

**IMPROVED PROCESS.**

**Zinc and Lead Shavings Mixed Mechanically.**

A South African Chemist a few days ago filed application for a patent in the United States on certain new and useful improvements in methods of extracting gold from solutions containing the precious metals, of which the following is a specification, given in the inventor's own language:

This invention relates to methods of extracting gold from cyanide solutions containing the precious metals; and the object I have in view is to improve and cheapen the methods at present known.

I pass the gold bearing solution of potassium cyanide of any strength through launders or boxes containing a mechanical mixture of zinc shavings and lead shavings and allow the gold to deposit on the mixture of metals. The gold is then obtained in the usual way.

I am aware that alloys of metals have been used, but what I claim is the mechanical mixture of these particular metals herein before described.

The advantages of a mechanical mixture of lead shavings and zinc shavings over old forms of lead-zinc couples above described is as follows:

In precipitating the gold from the gold-bearing cyanide solution obtained in the treatment of auriferous battery-slimes these solutions frequently carry finely divided solid matter in suspension. This suspended solid matter becomes deposited all over the surface of the precipitating agent, forming a slimy coating, and thereby protecting it to a great extent from actual contact with the solution, thus gradually lessening its efficiency. In the case of lead-zinc alloys or of a lead-zinc couple formed by lead deposited on zinc fresh solution is not allowed to pass between the zinc and lead particles after the formation of this coating and to thereby become subjected to the action of the galvanic current which causes the precipitation of the gold. In the case, however, of a mechanical mixture of lead and zinc shavings actual experience on a large scale has shown that although the zinc shavings and lead shavings become coated in the manner described, yet there being an appreciable interval between the shavings through which a stream of solution is constantly passing the galvanic current still acts, and passing from the zinc to the lead, causes the precipitation of the gold. In other words, the mechanical mixture of zinc shavings and lead shavings retains its efficiency for the reasons above described longer than other lead-zinc couples in precipitating the gold from the turbid cyanide solutions met with in certain operations of gold extraction, particularly in the treatment of slimes.

Preferably the mixture of lead and zinc shavings is formed as follows: Alternate layers of zinc, lead and paper are made up on a mandrel, forming a compact cylinder, and from this lead and zinc shavings are produced simultaneously as one shaving, the paper giving a division line between the alternate layers of lead and zinc. The lead and zinc thus form an electric couple. Neither lead nor zinc by itself will decompose water nor precipitate gold from a solution in which there is no cyanide, but a mixture of lead and zinc shavings will, and I consider such use of the mixture of shavings within my invention.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

Means for extracting gold from cyanide solutions in depositing cells, consisting in a mechanical mixture of zinc shavings and lead shavings.

**Sample of Turkish Justice.**

Justice is meted out rapidly in Turkey. On one occasion a Kurd picked up a to-

bacco box in the street, which was promptly claimed by an Armenian, just as they were coming to blows a policeman interfered. Both Armenian and Kurd claimed the box, when the former suggested that the Kurd should say what was in it. "Tobacco and cigarette paper," promptly answered the Kurd. "Nothing of the sort," cried the Armenian, "It contains only a five-plaster piece." The box was gravely opened by the policeman, who then said. The Armenian is right and the Kurd is a liar." Here he smote the Kurd's head. "For trouble in deciding this complicated case I keep the five-plaster.

When Europeans are the victims of Turkish injustice in moderately small matters it is, perhaps, a total waste of time to appeal to the counsellor or diplomatic officials. Even if by this means the injustice is put right, so much trouble is involved and so much time wasted that it is better, on the whole, to "cut the loss." The neat manner in which the sultan "cabled" Secretary Hay in the late breach between Turkey and the United States may be taken as a criterion of the fencing ability of the sultan, who as a liar and diplomat is second only to Li Hung Chang.

**ANOTHER WINNER.**

**From the Big Limber District North of Cable Cove.**

The district on Big Limber is the newest in the Sumpter section in point of discovery but it is coming to the front with strides and bounds. Eugene Barthoff was the first to discover the ledge, although it was known to many that a ledge was there. The wash is very heavy and prospecting correspondingly difficult. Finally some low grade ore was struck in the creek bottom and in a few feet the values increased until at a depth of six feet they had \$20 ore, the values being principally in gold, with silver and lead increasing with depth. From this first discovery many locations have been made. G. S. Burkhead has a bond on the Evening Star group some 1300 feet from the Gipse, he brought in a sample of ore to THE MINER office that is a beautiful specimen, being apparently nearly all metal, iron, zinc and lead predominating. The ledge is six feet wide with four feet of good pay ore averaging over \$20 in value. The Gipse was purchased last week by E. A. Kingman, of Boston and the deal for the Evening Star will be closed before this paper reaches the readers.

The ore is a shipping proposition from the grass roots and will be desirable for the smelter.

Many other districts in this immediate vicinity have been slighted and neglected that will some day develop some more surprises. Intelligent prospecting has only just commenced in the camp.

**The Spokane Exposition.**

Manager W. E. Hawley, of the Spokane Industrial exposition, has announced the list of district commissioners who will assist in securing and arranging the displays from the various mining camps. They are:

W. H. Copen, commissioner for the Slocan.

M. J. Greevy, commissioner for Camp McKinney and Rock creek districts, B. C.

O. Clark, commissioner for White river district in the Cascade mountains.

George D. Potter and H. R. Allen, commissioners for the Coeur d'Alene.

J. F. Reedy, commissioner for Pend d'Oreille district.

Captian C. H. Thompson, commissioner for Baker City district and Sumpter.

B. N. Carrier, commissioner for Prairie City, Oregon, district.

W. L. Blossom, commissioner for Murray, Idaho, district.

Prof. L. K. Armstrong, of Spokane, is again in charge of the mineral department.

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