment the advancing columns still pressed on, shivering like pennons in the fatal storm; but a few paces told how terrible had been the force of the long-suspended blow. [21]

2. Write sentences to show that the following words may be properly used as different parts of speech, and state the part of speech: *walking, iron, on, but.* [12]

3. Write out every subordinate clause in the following extracts, state its kind and give its relation:—

(a) If I talk to him, with his innocent prate
He will awake my mercy, which lies dead:
Therefore I will be sudden, and despatch.

(b) The elders of the city
Have met within their hall—
The men whom good King James had charged
To watch the tower and wall.

(c) When Bassanio read Antonio's letter, Portia feared that it was to tell him of the death of some dear friend. [12]

4. Analyse fully the following:—

The happiness of these lovers was sadly crossed at this time by the entrance of a messenger bearing a letter from Antonio containing fearful tidings. [17]

5. Parse the italicized words in the following extract:—

Therefore, on every morrow, are we wreathing
A flowery band *to bind* us to the earth,
Spite of despondence, of the inhuman dearth
Of noble natures, of the gloomy days,
Of all the unhealthy and o'er darkened ways

Made for our searching: *yes, in spite* of all,
Some shape of beauty moves *away* the pall
From our dark spirits. [18]

6. Correct, with reasons, the errors in the following sentences:—

(a) I will be drowned and nobody shall help me.

(b) The man and the horse which was lost in the blizzard has been found dead.

(c) Neither the time nor the place of his birth are known definite.

(d) There aint no doubt as you and me can run faster than him. [20]

7. Give the principal parts of: *choose, sit, slay, shoot, stick*, and the positive cases of: *we, you, she, who, which, one, they, St. James, goodness, kings.* [20]

LITERATURE.

Examiners: John Seath, B.A.; J. S. Deacon.

NOTE.—A maximum of five marks may be allowed for neatness.

I.

"Princess! if our aged eyes
Weep upon thy matchless wrongs,
'Tis because resentment ties
All the terrors of our tongues. [2]

"Rome shall perish!—*write that word*
In the blood that she has spilt;
Perish, hopeless and abhorr'd,
Deep in ruin as in guilt! [4]

"Rome, for empire far renowned,
Tramples on a thousand states;
Soon *her pride shall kiss the ground*—
Hark! the Gaul is at her gates! [4]

"Other Romans shall arise,
Heedless of a soldier's name;
Sounds, not arms, shall win the prize,
Harmony, the path to fame." [4]

"Then the progeny that springs
From the forests of our land,
Armed with thunder, clad with wings,
Shall a wider world command." [4]

"Regions Cæsar never knew
Thy posterity shall sway;
Where his eagles never flew,
None invincible as they." [4]

1. What is the subject of the foregoing extract, and under what circumstances is it supposed to be spoken? [2]

2. Explain fully the meaning of each of the italicized parts. [2]

3. Distinguish between the meanings of "resentment," line 3, and "anger;" and "tramples," l. 10, and "treads;" and supply the words left out in line 24. [6]

4. Write out in as simple language as you can, the meaning of each stanza, and tell how each part of the prophecy has been fulfilled. [18]

5. Point out the bad rhymes in the above extract. [2]

II.

The battle commenced with a cannonade, in which *the artillery of the Nabob did scarcely any execution*, while the few field-pieces of the English produced great effect. Several of the most distinguished officers in Surajah Dowlah's service fell. Disorder began to spread through his ranks. His own terror increased every moment. One of his conspirators urged on him *the expediency of retreating*. *The insidious advice*, agreeing as it did with *what his own terrors suggested*, was readily received. He ordered his army to fall back, and this order *decided his fate*. Clive *snatched the moment*, and ordered his troops to advance. The confused and dispirited multitude gave way before *the onset of disciplined valour*. No mob attacked by regular soldiers was ever more completely routed. The little band of Frenchmen, who alone ventured to confront the English *were swept down by the stream of fugitives*. In an hour the forces of Surajah Dowlah were dispersed, never to reassemble. Only five

hundred of the vanquished were slain. But their camp, their guns, their baggage, innumerable waggons, innumerable cattle, remained in the power of the conquerors. With the loss of twenty-two soldiers killed and fifty wounded, Clive had scattered an army of near sixty thousand men, and subdued an empire larger and more populous than Great Britain.

1. (a) What is the subject of the foregoing extract? [2]

(b) Tell briefly the events that led to the battle. [4]

2. Explain the meaning of each of the italicized parts. [16]

3. (a) Distinguish between the meanings of "terror," l. 6, and "fear"; "mob," l. 15, and "crowd"; and "to confront," l. 17, and "to meet."

(b) Why is "innumerable," l. 22, repeated? [8]

4. Give briefly, in your own words, the meaning of the foregoing extract. [8]

III.

Quote any one of the following :

The stanzas of the "Elegy Written in a Country Churchyard," beginning with "Beneath those rugged elms" and ending with "The paths of glory lead but to the grave." "Lead, Kindly Light." The last two stanzas of "Yarrow Unvisited." [10]

WRITING.

Examiners : J. S. Deacon, J. E. Hodgson, M.A.

1. Write the seven principles used in the formation of small and capital letters. [5]

2. Write the following twice :
Toronto, 2nd July, 1892. Sir, Dear Sir,
My dear Sir. Lieut., Capt., Col., Maj.,
Gen. inst., ult., prox., Yours truly. [10]

3. Write the following once :

Courage, brother ! do not stumble ;
Though thy path be dark as night,
There's a star to guide the humble,
Trust in God, and do the right.

Who is the honest man ?

He who doth still and strongly good pursue,
To God, his neighbour, and himself, most true :

Whom neither force nor fawning can
Unpin, or wrench from giving all their due. [10]

ARITHMETIC.

NOTE.—Candidates are to take the first question and any six others. In the first question four marks are to be allowed for form, and twelve for the calculation; but no value shall be given for the calculations unless the result is absolutely correct. A maximum of five marks may be added for neatness.

1. Make out the following account, neatly and accurately, in proper form :

Nicholas Nickleby bought the goods from you on March 3rd, and paid you \$10 on account April 8th.

$3\frac{3}{4}$ lbs. tea @ 80c. 300 lbs. sugar @ $4\frac{3}{4}$ c.
45 yds. print @ $11\frac{1}{2}$ c. $2\frac{1}{2}$ gals. syrup @ 65c.
 $12\frac{1}{2}$ yds. towelling @ $12\frac{1}{2}$. $\frac{3}{4}$ doz. knives and
forks @ \$2.50. 27 lbs. cheese @ 15. 1 lb.
10 oz. lemon peel @ 32c. per lb. [16]

2. A load of wood, 10 ft. long, 3 ft. 8 in. wide and 3 ft. high, was sold for \$3.

(a) What was the price per cord?

(b) At \$4 per cord what would the load be worth? [14]

3. How much will it cost to paint the outside and both floors of a two-storey cottage, 36 ft. long, 33 ft. wide, and 18 ft. high, at 10c. per sq. yd. The walls to be 18 in. thick, and no allowance to be made for cornices, openings or partitions. [14]

4. What amount will be due July 1st, 1892, on a note of \$80, drawn February 6th, 1892, and bearing interest at $5\frac{1}{2}$ per cent. per annum? [14]

5. What is the smallest sum of money with which you can buy chickens at 25c., or geese at 50c., or turkeys at 75c., or lambs at \$3, or sheep at \$5, or pigs at \$7, or cows at \$35, or horses at \$140, and have exactly \$15 left for expenses? [14]

6. A farmer agreed to pay his hired man ten sheep and \$160 for one year's labour. The man quit work at the end of seven months, receiving the sheep and \$60 as a fair settlement. Find the value of each sheep. [14]

7. What decimal must be taken from the sum of $69\frac{1}{2}$, 8.2, 5.445, .065 and $20\frac{1}{2}$, so that it will contain 6.05 an exact number of times? [14]

8. A lad earned \$21.16 collecting accounts for a physician. He was allowed $5\frac{3}{4}$ per cent.; what amount did he collect? [14]

9. S. S. No. 5, Esquesing, is assessed for \$150,000. The trustees have built a school-house costing \$1,800.

(a) What will the school-house cost a ratepayer whose property is assessed for \$4,500?

(b) What would be the rate of taxation per annum on the whole section if the house were paid for in six equal annual payments, without interest? [14]

AGRICULTURE.

NOTE.—Only five questions are to be attempted. A maximum of five marks may be added for neatness.

1. What trees are most suitable for shade; for protection as windbreaks; for adornment? [15]

2. By means of what agencies is rock changed into soil? Describe the part each agent takes in this change. [15]

3. How should exhausted soil be treated, so as to restore its fertility? [15]

4. Explain the terms: tillage, plant food, heavy soils, humus, general manure, trenching. [15]

5. Under the following heads, tell what you know of underdrainage: materials used, depth of the drain, distance apart of the drains, cutting the trench, refilling the trench. [15]

6. Tell as many of the benefits as you can, arising from the rotation of crops. [15]

DRAWING.

Examiners: Isaac Day, Ph.B.; J. S. Deacon.

NOTE.—Only four questions are to be attempted.

1. Draw an axe, with the handle leaning against a wall, the figure to be six inches in height. [7]

2. Draw a table lamp, five inches in height. [7]

3. Draw the wheel of a waggon with sixteen spokes, drawing to be three inches in diameter. [7]

4. Draw a trunk three feet long, twenty inches wide, and twenty inches high, with the lid partly open; size of drawing one-half inch to a foot. [7]

5. Draw two oblique lines, one inch apart and five inches in length; divide each into five equal parts; join each point of division of the one line with the three nearest points of division of the other. [7]

6. Draw a watering-can, below the line of sight, two inches in height. [7]

CONTEMPORARY LITERATURE.

WE direct the special attention of teachers to the two Latin books authorized by the Minister of Education for use in the schools of Ontario. The Copp, Clark Co. publish the book prepared by Prof. Fletcher and Principal Henderson; and the Methodist Book Room the one prepared by Mr. Carruthers, Classical Master Parkdale Collegiate Institute, and Mr. Robertson, Head Master High School, Toronto Junction, lately of Owen Sound Collegiate Institution.

THE leading article in the September *Overland* is a description of the Farallon Islands by Charles S. Green. There is also an interesting paper on "Quail and Quail-Shooting," by J. A. A. Robinson. The number contains the usual short stories and poems.

THE August *English Illustrated Magazine* has for leading articles, "W. H. Smith & Son," by W. M. Acworth. The number abounds in interesting papers, one being on "Biscuit Town," by Joseph Hatton, and others being on the "North Eastern Railway" and "English Racing Yachts." The fiction is hardly up to the average of the magazine.

THE September *Eclectic* contains an interesting short story from the *National Review*, entitled "The Candidate for West Drum." "Three Essayettes," by Coventry Patmore, is from the *Fortnightly Review*. Other interesting papers are "Midsummer Magic," by Vernon Lee (*Macmillan's*), and the "Russian Crisis," from the *Contemporary Review*.

MARGARET DELAND'S serial, "The Story of a Child," begins well in the September *Atlantic*. Rarely can be found a more interesting reminiscence than that of Edward Everett Hale's, entitled "A New England Boyhood," the third part of which appears in this number. Other valuable articles are "The Primer and Literature," by Horace E. Scudder, and "Cliff-Dwellers in the Cañon," by Olive Thorne Miller. "Duc. Orsino," by F. Marion Crawford, is continued.

STEVENSON'S story of the South Seas was concluded in the *Illustrated News* of the 20th August. The last issue contains a short story entitled, "In Sight of Death," by George Moore. In a short note Mr. Edward Blake is spoken of as the most conspicuous new member in the House of Commons. Elizabeth Robins Penwell is contributing a series of articles, "Berlin to Budapest on a Bicycle."

A RECENT number of the *Critic* contained an appreciative article on Sir Daniel Wilson. The issue of the 27th August gives besides lengthy reviews, magazine notes, and interesting letters, a short article by Andrew Lang on "Miss Mollie Elliot Seawell," who bids fair to obtain fame by her paper on woman. The "London Letter" by Mrs. Walford, and the "Boston Letter" by Chas. E. Wingate are always of great interest.

SELDOM is history more entertainingly told than by Tudor Jenks in the September *St. Nicholas*, under the title "A King Without a Throne." The two capital serials, "Tom Paulding," and "Two Girls and a Boy," give signs of drawing to a close, a fact which will be regretted by the eager readers. Laura E. Richards finishes her charming series of recollections, "When I was Your Age." Jingles, pictures, and verses make up, with other stories and articles, an excellent issue.

THERE are no less than three articles concerning Walt Whitman in the August *New England Magazine*, one by George D. Black on the poet, followed by "Walt Whitman in Boston," by Sylvester Baxter, and "Walt Whitman's Democracy of W. Blackburn Harte." The short stories are good, particularly the one entitled "Off Monomay Point." The poetry of the number is by Clinton E. Scollard, Julia E. Lippman and Arthur L. Salmon.

A *Compendious German and English Dictionary*, with notation of correspondences and brief etymologies. By W. D. Whitney and A. H. Edgren. (London and New York: Macmillan & Co., 1891.) This is one of the best of the smaller dictionaries for

school use, both as regards the number of words given in the German-English part, and the general accuracy of the definitions.

Beowulf: An Anglo-Saxon Epic Poem. Translated by Prof. J. L. Hall, of the College of William and Mary. (Boston: D. C. Heath & Co.) Twenty or more translations of the great Anglo-Saxon Epic have already been published, but there is room for this one. It is largely written in alliterative measures, and is easy and interesting to read. The Hague-Socin text and glossary have been closely adhered to, and although the translator modestly disclaims being an editor, the footnotes and other aids will be appreciated by those who, inheriting their forefathers' love of war, sea and adventure, read this tale.

Handbooks for Bible Classes and Private Students:

(1) *Acts of the Apostles.* By Rev. Prof. Lindsay, D.D. Two parts. 1s. 6d. each. (Edinburgh: T. & T. Clark.)

(2) *Studies in the Acts of the Apostles.* By the Rev. J. C. Jones. 5s. (London: Bible Christian Book Room.)

(3) *The Acts of the Apostles and the Epistles of St. Paul.* By Thomas Morrison, M.A., LL.D. 2s. 6d. (Edinburgh: Oliphant, Anderson & Ferrier.)

(4) *Spiritual Development of St. Paul.* By the Rev. George Matheson, M.A., D.D., F.R.S.E. (Edinburgh and London: William Blackwood & Sons.)

(5) *The Cambridge Bible for Schools and Colleges—Acts.* Edited by Prof. J. R. Lumby, D.D. (Cambridge: At the University Press.) Professor Lindsay, one of the most prominent in Foreign Mission work in the Free Church of Scotland, has a congenial theme in the book of "Missionary Journeys, and Labours, and Triumphs." Like the other Handbooks this (1) is useful and satisfactory. The Introduction is helpful, and the Index, Maps, etc., are all good, but the Notes are the book. It compares favourably with the best brief commentaries. Again, the "Studies" (2) are earnest and suggestive sermons and addresses on the great texts, events, and characters of the book of Acts. The thoughts are well ar-

ranged, and expressed clearly and earnestly, often eloquently. This is the third edition of these "Studies." The author's other works have been widely read.

Dr. Morrison's work (3) has grown out of his experience in the Free Church Normal College, Glasgow, and is an excellent textbook, arranged in the form of a continuous history, to which an Index, Gazetteer of places mentioned, and numerous questions are appended. It will thus be seen that it differs considerably in scope from the works previously mentioned. It is condensed, accurate, and forcible, and Bible students and teachers will find it a valuable aid.

The last-mentioned work (4), by Dr. Matheson, of St. Bernard's (Edinburgh), is a deeply-interesting book. Do the thirteen Epistles show the gradual development of their author in the spiritual life? Leaving aside both his theology and the outward events of his life, what remains to be known from the Epistles of the wonderful man whose sympathy widened from Jerusalem to Rome? The answer to these questions is the substance of the book—a thoughtful and even fascinating one. To the primary interest of the subject is added that awakened by the fine style, historical imagination and insight of the author. We have pleasure in directing the attention of our readers to all these books, knowing that they will appreciate them, and hoping that many of them will be able to read them for themselves, especially this year when so many children are studying the Acts.

To those who must choose only one commentary, either Prof. Lindsay's book, or Prof. Lumby's (5) would perhaps be the best. The volume on Acts is one of the best in the Cambridge Bible Series, and that is saying much. The Introduction, as usual, is exceedingly instructive, dealing with the source, authorship, scope, date, and alleged difficulties of the book. The Notes are full, never trifling, never passing over difficulties, not too long, and admirably suited to the needs of teachers and students of the Bible, being adequate and at the same time suggestive. There are four excellent maps, and a good Index.