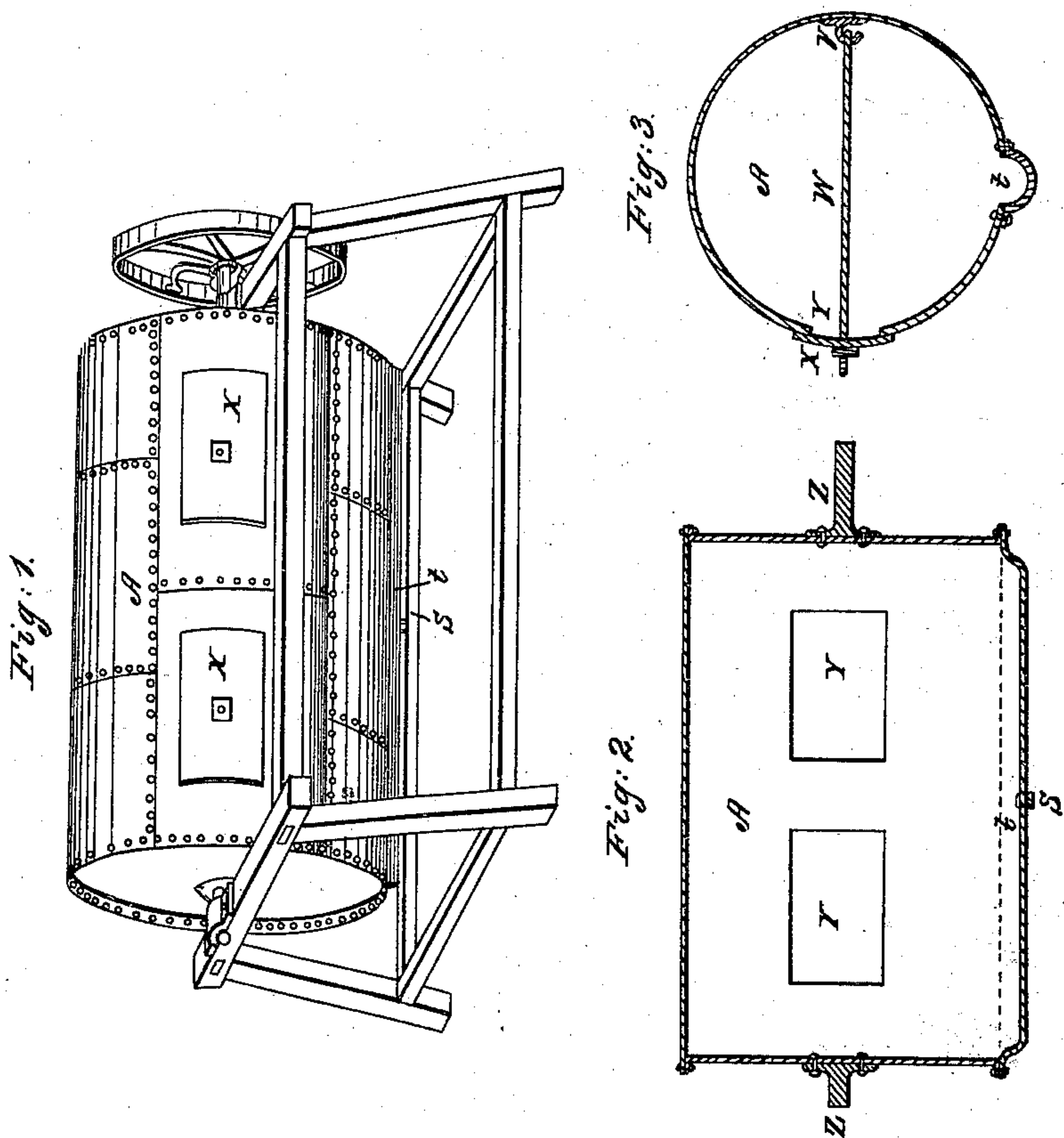


S. G. STURGES.

Amalgamator.

No. 58,149.

Patented Sept. 18, 1866.



Witnesses:

W. M. Gooding
Charles Skinner

Inventor:

Stephen G. Sturges

UNITED STATES PATENT OFFICE.

STEPHEN G. STURGES, OF NEWARK, NEW JERSEY.

IMPROVED AMALGAMATOR.

Specification forming part of Letters Patent No. 58,149, dated September 18, 1866.

To all whom it may concern:

Be it known that I, STEPHEN G. STURGES, of the city of Newark, in the county of Essex and State of New Jersey, have invented an Improved Amalgamator for use in Separating the Precious Metals from their Ores; and I do hereby declare the following to be a full and exact description of the same, reference being had herein to the drawings accompanying this specification, and which make part of the same.

The nature of my improvement consists in the addition to the agitator of the mass of ore and quicksilver of a side pocket, for the uses and purposes hereinafter stated.

In the drawings, Figure 1 is a view of the amalgamator with the pocket attached thereto. Fig. 2 is a sectional side view, and Fig. 3 is a sectional end view, of the same.

A cylinder, A, constructed of iron, of any length and diameter required, is suspended upon the journals Z, motion being given thereto by belt or gearing, as desirable. Apertures Y are made for the introduction of the rock or earth, that are closed by the lids X, the lids being securely held down by the screw-bolt W, one end of which takes hold of a hook, V, that is fast to the cylinder opposite to the opening. The other passes through the lid X, and by the nut and screw thereon it draws down to a tight joint the covers, with or without packing, as the case requires, the bolts forming supports strengthening the cylinder.

At or about one-quarter of the circumference, measuring from the apertures, a long slot is cut, extending nearly the whole length of the cylinder, and this slot is covered by the flute or pocket *t*, which is riveted or otherwise made fast with a water-tight joint to the cylinder A. This pocket can be formed on the sheets of iron out of the sheet itself, if necessary so to do. The object of this pocket *t* is to receive the amalgam as the cylinder revolves and redistribute the mercury into the mass of ore, and it is placed at one-quarter turn from the openings, that it may be at the bottom when the lids are removed for drawing or renewing the charge of ore; and as there is a hole and a plug, S, in the middle of the length of the pocket the amalgam can be drawn therefrom at any time during or at the finish of the process.

What I claim as my improvement, and desire to secure by Letters Patent of the United States, is—

1. The flute or pocket *t*, when attached to a reciprocating or revolving cylinder, in the manner and for the purpose substantially as shown.

2. The bolts W, extending across as supports to the cylinder, when used in combination with the pocket attached to the cylinder.

STEPHEN G. STURGES.

Witnesses:

W. M. GOODING,
CHAS. H. SKINNER.