

PUBLICATIONS.

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"Manual of Hydraulic Mining, for the use of the Practical Miner; Second Edition, revised by T. F. Van Wagman, E.M.; D. Van Nostrand Company, New York; 18 mo., cloth. Price, \$1.00."

This little book should serve a very useful purpose. The information it contains is more or less of an elementary character, but as the author is careful to point out, his aim has been to compile a work that will be of real service to the practical and working miner, who, while rarely deficient in common sense, is generally unacquainted with the principles of physics, and generally rusty in arithmetical methods. In the daily discharge of his business he is continually confronted with engineering problems of more or less complexity, and compelled to depend for their solution—trained engineering advice being unobtainable or too expensive—upon his own limited experience or upon that of his co-labourers, with results that are too often disappointing and perhaps disastrous. It is not, however, claimed for the "Manual" that it will take the place of a trained engineer in important enterprises or that it answers all questions appertaining to hydraulics, nevertheless, to the miner working his own ground, its tables and formulas will undoubtedly prove of great assistance, if only for checking his own calculations. Among the more useful tables are the following: for finding the duty of the miner's inch of water in moving various materials; the nozzle force from head; the reduction of head by friction and bends in the pipe; the size of excavation required to carry stated volume of water, and the relative strength of iron piping.

Chapters 7, 8 and 9 are taken up with rules for the solution of the more ordinary problems which arise in placer mining. In passing we may say that the volume contains the best definition of what constitutes placer ground that we have yet come across. "Gold," we are told, "occurs in gravel deposits in a metallic condition. The chemical and mechanical operations required to separate it from the vein substances with which it was originally associated have all been performed by nature. That wonderful agency has also supplemented her work by again collecting the particles of metal within certain limits. In other words, degradation and erosion of quartz veins has been followed by the partial concentration of the material so broken up; and while this operation has not resulted in an enrichment of the gold-bearing material (on the contrary, it is much poorer, bulk for bulk), the metal is placed in association with substances from which it may be separated with extreme ease and very small cost." The author, after showing that there is far less risk in hydraulic mining than in quartz, suggests that in the former there is an additional advantage that "the extent and richness of the gravel-bed may be completely studied and ascertained before working it and at a slight cost, while vein mining is from first to last more or less of an experiment and a chance." There is certainly some truth in this, but the last sentence might well have been more strongly qualified.

A summary of the mineral production of Canada for 1897 has been issued by the Geological Survey. The value of the metallic products for the year is placed at \$13,996,234, the non-metallic at \$14,542,939, and the estimated value of mineral products not returned at \$250,000, or a total value of \$28,789,173. These figures show an exceedingly gratifying increase, particularly as regards the production of gold, which is found to be nearly 123 per cent. in advance of 1896. The increase here is, of course, largely due to the Yukon discoveries, although the output from British Columbia mines contributed considerably towards the satisfactory results attained. The province in fact is responsible for the increased production of all the principal metals with the exception of nickel, of which the Sudbury mines yielded the increase of 18 per cent.

"Papers and Reports relating to Minerals and Mining," comprising: Statement by the Minister of Mines; Report on the Goldfields; Warden's Reports; Report on Coal Mines; Water Conservation for Mining and Irrigation Purposes, Otago and Westland districts; Report on Geology of Oape Colville Peninsula; Chemistry of the Cyanide Process. Published by authority, John MacRay, Government Printer, Wellington, New Zealand, 1897.

The New Zealand Department of Mines is to be congratulated upon the publication of this exceedingly interesting and bulky report, which, however, appears somewhat late in the

day, for the tables showing the mineral production of the colony are not brought beyond December, 1896. This hardly compares favourably with the work of the British Columbia Bureau. In 1896 the value of the New Zealand precious mineral exports decreased, compared with those of the preceding year, by £120,826 or nearly \$600,000, the falling off being chiefly attributable to the "increased demand for mining properties by English companies and the consequent change of ownership of many of the gold producing mines, together with an alteration of policy in preparing for extensive exploring operations." Doubtless this is the correct explanation, but if so the situation still remains unaltered, for according to the figures published in the *New Zealand Mines Record*, an official monthly journal, the exports of gold and silver bullion from January to December or eleven months of 1897 amounted to a total value of £930,846, which averaging the production at £90,000 per month would bring the values for 1897 rather below those of 1896, of £1,052,017. The report contains a number of excellent maps, and is in every respect a most interesting blue book.

"Lubricants," by J. J. Redwood. Published by Spon & Chamberlain, New York. Price, \$1.50.

This little book contains a considerable amount of information on oils and greases that every engineer should make part of his stock in trade, but there is one great defect in the method of treatment. Bald statements are made regarding important conclusions which readers have no opportunity of checking, for neither the facts nor the arguments by which these conclusions have been reached, are submitted to their consideration. It is very useful to know certain facts of inference, but it is much better to understand the reasoning which establishes such inferential facts.

There is one sentence in the chapter on fatty oils which indicates very clearly the incompleteness of our knowledge of lubricants. It is this: "The only sure way of doing justice to machinery is to try numerous lubricants, and when one is obtained that gives thoroughly satisfactory results, use it and no other."

We are indebted to Messrs. Fraser & Richards, of Ashcroft, for a map showing the route starting from that point to the Yukon gold fields. The map is admirably got up, and will be of great use to those proposing to travel to the North by this road, which for experienced men, having only limited means, is certainly the best.

CORRESPONDENCE.

The Editor does not hold himself responsible for the opinions which may be expressed in this column. No notice will be taken of communications unless accompanied by the full name and address of the writer.

TO THE EDITOR:—I submit the following account of an adventure that befell me the other day, in the hope that it will serve to warn strangers against the dangers that one may expect, even in the quiet streets of Victoria in these days of Klondike lunacy:

A Klondiker, two Klondike dogs, a West Coast prospector not unknown to fame, and the writer, came very near being involved in an appalling catastrophe the other evening on Johnson st., Victoria. The Klondiker was leading his dogs—large, fragrant animals with equilateral triangular ears, jaws like steel traps and coats like door-mats—by a couple of steel chains. The prospector was crossing in front of the outfit when we came upon the scene. The dogs differed as to which side they should pass the prospector, and one went in front of him while the other passed behind, then moving around to speak to his fellow-canine. The result was a tangle of dogs, steel chain, Klondiker and prospector, the latter eventually sitting down on the sidewalk with a jar that made the adjacent store-windows rattle. The electric light shone full on his face and showed a countenance struck as white as ashes, eyes standing out like the proverbial hat-peg, and blue lips that quivered and writhed in a vain attempt to formulate the Queen's English. "What is the matter with you, man?" asked the Klondiker, who, with my assistance, had got out of the tangle, and was now trying to extricate his beasts of prey. "Them there dogs ain't a bit wicked; they'll never hurt you." "Dogs be —" came in hoarse and broken tones from the recumbent one. "Lift me to my teet, for the Lord's sake, and be gentle about it." Thinking the man was seriously hurt, the two of us managed to untwist the dogs and get him