

**IMPROVEMENTS ON OLD PROCESSES.**

**In Time One Hundred Per Cent of Noble Metals Will be Saved.**

Forty years ago the pick and pan saved probably forty per cent of the gold in material the miner handled with much toil and many disappointments.

Modern methods have changed this so that with the stamp mill and amalgam plates the modern miner is plugging away day and night to the tune of a saving of only about seventy-five per cent of the gold values that we ought to get.

In other words, we put a gold dollar in at one end of the mill, and when it comes out at the other it is only seventy-five cents. We are just as foolish and short-sighted as were those other miners forty years ago, and twenty years from to-day we shall be the laughing stock of miners yet to come.

Already the first important improvement over the stamp mill and amalgamating plates has come in the form of the cyanide process, which saves from ninety-five to ninety-seven per cent of the values, and even this process must be improved.

A system of treating ores is coming—and it is probably very near at hand—which will save absolutely 100 per cent., and even then our process will not be perfect, for a big reduction in the expense of operating must come, too.

Practical efforts in this direction have already been made, and there are now on the market and in actual operation grinding machines which unquestionably are better than stamp mills. They do the work better, give you a dry powder, and save the loss of slimes.

They need not be closed down so often for repairs, they save energy. But no practical mining man has time even to look at them. He regards his time-honored stamp mill as the essence of perfection, and says the others are "only for books."

The same man, until a very few years ago, had also a poor opinion of the cyanide process, and declared it was merely the dream of some "city chemist" and would not pan out.

Despite this reluctance to change, however, mining methods to-day are safely established on a commercially profitable basis. On the part of the capitalist, the man who really makes the mine, there is growing a disposition to accord more respect to the numerous claims to improvement which are being advanced, and the next five years will doubtless witness the introduction of some new and greatly improved method.

Ten years ago \$6 ore everywhere, and in some camps \$12 ore was thrown aside as utterly worthless. To-day we have a number of mines operating steadily and paying large dividends from the treatment of ore that runs only \$2 in gold to the ton.

And all over the great west the waste dumps of old mines are now being worked at even greater profit than was derived by the original company—a fact that reflects instantly the progress resulting from the experiments of the last decade.—Exchange.

**Used Scientific Knowledge.**

The earliest data respecting mining shows that the necessity of engineering skill was recognized in the pursuit of the business. The few copies of Agricola extant in its ancient parchment

binding has many rude wood cuts showing men at work underground, with engineers engaged in taking levels or establishing angles by means of plummet and level. Some of these cuts also show the methods of timbering employed in those "early days." In most cases the timbers were not framed, but were selected and cut with the forked limbs. These were used as posts which were employed to support caps laid on the fork. None of these timbers appear to have been framed.

**REVOLUTION IN METALLURGY**

**Process For Treatment of Copper and Other Sulphide Ores.**

It is reported that a process has been perfected for the treatment of copper and other sulphide ores which, according to experts, will bring about a revolution in metallurgy.

The new method will permit of the opening up of hundreds of low-grade copper mines, which have been lying dormant because of the hitherto prohibitive cost of operation.

Former Superintendent Knox of the East Pittsburg Gas company, is the inventor of the new process and the representative, George Westinghouse, has already invested \$2,000,000 in the system.

The method does away with the preliminary roasting of the copper ore, which not only is expensive treatment, but one which kills all vegetation near the smelters.—Mining and Scientific Press.

**Treat Seventy Cent Tailings.**

An index of what the cyanide process is doing for the development and operation of Black Hills, South Dakota, mines is found in the fact that seventy cent tailings are being treated direct from some of the mills of the Homestake Co., at a good profit. It is expected that a still further reduction in cost of treatment will be made.

**Help Build Up The West.**

The low rates from the east to the west and the northwest, February 15 to April 30, will undoubtedly bring out thousands of settlers. Where they will go is largely a question of inducement. If you are interested in securing any eastern people for your section of the west, send their names and addresses to the undersigned. All the facts and figures about the trip will be promptly sent them. H. S. Rowe, General Agent, Chicago, Milwaukee & St. Paul Railway, 134 Third Street, Portland, Ore.

**Timber and Homestead Filings.**

Timber and homestead filings, as well as final proofs, can be made before Charles H. Chance, United States commissioner, office in First Bank of Sumpter building, Sumpter, thus saving applicants expense of a trip to La Grande.

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- Two Houses and Lot on Parkinson Avenue . . . . . 800
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- Corner Lot, good location . . . . . 350
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- 6-Room House, good stable . . . . . 675
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