UNITED STATES PATENT OFFICE.

CARL MOLDENHAUER, OF FRANKFORT-ON-THE-MAIN, GERMANY.

EXTRACTING GOLD FROM ITS ORES.

SPECIFICATION forming part of Letters Patent No. 492,221, dated February 21, 1893.

Original application filed February 20, 1992, Serial No. 422,294. Divided and this application filed September 7, 1892. Serial No. 445,251. (No specimens.) Patented in Italy February 27, 1892, XVI, 31,214, and LXI, 250.

To all whom it may concern:

Be it known that I, CARL MOLDENHAUER, a subject of the Emperor of Germany, and a resident of Frankfort-on-the-Main, Germany, have invented new and useful Improvements in Processes of Extracting Gold from its Ores, (for which I have obtained Italian Letters Patent Nos. XVI, 31,214, and LXI, 250, dated February 27, 1892,) of which the following is a specification.

This invention relates to the process of extracting gold from its ores by means of a solution of cyanide of an alkali or alkaline earth and has for its object to render the process more expeditious and considerably cheaper.

In extracting gold from its ores by means of a solution of cyanide of potassium, sodium, barium, &c. the simultaneous oxidation of the gold is necessary and this has hitherto been effected by the action of the air upon the gold which is rendered oxidizable thereby by the action of the cyanide solution.

Instead of depending solely upon the agency of the air for the oxidizing action I employ, to assist the oxidation of the gold, ferricyanide of potassium or another ferricyanogen salt of an alkali or of an earth alkali in an alkaline solution. By this means the oxidation being rendered very much more energetic is effected with a considerably smaller quantity of the solvent. Thus by the addition of ferricyanide of potassium or other ferricyanides to the cyanide of potassium solution, as much as eighty per cent. of potassium cyanide may be saved.

It may be remarked that the ferricyanide of potassium alone will not dissolve the gold and does not therefore come under the category of a solvent hitherto employed in processes of extraction. It does not therefore render unnecessary the employment of the simple cyanide as a solvent but only reduces the amount required owing to the capacity of the ferricyanide to assist the air to rapidly oxidize the gold in the presence of the simple salt. Consequently the cyanogen of the latter is not used to form the gold cyanide compound.

What I claim as my invention, and desire to secure by Letters Patent, is—

The process of extracting gold from its ores consisting in subjecting the ores to the dissolving action of cyanide of potassium in the presence of ferricyanide of potassium, substantially as herein described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CARL MOLDENHAUER.

Witnesses:

FRANZ HASSLACHER,

ALVESTO S. HOGUE.