No. 853,044. PATENTED JULY 2, 1907.

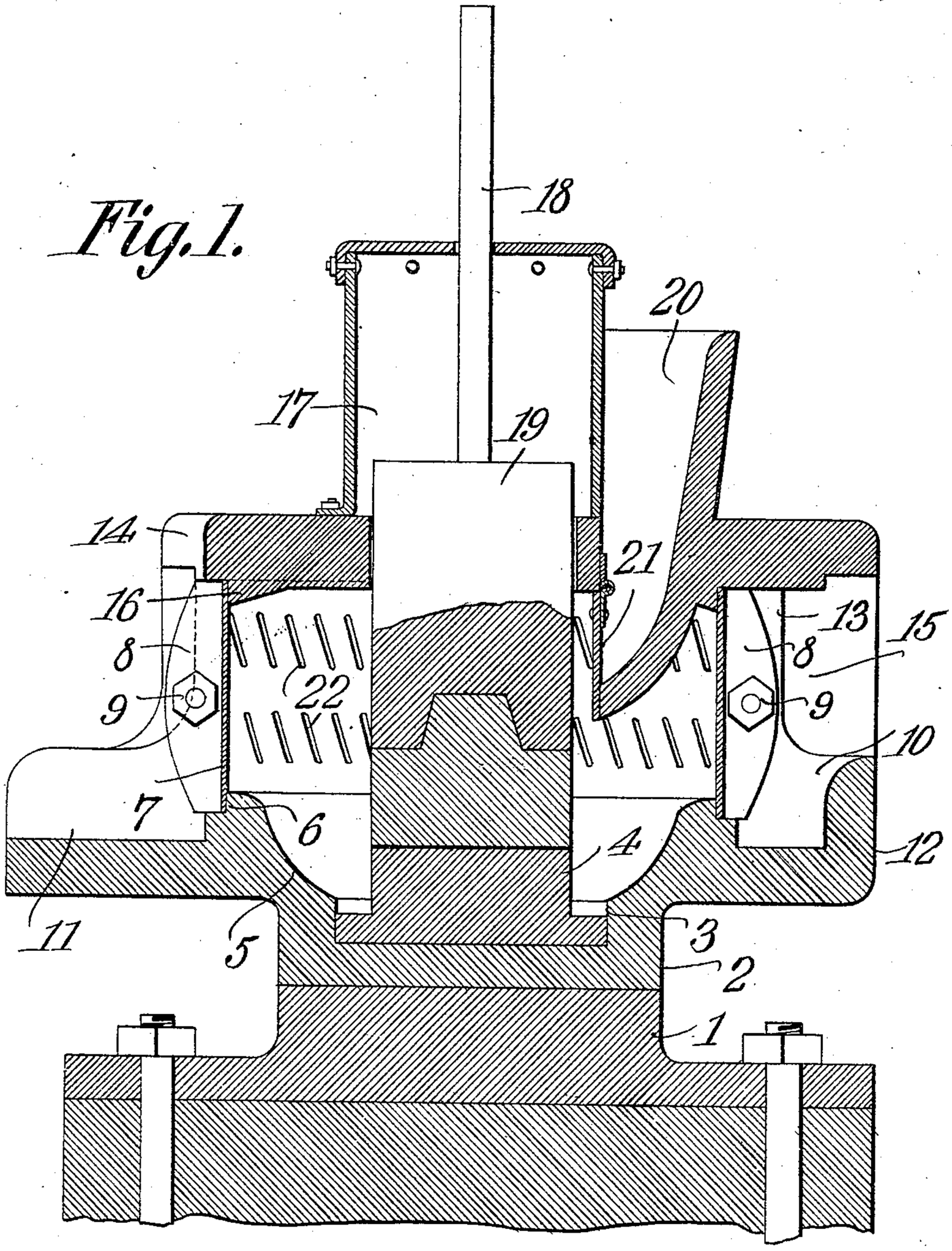
J. E. BROOKS.

ORE STAMP MILL.

APPLICATION FILED OCT. 1, 1906.

2 SHEETS—SHEET 1.

Fig. 1.



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No. 859,044. PATENTED JULY 2, 1907.

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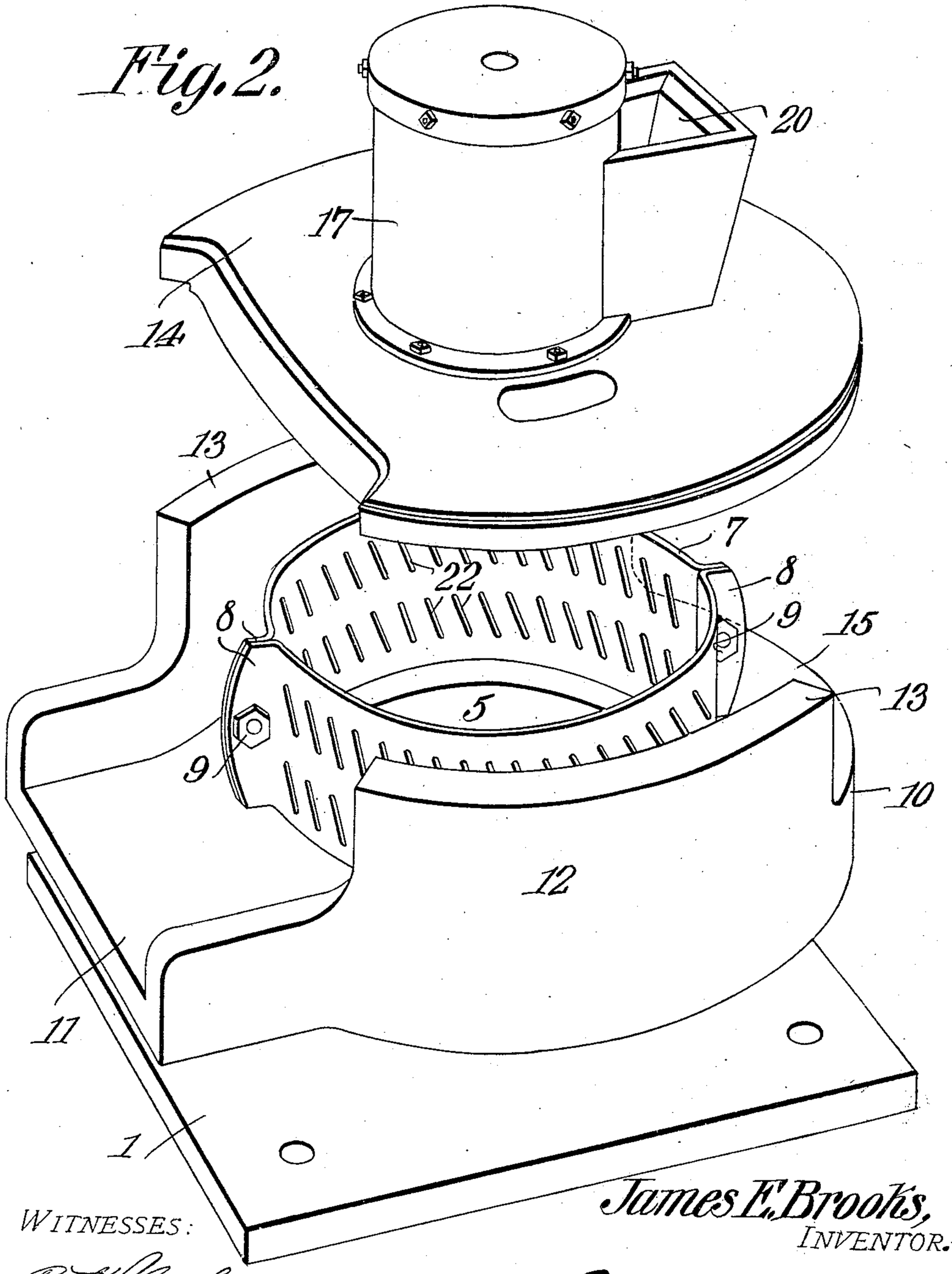
2 SHEETS—SHEET 2.

Fig. 2.



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UNITED STATES PATENT OFFICE.

JAMES E. BROOKS, OF CRAWFORDSVILLE, OREGON, ASSIGNOR OF ONE-HALF TO JAMES C. MUNKERS, OF CRAWFORDSVILLE, OREGON.

ORE-STAMP MILL.

No. 859,044. Specification of Letters Patent. Patented July 2, 1907.

Application filed October 1, 1906. Serial No. 336,897.

To all whom it may concern:

Be it known that I, JAMES E. BROOKS, a citizen of the United States, residing at Crawfordsville, in the county of Linn and State of Oregon, have invented a new and useful Ore-Stamp Mill, of which the following is a specification.

This invention relates to ore stamp mills.

The object of the invention is to improve and simplify the construction and to increase the efficiency in operation of such mills by providing an improved mortar which is adapted to receive a continuous, uninterrupted, circular screen by means of which the ore pulp may be discharged on all sides of the die and stamp, whereby the output of the mill is greatly increased.

With the foregoing and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of the following claims without departing from the spirit of the invention or sacrificing any of its advantages.

In the accompanying drawings forming part of this specification: Figure 1 is a vertical section, partly in elevation, through a stamp mill constructed in accordance with the present invention; and Fig. 2 is a perspective view thereof showing the cover of the mortar in raised position.

Like reference numerals indicate corresponding parts in the different figures of the drawings.

The reference numeral 1 indicates the base, which may be of any suitable form and construction. Mounted upon the base 1 is a mortar body 2 which is formed with a die recess 3 in which is mounted a die 4. The die recess 3 is formed with a flared rim 5 having in its upper portion a circular rabbet 6 adapted to receive a circular screen 7. The screen 7 preferably is formed of two semi-circular pieces, each having outwardly extending flanges or lugs 8 at the meeting ends thereof and through which are passed bolts or other fastening devices 9. Surrounding the circular screen 7 and flared rim 5 is an annular overflow trough 10. Communicating with one side of the annular overflow trough 10 is a lip 11 which is adapted to receive the ordinary amalgam plates for acting on the ore pulp which escapes through the screen 7 into the overflow trough 10. The outer wall 12 of the overflow trough 10, on opposite sides of the lip 11, is extended upward as indicated at 13, to form supporting members for the cover 14 of the mortar body which is suitably secured to the supporting members. The outer wall 12 of the overflow trough 10, at a point opposite the lip 11, is cut away to form a segmental opening 15 through which the meeting edges of the flanges 8 of the screen 7 will be exposed at one side of the screen, the other side of the screen being exposed above the lip 11, whereby an old screen can be readily replaced at any time, as will be apparent. The cover 14, on its lower surface, is formed with an annular shoulder 16 which projects downward into the upper end of the screen 7 so as to hold the same in proper position in conjunction with the rabbet 6 of the flared rim 5.

Bolted or otherwise suitably secured upon the cover 14 is a dome 17 through the upper end of which projects the stem 18 of the stamp 19 which is adapted to reciprocate in the dome 17 so as to crush any ore located upon the die 4. The ore, suitably mixed with water, is fed down through the cover 14 by means of a feed spout 20, which is suitably connected with the dome 17 as shown and is provided at its lower end with an automatic or gravity-actuated door 21. The door 21 is adapted to open inwardly so as to permit the entrance of ore to the mortar, said door being adapted to close when the proper amount of ore has been fed to the mortar so as to prevent any pulp from being splashed up the feed spout.

While any suitable form of screen 7 may be employed in connection with the improved mortar body, said screen preferably is formed with inclined pin slots 22.

Constructed as described, the operation of the improved mill may be briefly described as follows: The ore is fed into the die recess 3 through the feed spout 20, together with a quantity of water, and is crushed upon the die 4 by means of the stamp 19. The ore pulp thus formed rises over the flared rim 5 which, if desired, may be provided with amalgam plates of ordinary form, and the pulp which has been crushed fine enough passes through the pin slots 22 of the screen 7 into the overflow trough 10 from which it flows out on to the lip 11.

The peculiar advantage of the present die stamp is that it permits the use of a circular screen 7, as described, said screen not being interrupted even by the usual mortar sections, for which reason the pulp can escape on all sides of the die recess and the output of the stamp is consequently increased to a very large degree. Furthermore, by the use of an uninterrupted screen, the interior space of the stamp which is liable to become splashed with ore pulp is decreased to a minimum.

For the purpose of removing any little pieces of wood or other particles which may inadvertently enter the feed spout 20 with the ore and clog the screen

7, the cover 14 is formed with a plurality of hand holes 23 through which a hand can be readily inserted for cleaning the screen.

The improved mortar of this invention is strong, simple, durable and inexpensive in construction as well as thoroughly efficient in operation.

What is claimed is:

A stamp mill comprising a base, a body mounted thereon and having a die recess surrounded by an annular rim, a screen surrounding the rim, a lip extending from the body, an annular trough surrounding the screen and opening on to the lip, said trough having upwardly extending oppositely disposed walls, a cover bearing upon said walls and having an annular flange projecting into the screen, said cover having a central opening, a stamp guided within said opening and disposed above the die, a dome extending upward from the cover and over the stamp and opening, a feed spout extending along one side of the dome and through the cover, said spout being disposed to feed material into the screen and toward the stamp, and a gravity actuated door suspended across the discharge end of the spout.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JAMES E. BROOKS.

Witnesses:
W. H. SCOTT,
JOHN A. GUION.