

TRIPP & CURTIS.

Amalgamator.

No. 54,075.

Patented April 17, 1866.

FIG. 1.

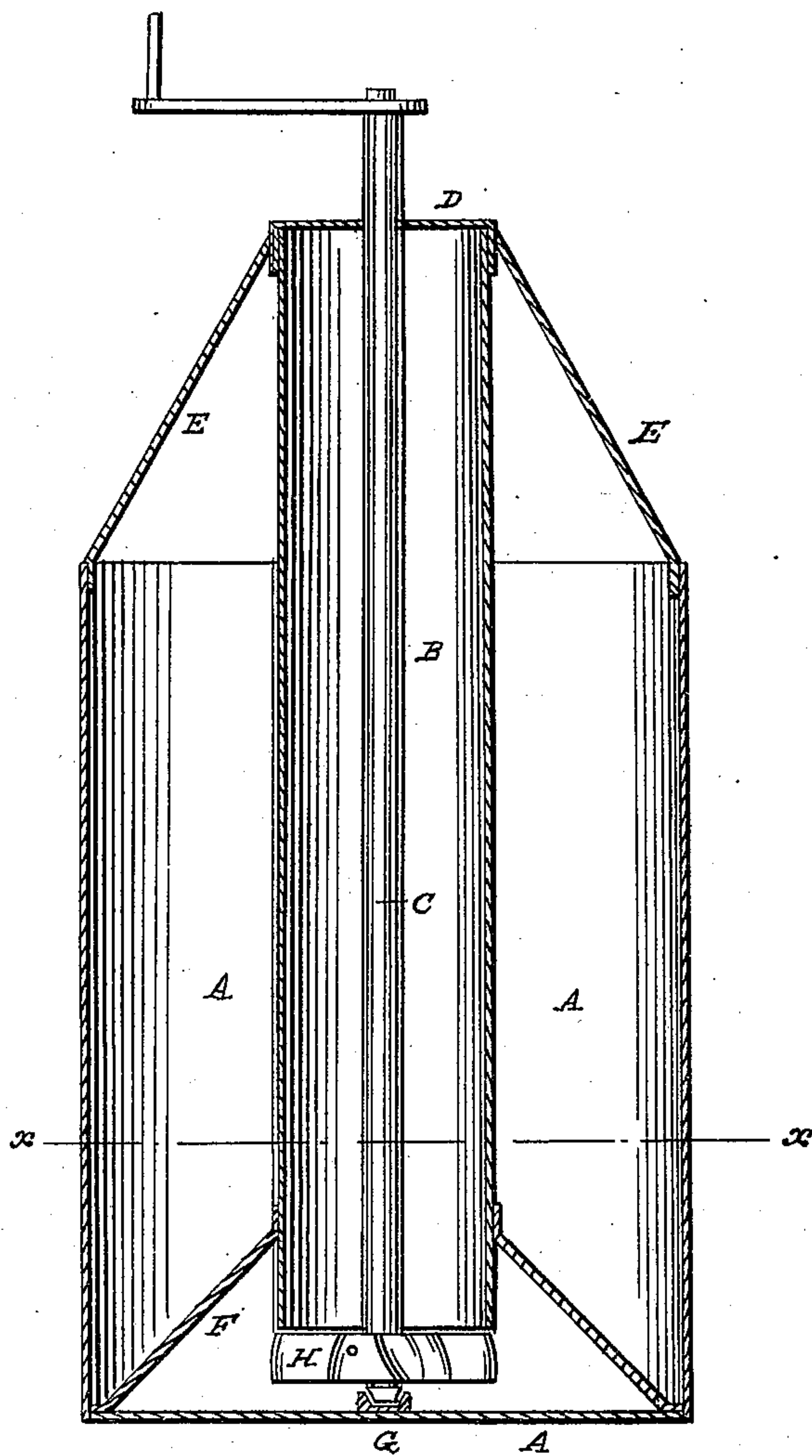
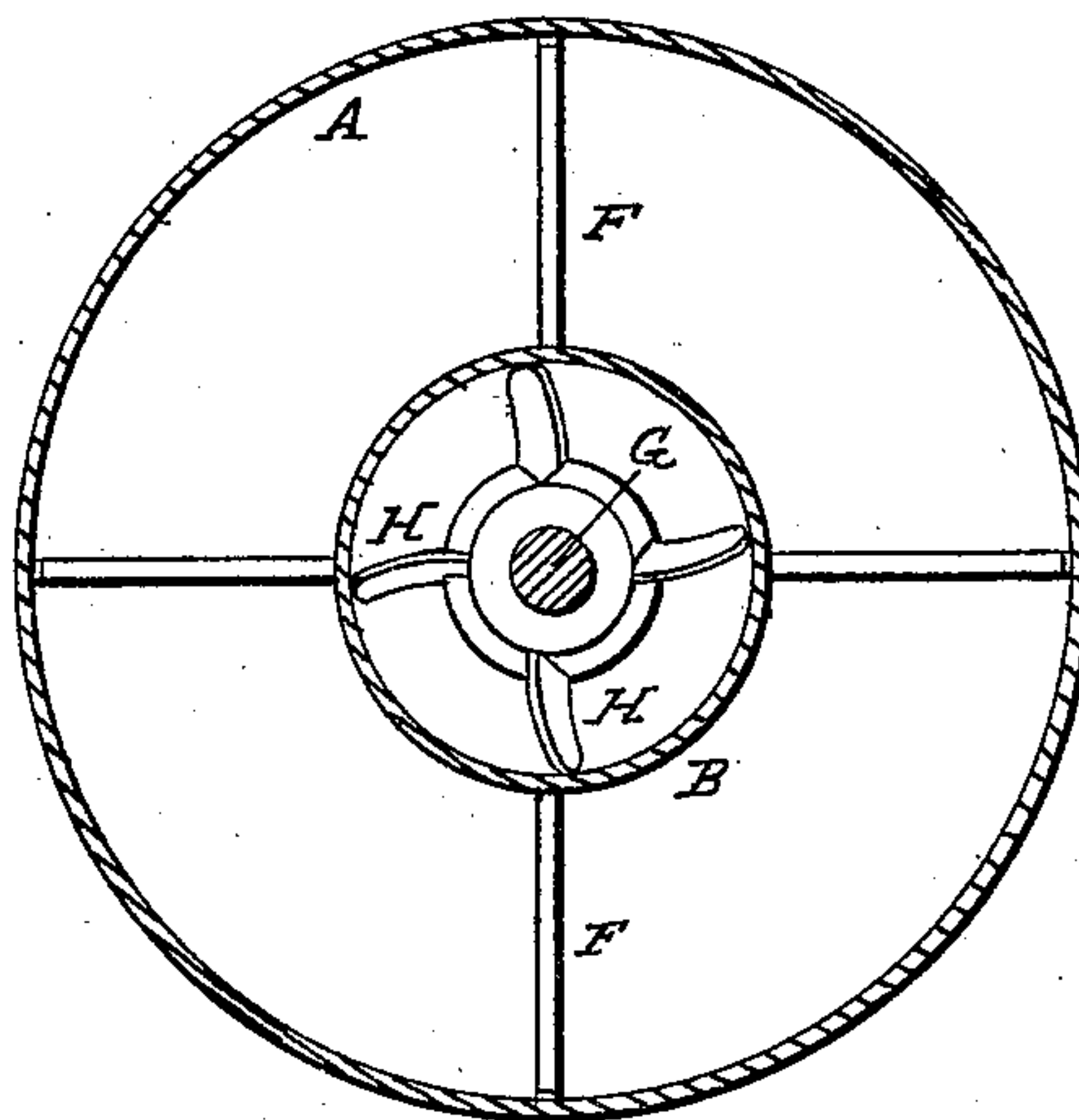


FIG. 2.



WITNESSES:

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INVENTOR.

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# UNITED STATES PATENT OFFICE.

THOMAS TRIPP AND GEORGE S. CURTIS, OF CHICAGO, ILLINOIS, ASSIGNORS  
TO THEMSELVES, E. G. L. FAXON, AND HENRY S. DODGE.

## IMPROVED AMALGAMATOR.

Specification forming part of Letters Patent No. 54,075, dated April 17, 1866.

*To all whom it may concern:*

Be it known that we, THOMAS TRIPP and GEORGE S. CURTIS, of the city of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Amalgamators; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters and figures marked thereon, which form part of this specification.

The nature of our said invention consists in a novel arrangement for submerging the disintegrated ores and sands containing the precious metals beneath the bath of mercury or other liquid metal used for the purpose of separating the precious metals from the ores and sands aforesaid, and for agitating the said submerged ores within the bath, so as to bring all particles of the ores in contact with the liquid metal, and thus obtain a greater percentage of gold or silver than can be obtained by any other method.

To enable those skilled in the art to understand how to construct and use our invention, we will proceed to describe the same with particularity, making reference in so doing to the aforesaid drawings, in which—

Figure 1 represents a vertical central section of our invention, and Fig. 2 a horizontal section thereof at the line *x* in Fig. 1.

Similar letters of reference in the different figures denote the same parts of our invention.

A represents a cylindrical or other shaped vessel, in which the mercury or molten lead forming the amalgamating-bath is placed, and B represents a cylinder or tube through which the ores, being fed in at the top, are conducted down into the bath, said tube not extending down to the bottom of the vessel A, being supported, as shown, upon suitable standards, F, the upper end of said tube being stayed by means of the braces E, attached to the walls of the vessel A. The top of the cylinder or tube B is open, with the bar D extending across it to

form a bearing for the vertical shaft C, which passes down through it, as shown, its lower end being supported in a step or bearing in the bottom of the amalgamator, (marked G,) permitting a free rotary motion to the shaft.

Upon the shaft C, directly beneath the lower end of the tube B, are arranged a series of curved scroll-formed buckets or wings, arranged radially with respect to the shaft, so that by rapidly revolving the shaft a rapid rotary motion is given to said wings.

In the operation of our apparatus the sand or pulverized ore containing the precious metals is filled into the tube B before the mercury is put into the amalgamator, so that, having possession of the tube, the mercury will not displace it.

By giving a rapid rotating motion to the wheel H the ores and sand are driven out into the bath in small and diffused quantities, so as to subject them thoroughly to the action of the bath, and the ores being continually fed into the tube the operation is successfully continued as long as may be desired.

We do not confine ourselves to any particular form for the wings H, but they may be of any configuration which will produce the desired result.

It is obvious that the operation would be substantially the same were the tube C closed at the bottom and provided with suitable lateral openings at its lower end, and the agitator placed within the tube.

Having described our invention, we will proceed to specify what we claim and desire to secure by Letters Patent.

We claim—

The combination of the vertical tube B with the revolving agitator or dispenser H, arranged and operating substantially as herein set forth and shown.

Witnesses:

W. E. MARRS,  
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THOMAS TRIPP.  
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