

warrant business dealings with our people. Our contemporaries have doubtless learned something of its financial standing and business methods; those who have not would confer a favor on the public if they refused its advertisements at any price.

The history of English investments in Canadian mining enterprises is none too good reading. Abandoned mines and dismantled machinery are standing monuments in many parts of the country to capital that has been misapplied and to management that has been bad. Mr. Thos. Tonge in a letter to the London *Mining Journal*, gives the following reasons for the disappointments realized in mining investments on this side. He says:—

"Many mining enterprises, good and sound in themselves, placed in England, have proved financial failures to the shareholders by reason of the following:—

"1. Over-capitalization. For instance, a property for which the vendor received (say) £20,000, being more than worth every shilling of it, is floated on the British market at (say) £50,000 or £75,000, or even more, with the result that, whereas the property would have paid handsome dividends on a capital of £30,000, no management can make it pay satisfactory dividends on the exaggerated sum at which it is floated.

"2. Exorbitant 'rake-off' by promoters and middlemen, which inevitably is at the expense of the duped shareholder. Too many promoters are not content with a fair remuneration for their trouble, but look for big profits from unloading stock and not from ore shipments.

"3. Excessive office and directors' expenses at the English headquarters, even though involving the curtailing of necessary expenses at the mine. The wealthiest and most experienced and successful mining men in Colorado do not waste their time on public stock companies with the minimum of efficiency and the maximum of red tape formality and office expense, but form themselves into small private syndicates or companies, the capital being furnished by themselves and a few personal friends, and the money put into efficient work on the properties.

"4. Inexperienced and incompetent mining engineers, managers, &c., usually relatives or connections of the directors, sent out to report upon or manage, or in some way draw a salary at the mine."

Everyone acquainted with Canadian mining will endorse the truth of Mr. Tonge's observations. At the same time it is noteworthy that not a few Canadian mines upon which thousands of dollars were expended foolishly have been, and are to-day, being worked at a profit by Canadians and Americans.

The value of one pound of coal at different epochs in steamship evolution has been stated in striking form by Mr. A. J. McGinnis, president of the London Engineering Society. In 1840 a pound of coal propelled a displacement weight of 0.578 ton eight knots; but the earning weight was only one-tenth of this, as 50 per cent. of the displacement represented the machinery and fuel, 40 per cent. of the hull, and 10 per cent., or 0.057 ton, the cargo. In 1850, with iron vessels and the screw propeller, a displacement weight of 0.6 ton was propelled nine knots by the pound of coal; but the proportion of cargo had risen to 27 per cent. or 0.16 ton. In 1860, with high boiler pressure and the surface condenser, 0.82 ton displacement was propelled ten knots, and the cargo was 33 per cent., or 0.27 ton. In 1880 the compound engine was in full swing, and 1.8 tons displacement was propelled ten knots, and the cargo was 50 per cent., or 0.9 ton. In 1880, in the freight steamer, 2.1 tons displacement was propelled ten knots, with still 50 per cent., or 1.05 tons of cargo. In 1895 there were two classes of freight boats: The "tramp" (working better than the tramp on land) propelled 3.4 displacement tons eight and one half knots, with 60 per cent. or 2 tons of cargo. At the same time the huge cargo steamers of the North Atlantic were driving a displacement of 3.14 tons twelve knots with 55 per cent. or 1.7 tons of cargo. On the express passenger steamers the cargo weight is down to 0.09 ton per pound of coal.

The Prussian government has, for the purpose of examining the geological condition of ground, drilled a number of bore holes throughout the coal-fields of Upper Silesia. The deepest hole so far drilled, which is probably also the deepest in the world, has a total depth of 6,510 feet. In its course eighty layers of coal were found, with a total thickness of 290 feet, and besides these practical results the boring of this hole has made possible scientific observations of great interest. The rise of the temperature in the bore-hole was carefully recorded and was found to be one degree Celsius for each 110 feet advanced. This figure is quite in keeping with the generally accepted increase in temperature as obtained by Lord Kelvin at the St. Gotthard tunnel. The work upon this boring was completed in 399 days, which gives an average of a little over 16 feet per day. The cost was \$19,000, or almost \$3 per running foot. During the past fifteen years the Prussian government has had about 400 borings drilled in various localities, for which altogether more than \$3,000,000 were spent. The total length of these holes is 425,000 feet, the average cost being about \$7 per foot.

The first meeting of the Canadian Mining Institute (Federated) will be held at Montreal early in January next year, when a first-class programme of papers and entertainment will be provided.

The members of the Council of the General Mining Association of the Province of Quebec, are requested to meet in the Windsor Hotel, Montreal, on Thursday evening 8th October, for the transaction of business.

The last clean-up of the Cariboo Hydraulic Mining Co. realized a brick of a value of about \$82,000 making a total output so far this season of over \$100,000. It is confidently anticipated that the gold yield for the year from this mine will reach about \$200,000. When the lower and richer benches are reached the output will of course be much greater.

Mr. E. D. Ingall, M.E., Chief of the Division of Mineral Statistics, Geological Survey of Canada was married on 2nd instant to Miss Emily Gertrude (Baldwin) daughter of the late Capt. Fitzgerald. THE REVIEW extends its heartiest congratulations.

One of the best indications as to the kind of management of a mill is the amount of lost time in running. Good records in this respect can only be obtained with good machinery and good management. The following figures, extracted from the last annual report of the Alaska Mexican Mining Company, speak for themselves as to both these essentials. The mill is of 60 stamps, with Frue vanners, supplied by Fraser & Chalmers:

Number of Stamps, 60; weight, 1,020 pounds.
Drops per minute, 97; height of drop, $7\frac{1}{2}$ to $8\frac{1}{2}$ inches
Total tons crushed, 79,439, of 2,000 pounds.
Tons of concentrates produced, 1,597.
Total time lost in 12 months, 5 days, 16 hours.
Of this, time taken for cleanups, 2 days 12 hours.
Actual lost time from other causes, 3 days, 4 hours.

The duty of the stamps was 3.68 tons per 24 hours of running time, the ore being hard quartz and the screen 40 mesh. The total cost of milling, inclusive of the inclusive of the chlorination of sulphurets, was 45 cents per ton of 2,000 pounds. The cost includes every pound of material of every description used in the mill during the year, and all costs of repairs and renewals of machinery. The mill was operated 207 days by water power and 152 days by steam power. The avoidable loss of time is equivalent to only $6\frac{1}{5}$ hours per month. What is still more remarkable in this record of lost time over so long a period is the fact that it includes the necessary time for several changes from water to steam power and *vice versa*.