

sweeten the dose, but to be fully effective the student must swallow it all, including the rigorous drill that can come only from the many applications that must be made before the benefit becomes an integral part of his personality.

And I am not so sure that we may not do some harm by oversweetening the dose. The theory that there is no pleasure in abstract mental effort is in my opinion more or less of a fallacy. There is a certain satisfaction that comes from successful effort, whether the work accomplished be abstract or practical. Students are naturally more interested in practical than in theoretical matters, and a teacher lacking in inspiration can very well help his work by a careful choice of illustrations. But to the student who sits under a teacher whose instruction is illuminated by the "divine spark" all things are interesting, whether they be music or logarithms. Let us not confuse *mechanism* with *inspiration*. Furthermore, it is a good thing for boys and girls to be compelled to do a certain amount of uninteresting if not unpleasant work. The duties of life are not, on the whole, entirely pleasant; and since proficiency in overcoming obstacles is obtained only by overcoming a few, perhaps a little uninteresting work is a good thing, after all. Huxley says, "the best way to learn how to do a thing is by doing something as near like it as possible, but under easier and simpler conditions." There is no royal road to learning; and if the three R's are the basis of our educational methods, so the way of mastering them and attaining the mental heights their mastery leads to lies through the three T's. No high mental development ever has or ever will be accomplished without a liberal application of toil, trouble and tears.

DEXTER S. KIMBALL

January 17, 1913

THE MINING CONGRESS AND EXPOSITION IN PHILADELPHIA

MANUFACTURERS of mining machinery, rescue and first-aid apparatus and safety appliances are to be given an opportunity to display their wares before the mining men of the country at

an industrial exposition to be held under the auspices of the American Mining Congress, in Philadelphia, Pa., during the week of October 20.

This exposition, the first of its kind in this country, will be held in conjunction with the annual convention of the Mining Congress. It will be national in scope, the metal mining interests of the west to be as fully represented as the coal mining of the east. There is a tentative plan to have a gold mining camp in full operation with a mill crushing the ore. Horticultural Hall, situated in the heart of the city, has been engaged for the occasion.

While the plans are still in embryo, a number of the leading manufacturers have already been approached and have shown sufficient interest to lead to the belief that all the space will be taken.

A number of the large coal companies that have developed the "safety first" movement at their mines are arranging for space to show the mining men and the public what they are doing in behalf of their men. These companies will send rescue and first-aid crews and there is talk of exhibition drills between the various crews. The U. S. Bureau of Mines will be represented by one of its safety cars and a picked crew of helmet men. The state of Illinois and a number of the anthracite companies may send rescue cars for exhibition purposes.

The convention is the first to include all the mining interests of the country and an attempt is to be made to show the need of a stronger national organization that will represent all phases of the industry. Perhaps the leading topic of the convention will be the new system of mine taxation recently put in operation in some states and being discussed in others at the present time. It is expected that a definite policy toward Alaska from congress will be asked.

The smelter fume problem will be discussed with the hope that an amicable adjustment may be reached soon. California has, at the present time, two commissions considering this problem and Montana, one.

The disposal of debris from placer mining is

another question that will be discussed by western men. They will declare that the placer mining industry of California has been nearly wiped out through drastic rules and regulations, some of them imposed by the U. S. government. At the present time the debris question is in charge of a commission of the United States army engineers and it is claimed that while they zealously watch the interests of the farmers, they know nothing about the mining problem. A demand may be made for the inclusion of a mining engineer on this board to see that the interests of the mines are protected.

The coal men of the east will be mostly interested in two problems, the "safety first" movement and the conservation of the coal lands adjacent to the great eastern industrial centers. This latter, it is said, has become a question of most serious moment. It is fully realized by the eastern men that their coal fields are being used up at a tremendous rate and that when these coals are gone, it will be useless to think of getting coal from the west, for the commercial prosperity of the east depends upon a supply of coal at reasonable price and transportation charges from the west would be too great.

The proposed system of leasing mineral lands will also come up for extended discussion. The fact that the federal government some time ago leased coal lands in Wyoming to a coal company, thus making the entering wedge in this system of disposing of the government's mineral lands, will undoubtedly call for comment. Then there is the proposal for the revision of all the mining laws of the country. A great many mining men are of the opinion that the laws are antiquated and cumbersome, imposing hardship upon every one who has to deal with them.

MEMORIAL TO SIR WILLIAM LOGAN

ON July 16, in the little fishing village of Percé, on the Quebec shore of the Gulf of St. Lawrence, a memorial was unveiled to Sir William Edmond Logan, Kt., LL.D., F.R.S., founder and first director of the Geological Survey of Canada. The day selected for this

interesting event was the occasion of the visit of seventy members of the International Geological Congress to the Gaspé country and the memorial was erected by the Congress to commemorate the important official services of Sir William Logan which began in Gaspé in 1842. Though the day had been set apart for the exploration of the picturesque and involved geology of Percé, a half hour was appropriately devoted to the ceremony of effectively reminding the visitors who it was that first lifted the veil from the geological problems of Gaspé. The memorial is a bronze slab bearing a strong and effective medallion portrait of Sir William accompanied by a suitable inscription and is the highly artistic work of Mr. Henri Hébert, of Montreal. It has been attached to the face of a natural rock wall in the heart of Percé village. At the unveiling ceremony suitable addresses were made by Dr. A. E. Barlow, chairman of the Logan Memorial Committee, and by Dr. John M. Clarke. As a further expression of their desire to establish the memory of Logan and his work in Gaspé, and to acknowledge their appreciation of the extraordinary attractions of Percé, the committee contemplates acquiring the land about the present memorial in order to present it to the town as a public park.

SCIENTIFIC NOTES AND NEWS

THE Kelvin Memorial window in Westminster Abbey was dedicated on July 15. The dean of Westminster made the address and the ceremonies were attended by many distinguished scientific men. The window, which was designed by Mr. J. N. Comper, is in the east bay of the nave on the north side. The light from it falls upon the graves of Kelvin and Isaac Newton, and immediately beneath it are the graves of Darwin and Herschel.

A COMMITTEE has been formed to erect a memorial in honor of the late Sir William White, the distinguished naval architect, at the time of his death president of the British Association for the Advancement of Science.

FORMER students of Ralph S. Tarr, of Cornell University, wish to place on the campus