

description. The light from the gas-burners had more the appearance of tallow candles than what they really were. As many of our readers are doubtless unacquainted with the nature of this light, we may give a brief description of it. It is produced by a galvanic current from a very powerful Grove's battery, being connected with an improved electric lamp. This lamp is so constructed that the charcoal points regulate themselves. It is fitted up with clock-work, which is kept in motion by the current of electricity, forming an electric self-adjusting magnet. The improvement in this lamp is that the light can be continued for several hours without intermission. As we have seen the electric light exhibited in Toronto before, it only lasted a few minutes. We may therefore consider this first attempt of Dr. May to illuminate a large room by one light a perfect success. The light was a soft, subdued one; and yet so exceedingly brilliant that small specks could be easily discerned on the lofty ceiling of the Music Hall. The apparatus belongs to the educational department, to whom great credit is due for the importation of all the modern improved philosophical instruments, as well as for their kindness in affording facilities to the public to examine them. At one time during the evening, while Dr. May was burning a small piece of magnesium wire in one of the rooms occupied by the educational department, the audience rushed in, thinking it was the electric light, and next to the electric light, it certainly is the brightest we have ever seen. This evening the electric light will be again exhibited, and a number of philosophical experiments performed. In consequence of the experiments performed and the beautiful microscopic objects displayed, the educational department rooms are still the centre of attraction, as well as the amusements derived from seeing many of the visitors experiencing galvanic shocks.—*Leader*.

(From the *Toronto Globe*.)

The contribution from the Educational Department for Upper Canada occupies the ante-rooms. There is here a very fine display of school-room maps, philosophical charts, apparatus, globes, &c. In the first room we notice, on our entrance, a large glass case which contains an interesting collection of articles intended for teaching from objects, a very important branch of education under our present school system. Amongst these are cards, illustrating the manufacture of pins, needles, steel pens, paper, &c. Here the pen may be seen as a rough piece of metal, and traced through its various stages until the beautifully finished pen is produced. We also notice cards of miniature tools used in the various trades, and metals grouped together to illustrate that important branch of manufacture, the metals being exhibited both in their crude and manufactured state. In the same glass-case are drawing models, consisting of fruit, models of crystals made of glass, &c. In the same room there is a very large electrical machine, with a quantity of apparatus for experiments in electricity, &c.; also, the actual improved galvanometer which was used by Professor Tyndall in his lectures before the Royal Institution of Great Britain. On the walls of the room are standard and other barometers, and some splendid botanical, zoological, astronomical, and other charts. The second, or middle room contains maps, globes, and philosophical apparatus, manufactured in Canada, and as the public generally have no idea that this department construct patterns and pay to the Toronto manufacturers several thousands of dollars per annum, we shall enumerate some of the articles manufactured. The walls of the rooms are covered with school-room maps, lithographed in Toronto by Chewett & Co. In appearance they equal those of any publisher we have ever seen, and in point of accuracy they are superior to most maps, for they contain all the recent discoveries and alterations in the boundaries of the different countries. The maps of Africa are very complete, containing all the recent explorations of Livingston, Burton, Speke, Kraff and other recent travellers. There is also a very large map of the whole of British North America, in which the counties of our Provinces are so distinctly marked that it must prove a most excellent aid to the teacher. On this map is a comparative sketch of the British Isles and America, showing the importance of the Canadian route of steamers over that of New York; by the lines laid down we observe that the distance to be traversed on the ocean is over 1,000 miles more from the United States than it is from Canada. This map was constructed and prepared for the lithographer by J. G. Hodgins, Esq., Deputy Superintendent of Education for Upper Canada, and Dr. May. All the other maps were drawn and compiled by these gentlemen. The same room contains globes from 1½ inches to 30 inches in diameter. The department exhibits these very large globes in different stages, showing the rough covered and finished globes. The balls for these globes are made by Mr. A. F. Potter, Romain Buildings, and are so well balanced that the slightest touch will move them to the required place. In pneumatics, electricity, &c., the instruments manufactured in Toronto are

equal in point of finish to those of England or the United States, and embrace every modern improvement. The planetariums and tellureans are superior to any instruments of this kind we have ever seen in Canada, the latter instrument being moved by a series of brass wheels instead of the old plan of the cord and wheel, which was continually getting out of order. There is also a frame containing samples of merit cards prepared by the department, and printed in colours by Chewett & Co. These are intended to introduce a just and equitable distribution of prizes in our Grammar and Common Schools. The third room is fitted up with apparatus, &c., imported from England, France, Germany, and the United States, and contains those instruments which are required for the more delicate manipulations, and not in general use in our schools. There is a very fine equatorial telescope in this room, probably the largest in Canada; also a collection of minerals and fossils from Nova Scotia and New Brunswick. The walls of this room are covered with drawing models, maps, charts, &c., and have a very fine appearance. These rooms attract a great deal of attention from the variety of articles exhibited, and to make them more attractive, as well as to show their utility, experiments are frequently performed here by Dr. May.

III. Papers on Practical Education.

1. PRIMARY READING.

It may be safely assumed that of all the problems in education the most important are those which relate to principles and methods in the primary school; for there the elements of our riper knowledge are obtained, and what is of greater moment, mental habits are formed which shape the intellectual labour of the whole life. Hence it is that we do but ill, nay, we subvert the fundamental law in education, when we leave the care and culture of the little ones to mere tyros in the art of instruction, or to such as having been subjected to the more searching ordeal we apply in our "better schools," have failed, and are dismissed from them to take up as a last resort the work of primary instruction, with the sage reflection on their part, and (alas that the demon is not yet exorcised), the careless assent on the part of employers and parents, "that any one will do well enough for such little children." Heaven, forgive them, and bring them to a better mind.

So long as the senses continue to be the avenues to the soul, so long a part of the means for intellectual culture will be mechanical. Let us not mistake, however, in supposing that it is merely mechanical; for the intelligence of the child is, or should be, one factor—the inner sense should answer to the outer. In the manner of reading, this law is of paramount importance, and we were not far from the truth to say that the process of learning to read is in some sense an important end, and not a mere means. Let us see what it involves. We learn to read for two purposes; 1st, that we may avail ourselves of the thoughts of others expressed in written language; 2nd, that by due oral expression we may communicate to others what is written. The last necessarily involves culture of voice, and intelligence in the first, and is what is termed the art of elocution. The first we shall see is of vastly more moment than has hitherto been esteemed, and does not consist merely in naming or thinking words at sight, but in such an intelligent act of the mind that those words become symbols, which in union express and excite intelligent thought. The mental process in primary reading is, then, within the limit of the child's intelligence, precisely the same as in the case of an adult; and any method of instruction which ignores an intelligent understanding of *what* is read, is radically false and vicious.

The point of commencement is therefore not with abstract forms and names, to be followed by combining them in meaningless syllables by painful spelling—as *bla, ble, bli*, etc., nor in an attempt to master elemental sounds, as in the "phonic method," equally abstract, and to the untutored child, absurd; but to make the exercises accord with the law of his mind and his method of thought.

We have before referred briefly to the plan to be pursued in the first steps. We urged that the lessons should commence with words, the names of common things—that the child should be led to recognize the word at sight, to compose it with letter cards, to form it upon his slate, and that its spelling, and the analysis of the sounds of which it is composed, should come afterwards. Commence first with noun words, follow with adjectives, then combine and make phrases. Teach the words *is, are, and, the*, etc., and as a new word is learned, use it in composing new sentences. There will thus be imparted a life and meaning to what the child reads, in most marked contrast with that senseless drawling of mere sounds under the old regime.

As the lessons progress, let the same intelligence be observed, and the reading will be all along natural and inspiring. Choose, as the