

May until August, when conditions will be better for the observation of how the existing law has been construed by the different parties now in this northern field.

MINING IN NOVA SCOTIA.

The annual report of the Department of Mines of Nova Scotia was recently submitted to the Legislature. As a whole, it was an encouraging one, though there was a diminution in the production of coal and gold.

The amount of coal raised during 1905 was 5,150,420 tons, as compared with 5,247,136 tons in the preceding year, a decrease of 196,750 tons. Gold was produced to the amount of 15,500 ounces, a gain of 1,325 ounces over the production of the year 1904. Two hundred and seventy-four thousand tons of iron ore were imported into Nova Scotia during the year. The province derived royalties from minerals to the amount of \$613,811.00, gross, from which, however, must be deducted \$41,732.00, which sum was paid as a bonus to the Cape Breton steel companies, on account of provincial coal consumed in the manufacture of iron and steel.

During 1905, coal to the amount of 4,475,284 tons was sold, a decrease of 69,325 tons, from the sales of the previous year. To extract this coal the services of 10,780 men were required, who put in an aggregate of 2,743,528 days labour.

OXYGEN GENERATORS FOR UNDERGROUND USE.

The rescue of the French miners at Courrières, by their German comrades from Westphalia, emphasizes the value of suitable apparatus for supplying oxygen to miners employed upon such work. The most efficient types supply sufficient air to enable a man to breathe for two hours, which is as long as any one engaged upon laborious work would probably be able to stand the strain. It is not good practice, however, for a man to endeavour to remain for such a length of time, and in some of the latest oxygen-suppliers a signal is given automatically by the machine at the end of three quarters of an hour. Those used at Courrières supplied oxygen automatically, and the air, after being exhaled, passed through two generators, which freed it from CO₂, and rendered it again fit to support life, when mixed with a further supply of oxygen. The generators contained specially prepared caustic potash, which did not generate as much heat as the ordinary commercial article, thus rendering a cooling chamber unnecessary. The apparatus which proved so efficient upon the occasion that we have mentioned was designed by Director Meyer, of the Hibernia and Shamrock mines, in Westphalia. It required no helmet, or face mask, which was a decided advantage, as the men had hard muscular work to meet before they could rescue their entombed comrades.

THE SAN FRANCISCO DISASTER.

In the face of such a calamity as that which befell San Francisco on one April morning, one realizes man's impotence. Although less disastrous, as far as the loss of human life is concerned, it resembles the disaster which overtook St. Pierre in its far reaching devastation. In the course of a few hours the labour

of years was wiped out. First came the wholesale destruction caused by one of the heaviest earthquakes shocks that has been experienced on this continent; then a conflagration started, that was not quenched until the greater part of the magnificent city of San Francisco lay in ashes.

One of the heaviest sufferers was our valued contemporary, the *Mining and Scientific Press*. Owing to the hour at which the disaster occurred, shortly after 5 a.m., the library and plant were destroyed without a chance of even a small portion being rescued.

The CANADIAN MINING REVIEW tenders its sincere condolence to Mr. T. A. Rickard and his coadjutors of the *Mining and Scientific Press*. We believe, however, that the *Press* will rise phoenix-like from its ashes, and that, eventually it will be able to date the beginning of a period of greater success from that dismal day when the end seemed to have come for San Francisco and its inhabitants. A paper that has earned the confidence and respect of its subscribers and patrons is as indestructible as anything well can be.

MINING SCHOOLS.

In a recent issue of *Mines and Minerals*, Prof. A. H. Purdue published an article on Mining Schools. As this subject has lately received some attention in these columns, the following abstract of Prof. Purdue's article is re-produced:—

"Each locality has its own peculiar mining problems, which will be quicker met and solved by engineering schools near at hand than by those distantly situated, for the reason that they are near and convenient and it will be to their interests to develop the mining industry of the locality. There are doubtless many deposits of economic worth lying idle, which need only the incentive that would come from a near-by mining school to make them paying property. There are others being worked by antiquated methods, eking out a precarious existence, that a little intelligent direction, coming from the influence of a school whose duty it is to look after the mining interests of the locality, would put on a paying basis.

The elective system that prevails in practically all of our state universities permits those students who take their degrees in other lines of engineering, to elect such courses in mining as their time and preparation will permit of. At my own school though the courses in mining have been offered less than a year, certain ones of them have been elected by the best students in engineering. While such students cannot be sent out as mining engineers, the small knowledge of the subject thus acquired may prove of incalculable value to them and their employers in the future. Furthermore, we fully expect within the next few years, to discover several mining engineers by students in other engineering lines electing our courses. A large percentage of boys who enter college have engineering tendencies and enter the departments of civil, mechanical, and electrical engineering, having never heard of mining engineering. By electing courses in the latter many will find that it is more to their liking than the course taken up, and will make the change.

The courses in mining engineering are the only ones offered in our schools that lay sufficient stress upon the estimation of the cost of work and plants. An immense building brings in profit from rent. A railroad bridge pays for itself and is a source of profit to the company because of the line it completes for ready transportation. But every dollar that is put into a mine for labour, material, or machinery, must come out of the mine, and enough in addition to pay a profit on the investment. This necessitates a most careful investigation into the probable size of the ore body, the cost of working it, the facilities for transportation, the cost of fuel, the cost of the plant, and the hundred other things that naturally suggest themselves to the cautious manager. Such a course of training is valuable not only for the mining engineer, but would be most valuable to students in other lines, especially in civil engineering.

In no other field are intelligent business men so often imposed upon as in "wild-cat" mining schemes. Men with good business judgment in most things are often easily led into these "sucker traps." The general diffusion of mining knowledge that would come from a large number of good mining schools would do more than anything else to prevent the floating of these fake schemes.