

assessment, is open also to objection, because it would bear with great inequality upon different mines. For example, a royalty of 20 cents per ton on a gold ore averaging \$4 per ton might mean 30 per cent. of the profit won, while the same royalty on ore worth \$50 might mean less than 1 per cent., and it is also probable that more capital pro rata would be employed in the first case than in the second. Furthermore, a gross royalty would in many cases be a tax on unprofitable mining and would handicap the industry. A tax on profit, with due allowance for depreciation, is, he considered, the fairest basis, and assessment becomes a matter of accountancy, which is within the skill of local officials. A small additional tax on improvements, for purposes of purely local government, would also be a necessity.

MINING ACCIDENTS IN ONTARIO

Bulletin No. 12, Mining Accidents in Ontario for July, August and September, 1912, has just been issued by the Ontario Bureau of Mines. Mr. E. T. Corkill, Chief Inspector of Mines, reports for the first nine months of the current year, fifteen fatalities below ground, and eleven above. These are distributed between mines, metallurgical works and quarries. It is gratifying to record that the present figures are much lower than those for the corresponding part of last year, when there were twenty-two underground fatalities and twelve above ground.

During the three months more particularly covered by the report, there occurred seven fatalities in mines, two at metallurgical works, and one in a quarry.

No less than 110 non-fatal accidents are reported for the third quarter of the year. This is much in excess of the third quarter of 1911, largely for the reason that a change in the Mining Act now requires that all accidents that incapacitate a man for seven days or more must be reported.

None of the fatalities in mines was due to the careless handling of explosives. One was due to electric shock.

In the main, the situation as regards accidents is improving. The policy of prompt official publicity is warmly to be commended.

A CORRECTION

A fortnight ago there appeared in the *Canadian Mining Journal* the statement that at the Jupiter mine, Porcupine, only one drill was working. The paragraph read as follows: "The Jupiter is now working with one drill, deeming it best to feel its way very carefully around the intricate fault, etc., etc." We have been advised authoritatively that this statement is incorrect. Drifting has been carried on to a point several hundred feet beyond the slight fault that was encountered some time ago. No intricate fault exists so far as is known, and the management has every reason to be satisfied with the results of work to date.

CHILIAN MILLS

In a very instinctive discussion of the Chilian mill, published in the latest bulletin of the Mexican Institute of Mining and Metallurgy, Mr. G. A. Denny and others express their opinions as to its efficiency. According to figures quoted by Mr. Denny, one slow-speed Chilian, with a daily output of 16 tons, showed 50 per cent. mechanical efficiency; whilst a mill running 14 per cent. faster develops an efficiency of 66 per cent., and outputs 26 tons daily. The discharge of the former was, however, in a finer state of comminution than that of the latter. Incidentally, the fact is brought out that the Chilian does far better work on a coarse feed than on fine. And, further, there is no advantage in slow speed, the high speed mill being demonstrably more economical and efficient.

Chilian mills, as compared with combined stamps and tube mills, have much to recommend them,—according to Mr. Denny. In initial cost, in output of fine material, in running expenses, and in cost of maintenance, the Chilian has everything in its favour.

Replying to Mr. Denny's criticisms, Mr. J. B. Empson, whose original paper is the basis of the discussion, concurs in the view that the stamp is not a grinder, but a fine breaker. He takes exception to the statement that, for Mexican ores in any case, the slow speed Chilian is less efficient than the high speed. The latter, he claims, is constantly getting out of repair. In fact, he looks upon the whole problem as not yet susceptible of solution.

EDITORIAL NOTES

At the Knights Deep mine, South Africa, all the newly installed crushers will be of the jaw type. Hammer drills are being used exclusively in the stopes.

Statistics published by the United States Bureau of Mines show that during the first eight months of 1912, 1,453 men were killed in and about coal mines in the States. In March the largest number of fatalities per month occurred, there being 351 lives lost. April had the lowest figure, 73. Unless disasters of unusual magnitude occur between now and the end of the year, these figures signify that the death rate will be substantially lower this year than ever before. Last year the number of deaths was 2,719.

Of the total coal consumed in Alaska in 1911, which amounted to 122,000 short tons, 88,573 tons came from British Columbia, less than 1,000 tons being produced in Alaska. The remainder was shipped from the State of Washington.

It has been the boast of the American Institute of Mining Engineers that it was an international society, representing not only the mining profession of the United States, but also that of Canada and of Mexico. In view of this claim some surprise is expressed that contrary to