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APPARATUS FOR WASHING REFUSE CONTAINING PRECIOUS METAL

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This invention relates to an apparatus for washing refuse containing precious metal. According to the invention the refuse is thrown into a water-filled stirring cup which is mounted in an outer vessel. From an opening in the bottom of the stirring cup a pipe leads into a collector from which the deposited metal can be withdrawn, the outer vessel comprising an overflow which communicates with a settling tank from which the clarified water is filled by means of a pump into the funnel shaped top end of the hollow stirring agitator so that the water from washing circulates continuously in the apparatus, the deposited metal being withdrawn without interruption of operation.

An apparatus constructed according to the invention is shown, by way of example, in vertical section, partly in side elevation, in the only figure of the accompanying drawing.

The apparatus consists of a semi-spherical stirring cup a which has radial grooves b in its inner surface converging towards an opening c in the bottom of the cup which opening is closed by a register d having a handle e. From the opening c a pipe f leads to a collector g accessible from the outer side.

A hollow agitator h having a funnel-shaped inlet i at the upper end is located in the stirring cup a. The refuse from sweeping is fed into the inlet i of the agitator from a reservoir k. A water pipe m of the pump n terminates at the inlet i. The stirring cup a is mounted in a vessel o which communicates by an overflow p with a settling tank q separated into several compartments. The clarified water is sucked by the action of pump n into the pipe m.

The operation of the apparatus is as follows:

The stirring cup a and the vessel o are filled with water. The refuse from sweeping containing precious metal is fed from the reservoir k into the funnel-shaped inlet or hopper o' of the hollow agitator h. If the agitator is rotated the heavy particles of precious metal are separated from the mud by the action of the agitator and conducted through the radial grooves b towards the center of the stirring cup a to slip through pipe f into the collector g, if the register d is opened by means of the hand lever e. The light constituents are thrown by the action of the centrifugal force in an outward direction so that they flow over the top edge of the stirring cup a into the outer vessel o. The water which flows from vessel o into the settling tank q draws the light constituents along so that they can settle in the tank. The clarified water from tank q is again fed into the funnel-shaped inlet i by the action of pump n so that the water circulates continuously through the apparatus, this circulation being not interrupted by the removal of the precious metal from collector g.

I claim:

1. An apparatus for washing refuse from sweepings containing precious metal by means of circulating and permanently cleaned water, comprising in combination a stirring cup of semispherical shape and having a central discharge opening in the bottom and radial grooves in its inner surface converging towards said central opening to conduct the heavy particles of the refuse which contain precious metal to said central discharge opening, a hollow agitator in said cup, an outer vessel enclosing said stirring cup and designed to receive the water with the light refuse particles flowing over from said stirring cup, a settling tank under said outer vessel, an overflow connecting said outer vessel to said settling tank, and means for lifting the water from said settling tank into said hollow agitator.