

Mr. B. H. Thwaite was the author of an important paper brought before the Institution of Mining Engineers at Manchester, at which the question was discussed: "Can explosions in coal mines, with their associated toxic fatalities, be prevented?" Mr. Thwaite thought the question might be answered by a direct negative. However perfect the precautions were in theory, the prevention of explosions in the workings of the marsh gas exuding from carbonaceous strata would never be possible in the absolute. He saw one gleam of light, however, in the depressing gloom. It would be possible in the future to prevent the death of, say, eight out of ten men who died through the toxic influence of carbon monoxide that was produced by the partial oxidation of the marsh gas. The coal-dust extension of the marsh gas flame was the principal source of that gaseous element which Dr. Haldane had put as the prime cause of 70 to 90 per cent of the deaths resulting from an ordinary coal mine explosion. This element was carbon monoxide, the highly toxic character of which was now becoming generally recognized. It was pretty certain that this was not produced by the combustion of marsh gas. The latter was the igniting agent of the toxic gas produced—coal dust—and therefore, neglecting the small proportion produced by the smouldering timber, if this coal dust was removed from the workings as produced, the toxic dangers to life associated with marsh gas explosions in coal mines, which they knew to be responsible for 75 to 90 per cent. of the fatalities, would be eliminated. Details were given as to the low death rate among coal miners from phthisis, owing to the antiseptic effect of the inhalation of finely divided coal or carbonaceous dust. Direct experience will alone absolutely determine how far it is possible to remove the coal dust without detriment to the healthfulness of coal miners, and the author suggests that the Government might initiate such an investigation. But assuming that the coal dust environment of the coal miner were permitted to remain as it is, will it be possible to prevent or reduce the deaths from toxic effects? An affirmative answer may at once be given, and for the following reason. It is generally known that oxygen is the best antidote for the toxic influence of carbon monoxide. Of course, pure air expels carbon monoxide from the haemoglobin of blood, but pure oxygen will do the work five times more rapidly. Now a supply of oxygen could be established along the line of working operations in a coal mine, and in such a way that it would automatically escape whenever an explosion of marsh gas occurred; through nozzles at different points along which the flame was propagated, setting up at the same time the whistling or audible sounds, so that even in the darkness that always succeeds an explosion the victims would readily be able to find their way by creeping or walking to the nozzles of escaping oxygen, the flow of which would continue as long as was required to permit the rescue party to find the victims and remove them, a duty that would be easily performed, because the location of the danger zone would be sharply defined by the whistling noise of the escaping oxygen. Such a method constituted the basis of a recent invention, — Science and Art of Mining.

The Malay Peninsula is the great tin producing region of the world at the present day, and the States with the largest output are under British protection.

Preparations on a grand scale are being made by the Commission for the Dominion Exhibition which will open its gates in Halifax to the public on September 22 and keep them open for two weeks.

The new Administration Building for the Grand Entrance will be erected on the same plans as though the recent proceedings in Court regarding expropriation had not taken place, but the building will be located on a site different from that proposed. The public will be in no wise inconvenienced by the change. Should the occasion ever arise, under which another site for this building should be determined upon, the edifice will be easily moved, and construction of the foundations will be such that this can be done without difficulty. The new building will be erected close to the other new buildings added during last year to the splendid equipment on the Exhibition Grounds.

Manager Hall says that inquiries for space are coming in from all parts of the Dominion, and he reiterates the hope previously expressed, that the people of the Maritime Province will avail themselves of every opportunity at their disposal to make a good showing for this branch of agriculture or other industry. The Exhibition will be worthy of all that can be done to make it still more useful and attractive.

In mining education two standards are required. A good deal of the work of the mining-engineer is what was once described to Mr. Gregory as "bushwhacking." The miner has himself to wade take so many different functions, quarrying, water-supply, railway and bridge building, and the erection of work-shops, crushing plants and smelters, and he often has to do this preliminary work so hastily that his methods must be somewhat rough and ready. The course at the Polytechnic Institute at Troy involves an extremely high standard of mathematical teaching; and in such a country as America there is a sufficient demand for engineers with highly specialised mathematical training to maintain a school with such an advanced course. But many men will make efficient working engineers although they may not have sufficiently mathematical minds to profit by the Troy system. In the same way in this country, it is necessary to train colliery managers, who may be thoroughly efficient in their own work, without undergoing the wide training of a fully qualified mining engineer. Provision has therefore to be made for mining schools with the double standard: a diploma course for colliery managers and the managers of small mines; and the higher degree course for those who are able to give the necessary time for the four years of advanced study.

Mr. John Burns, M. P. opened a new municipal electricity station at Southwick, Brighton, which has been provided at a cost of £300,000. He mentioned that in 1881 he built the first electric tramcar in this country and ran it round the grounds of the Crystal Palace for six months before people could be induced to believe that electric traction was possible, even as a toy experiment. Not to be overcome, he induced his sweetheart, Palace occasionally and get into the electric car to act as 'decoy ducks' for other passengers. Mr. Burns declared that in the United Kingdom we have, municipal servants of probity and efficiency; and, speaking broadly and generally, we have the most disinterested group of councillors in the world.