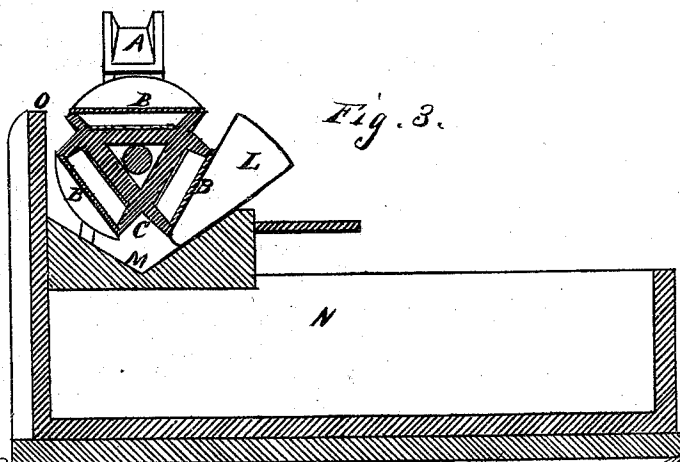
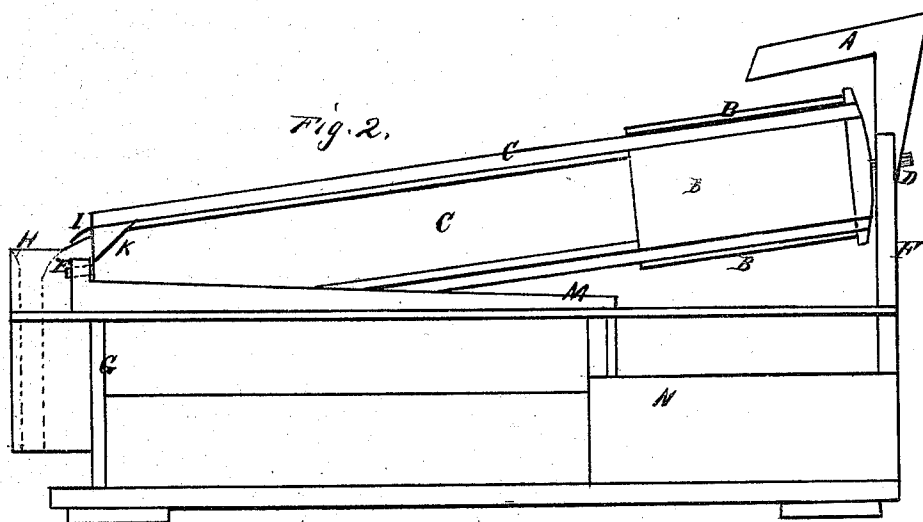
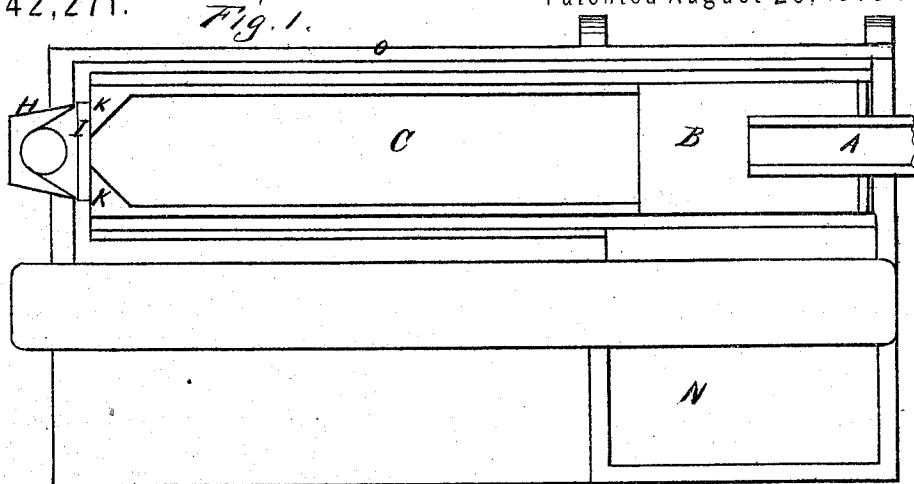


W. H. PATTON.

Rotating Blanket-Sluices for Washing Ores.

No. 142,271.

Patented August 26, 1873.



Witnesses.

John L. Borne

C. W. Richardson

William H. Patton
by Dewey & Co
attys

UNITED STATES PATENT OFFICE.

WILLIAM H. PATTON, OF OAKLAND, CALIFORNIA.

IMPROVEMENT IN ROTATING BLANKET-SLUICES FOR WASHING ORE.

Specification forming part of Letters Patent No. **142,271**, dated August 26, 1873; application filed June 13, 1873.

To all whom it may concern:

Be it known that I, WILLIAM HENRY PATTON, of Oakland, Alameda county, State of California, have invented a Rotating Blanket-Sluice; and I do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains, to make and use my said invention, without further invention or experiment.

My invention relates to certain improvements in blanket-concentrators now used for separating the metallic particles, amalgam, sulphurets, or other heavy substances from the material passing down the sluices, either in quartz-mills or ordinary mining operations, as more particularly hereinafter described.

In order to more fully illustrate and explain my invention, reference is had to the accompanying drawings forming a part of this specification, in which—

Figure 1 is a plan or top view. Fig. 2 is a side elevation. Fig. 3 is a transverse section.

A represents a small portion of an ordinary mining sluice or the sluice through which the material from a quartz battery or stamp-mill passes. B is a baffling-plate, of wood or metal, to receive the impact of the material falling from A and distribute the same evenly over the blanket-surface while protecting it from wear. C is the rotating sluice, composed in this case of three sluice-boxes, thus forming a triangular cross-section. The length may be in common practice from twelve to twenty feet, and width of each sluice from twelve to twenty-four inches. The bottom of each sluice is covered with blanket or other suitable material, having its lower end loose to allow the escape of air. D and E are the journals sustaining the rotating sluice, and on which it turns in bearings supported by the frames F and G, the sluice being inclined to any desired grade.

Any one of the three sluices composing the rotating sluice may be set uppermost, so that the material will fall from the end portion of A of the ordinary sluice upon the upper

end of the blanket-sluice, and be conveyed along it to the lower end, where it passes into the tail-sluice H.

During the passage of the material over the blanket-surface the metallic particles, amalgam, sulphuret, or other heavy substances, are arrested by the fibers of the blankets in the usual way of concentrating with blankets.

When the sluice in use has become charged with concentrations a partial rotation will expose a fresh blanket-surface to receive the material flowing from A, and at the same time the sluice already charged in a convenient position to be washed by a stream of water directed upon it from a hose.

At the lower end of each sluice is an apron, I, being a piece of flexible material, such as India rubber or oil-cloth, or other like fabric, which will overlap the space between the end of the rotating sluice and the tail-sluice H. Each apron I is inserted under the blanket and secured to the sluice-bottom by two strips, K K, which are placed so as to contract the discharge from the sluice and insure clean delivery into the tail-sluice. A side-board, O, is secured vertically at one side of the rotating sluice and V-shaped trough, and in rotating the sluice C so as to bring the first-surface uppermost it should always be rotated toward the board O, so that the overflow and splash resulting will be directed into the trough M also. L is a tapering wedge or key of wood, say two inches thick.

The rotation of the sluice is effected by hand of the attendant, who secures it in position by inserting the wedge L between the rotating sluice and V-shaped trough underneath.

The particular number of sluices composing the rotating sluice is immaterial, although I prefer three, for the reason that the inclination thus given to the sluice charged with concentrations facilitates the removal thereof.

M is an inclined V-shaped trough located under the rotating sluice receiving the concentrations as washed therefrom, and carrying the same to a tank, N. The inclination of the

trough M may coincide with the sluice C, or be in the reverse direction, as in the present instance, according to the most convenient location for the tank or the amount of fall available.

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

1. The sluice-boxes C, constructed with blanket-coverings, loose at the lower ends to allow the escape of air, as described.

2. The baffling-plate B, for protecting the blankets and distributing the material.

3. The flexible apron I at the discharge ends of the sluices, constructed to operate substantially as described.

In witness whereof I hereunto set my hand and seal.

WILLIAM H. PATTON. [L. S.]

Witnesses:

JOHN L. BOONE,

C. M. RICHARDSON,