(No Model.)

H. BOLTHOFF.

MORTAR FOR STAMP MILLS.

No. 515,896. Patented Mar. 6, 1894.

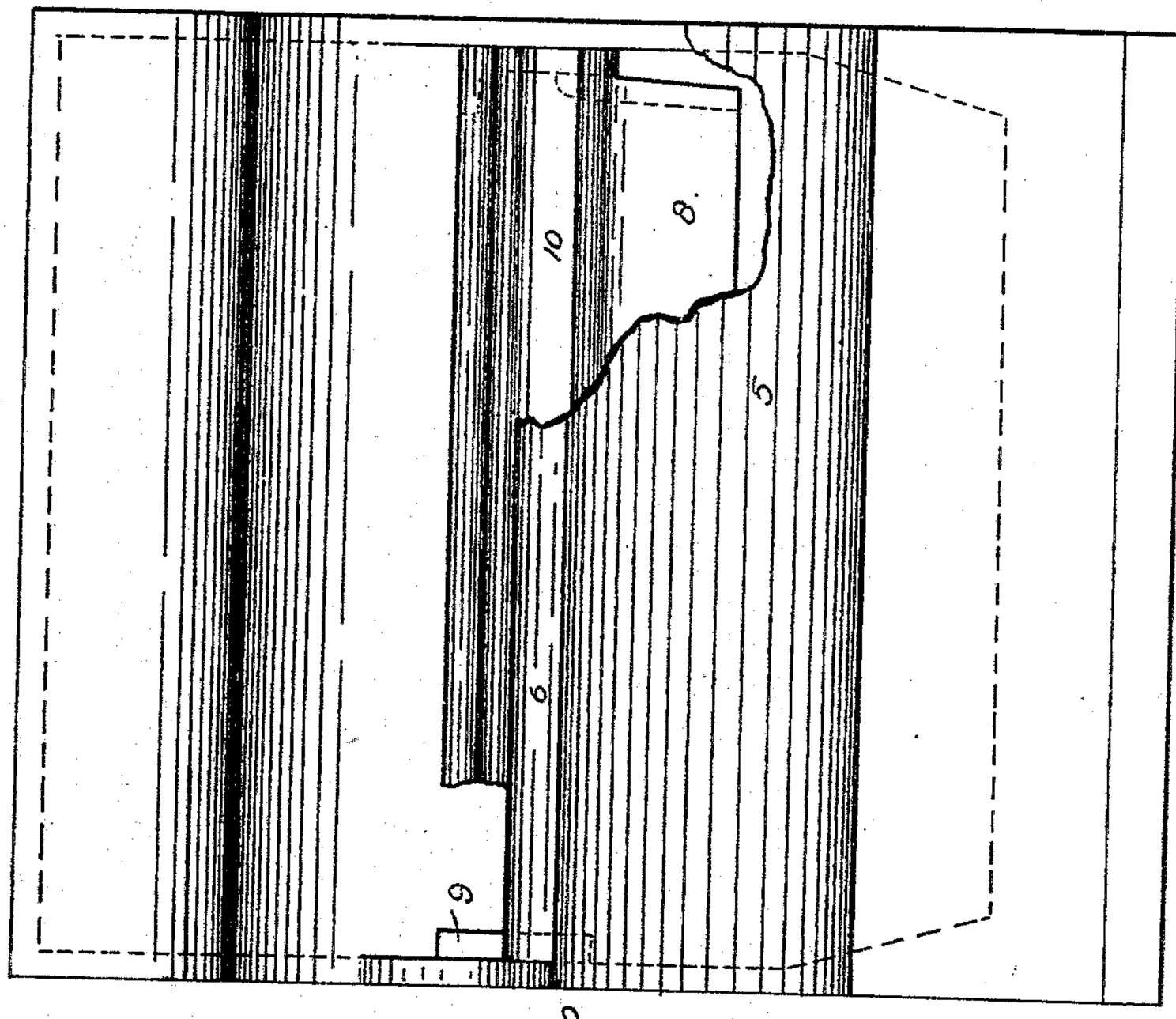

Fig. 2.

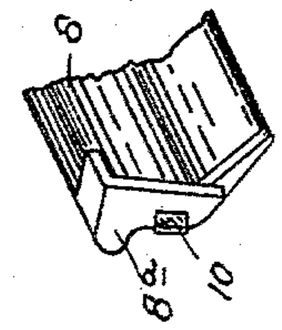

Fig. 3.

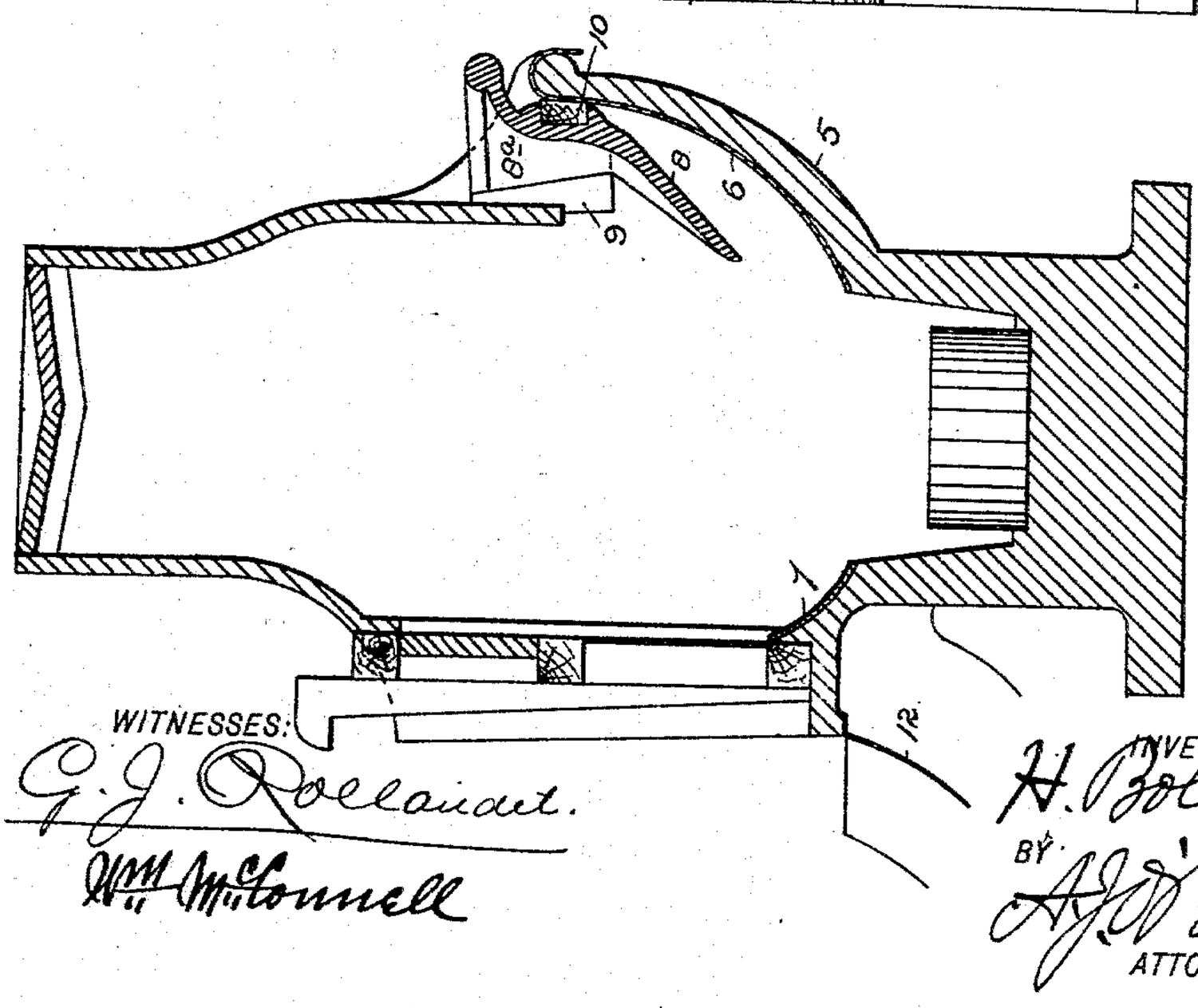

Fig. 1.

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MORTAR FOR STAMP-MILLS.

SPECIFICATION forming part of Letters Patent No. 515,896, dated March 6, 1894.

Application filed January 14, 1893. Serial No. 458,434. (No model.)

To all whom it may concern:

Be it known that I, HENRY BOLTHOFF, a citizen of the United States of America, residing at Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Mortars for Stamp-Mills; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in mortars for stamp mills and has special reference to the feed board mechanism and the shape of the inner walls below the feed and discharge openings.

My object is to attain the maximum in simplicity and economy of construction together with the highest degree of durability and efficiency in use.

To these ends the invention consists of the features, arrangements and combinations hereinafter described and claimed, all of which will be fully understood by reference to the accompanying drawings in which is illustrated an embodiment thereof.

In the drawings, Figure 1 is a longitudinal vertical section taken through the mortar. Fig. 2 is a front view in elevation showing the feed board and outer wall partly broken away. Fig. 3 is a fragmentary detail view in perspective of the feed board.

Similar reference characters indicating corresponding parts or elements of the mechanism in the several views, let the numeral 5 designate the outer wall of the mortar which is interiorly curved below the feed and discharge openings and provided with amalgamating plates 6 and 7 of corresponding shape. Heretofore these plates and their corresponding walls have occupied inclined planes. The object of the plates being to catch the free gold in the pulverized ore which may come in contact with them during the operation of the stamps, it follows that the curved plate is better adapted to perform this function than one whose face occupies an inclined plane, for the reason that the curve offers the greater resistance to the powdered material, which in consequence is longer retained on the plates. In other words the curved plate presents the greater surface to the pulverized ore, since any arc of the circle is longer than its chord. The curved plates having the greater surface area and offering the greater resistance to the ore will necessarily be attended with superior results as compared with the old style constructions. The bottom of the amalgamating table 12 leading from the discharge opening of the mortar is also curved as shown at Fig. 1. This curvature of the outer table is for the same purpose and has the same advantages as heretofore claimed for curved inner amalgamating plates.

My improved feed board 8 is of suitable shape to discharge the ore advantageously into the mortar. It is provided at its sides with flanges 8^a preferably cast integral therewith, this construction being shown in the drawings. The free edges of these side flanges are inclined toward the face of the board proper, whereby they decrease in width toward the bottom where they are most narrow. These inclined edges of the side flanges engage oppositely inclined edges of lugs or projections 9 with which the outer surface of the mortar wall is provided. These projections lock the feed board in place, since the side plates or flanges of the board and the lugs or projections on the wall wedge together. The feed board is provided with a buffer 10 composed of wood or other suitable material set into a recess or recesses formed on its rear side. This buffer engages the upper portion of the curved amalgamating plate 6 when the feed board is in place, and locks or fastens the plate in position. The object of the buffer is to prevent injury to the plate by the engagement of the feed board which is formed wholly of metal with the exception of this feature. This amalgamating plate 6 is simply hooked over the outer lip of the mortar's mouth and is removable at pleasure after the feed board is taken out.

Having thus described my invention, what I claim is—

1. A stamp mill mortar having longitudi-

nally curved amalgamating plates, supported upon and engaging the walls of the mortar, substantially as described.

2. The combination with a mortar of a feed board having inclined side plates or flanges engaging oppositely disposed inclined lugs or projections with which the wall of the mortar is provided whereby the feed board is automatically locked in place, substantially as described.

3. The combination with a mortar provided with an amalgamating plate of a feed board having side flanges engaging oppositely disposed locking lugs or projections on the wall of the mortar, the portion of the feed board contiguous to the amalgamating plate being provided with a buffer of wood or other suitable material, substantially as described and for the purposes set forth.

4. The combination with the mortar wall provided with an amalgamating plate of a feed board carrying side flanges adapted to engage locking lugs or projections on said wall, the back of the board being provided with a buffer located in a recess formed therein, substantially as described.

5. The combination with a mortar provided with a removable amalgamating plate supported upon the inner surface, and a feed board carrying inclined flanges engaging counterpart projections formed on the outer wall of the mortar whereby the board is locked in place, the outer surface of the board engaging the amalgamating plate and securing the latter in position, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY BOLTHOFF.

Witnesses:
WM. MCCONNELL,
J. E. RAY.