

C. C. Stevenson.
Ore Amalgamator.

N^o 102,177.

Patented Apr. 19, 1870.

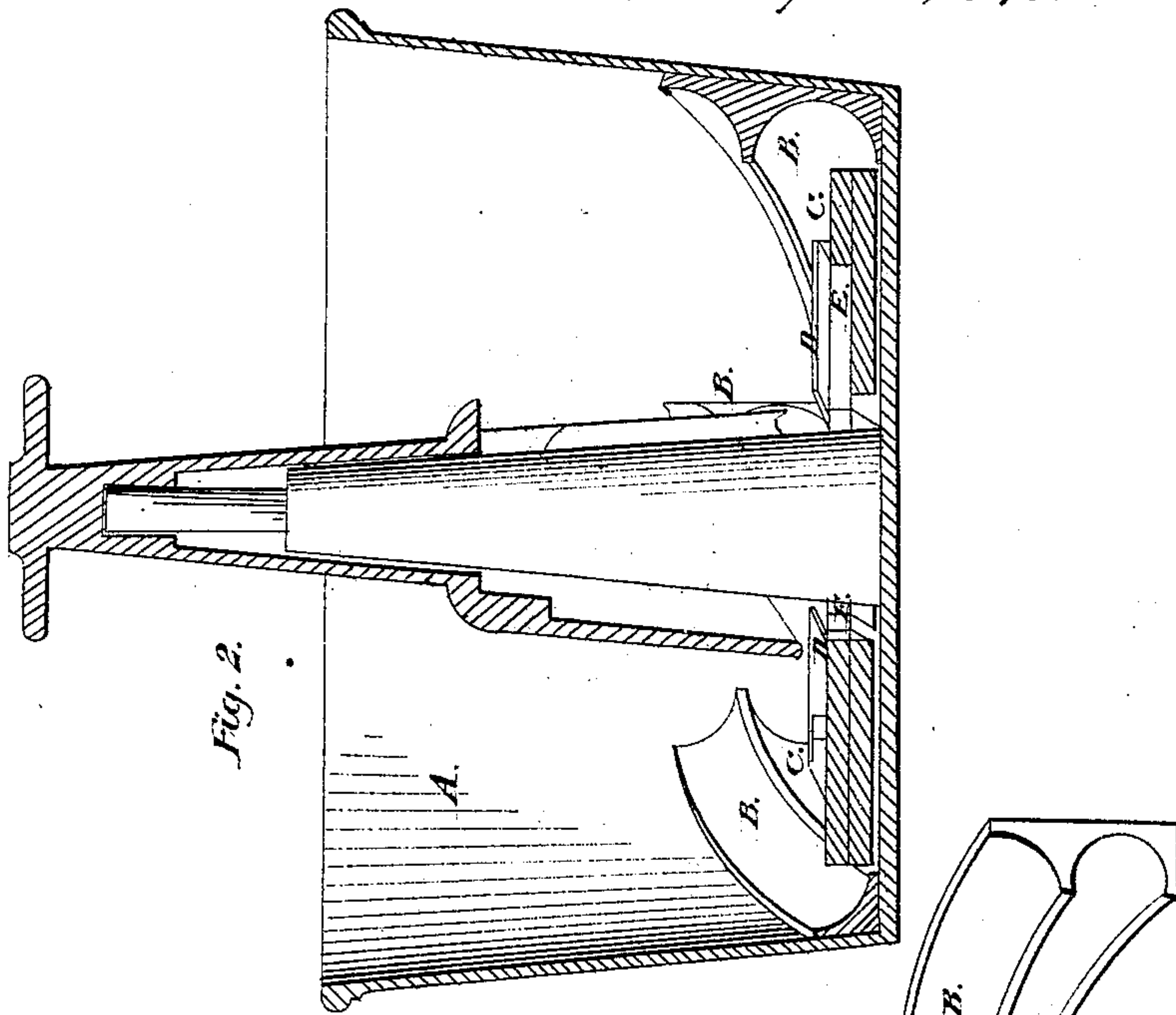


Fig. 3.

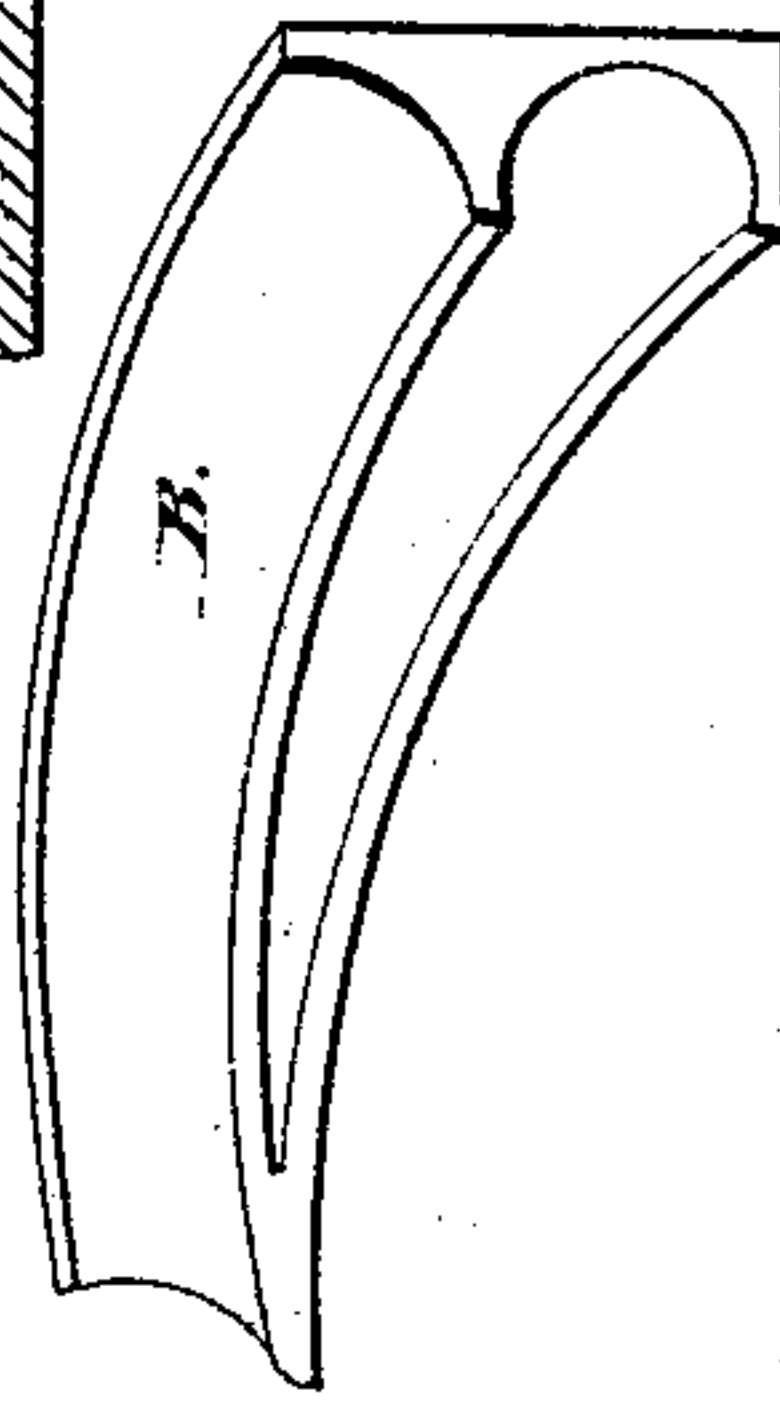
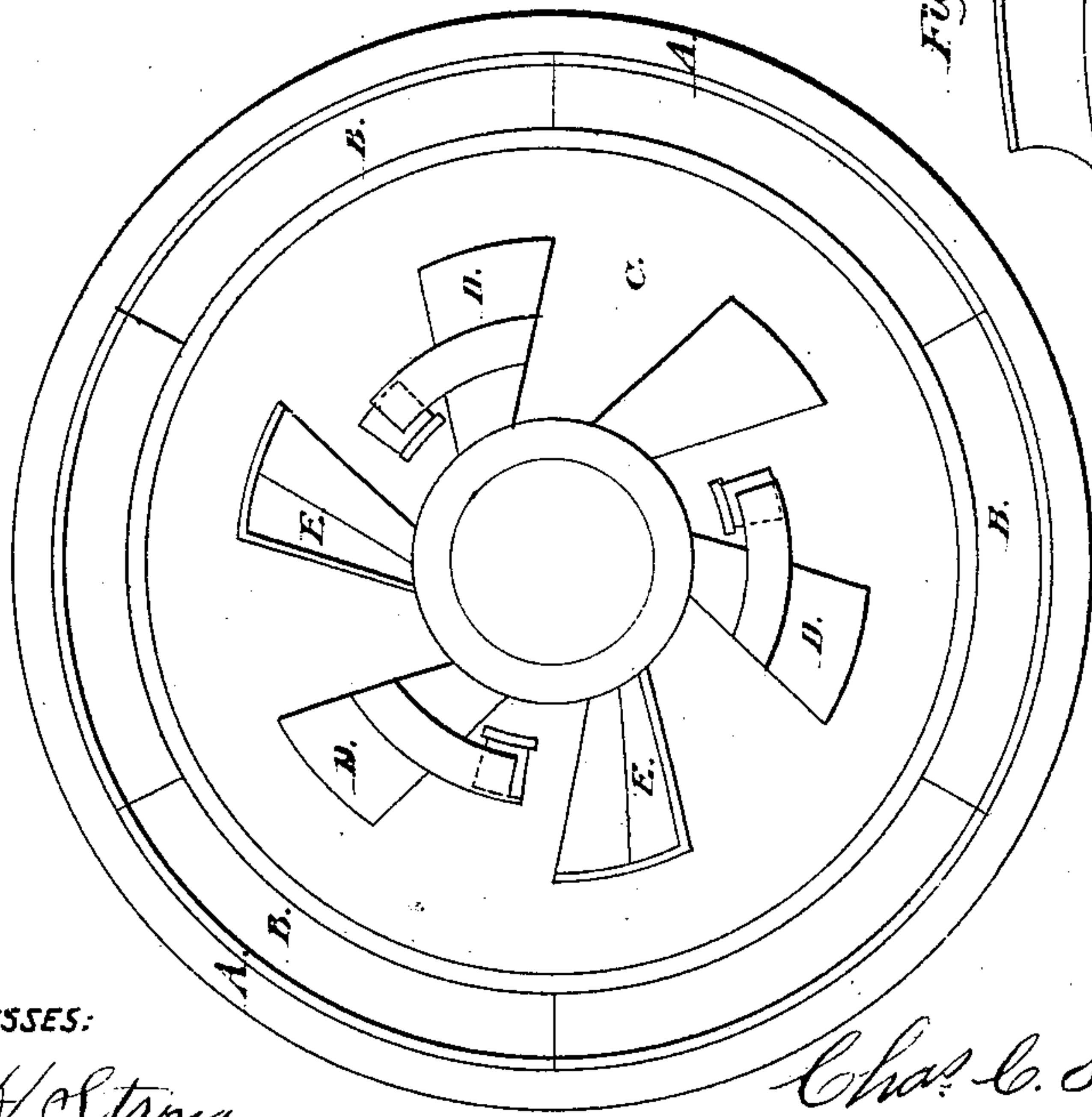


Fig. 1.



WITNESSES:

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United States Patent Office.

CHARLES C. STEVENSON, OF GOLD HILL, NEVADA.

Letters Patent No. 102,177, dated April 19, 1870.

AMALGAMATOR

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, CHARLES C. STEVENSON, of Gold Hill, county of Storey, State of Nevada, have invented an Improved Grinder and Amalgamator; 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 or improvements, without further invention or experiment.

The object of my invention is to provide an improved grinding and amalgamating pan, in which I construct a series of inclined wings or guides, of such form that the pulp, as it escapes from beneath the muller at the outside, will be carried up by these inclined guides, thus meeting with the minimum resistance at the sides of the pan, and being started on its return to the center, above the muller, with the least expenditure of power.

My invention also consists in providing a series of covered openings or housings on the upper surface at the inner periphery of the muller, by which the current of the pulp is forced beneath the muller at that point, so that the whole receives a thorough and perfect grinding.

To more fully explain my invention, reference is had to the accompanying drawings and the letters of reference marked thereon, of which—

Figure 1 is a plan of my pan and muller.

Figure 2 is a side sectional elevation.

Figure 3 is a perspective view of a single guide.

Similar letters of reference in each of the figures indicate like parts.

A is a pan, usually constructed of iron, with a series of movable dies at the bottom.

The guides or wings B are placed around at the angle formed by the sides and bottom of the pan, being formed in section, so as to be easily replaced.

The surface presented to the moving pulp is so grooved that as the current from beneath the muller strikes it, it glides up this curve with very little resistance, there being no square surface against which it can act directly, as in other pans.

As the pulp moves up the incline surface, it is, by

the peculiar shape and curve, turned over as by a plowshare, and diverted toward the center of the pan.

In case there is more mercury than can be held in suspension by the pulp, it is not permitted to settle, but is carried up each incline and poured off into the pulp below thus exposing its whole surface to the action.

The muller C is constructed with shoes, and operated by a central shaft in the ordinary manner.

Around its inner periphery on the upper surface are a series of raised plates, D, placed at an angle, so that they cover the openings E, facing toward the pulp as they revolve.

These elevated plates take in the pulp, and force it toward the center and through the openings E E by the motion of the muller, so that every portion is in turn passed beneath the muller.

By constructing my pan in this manner I secure, first, a nearly level surface of pulp, which is difficult to attain in fast-moving pans; second, it presents the least possible resistance to the motion of the pulp, and most effectually subjects the whole to the grinding and amalgamating process, while, by the peculiar action of the guides on the pulp, it is constantly lifted and prevented from bearing too heavily upon the muller, thus allowing a larger amount to be worked at once.

Having thus described my invention,

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

The combination in an amalgamator of the guides B, curved spirally lengthwise, and having their upper surfaces concave transversely, for throwing the pulp upon and toward the center of the muller, with the inclined plates D and openings E, for carrying the pulp beneath the muller again, substantially as described.

In witness whereof I have hereunto set my hand and seal.

C. C. STEVENSON. [L. s.]

Witnesses:

J. L. BOONE,

GEO. H. STRONG.