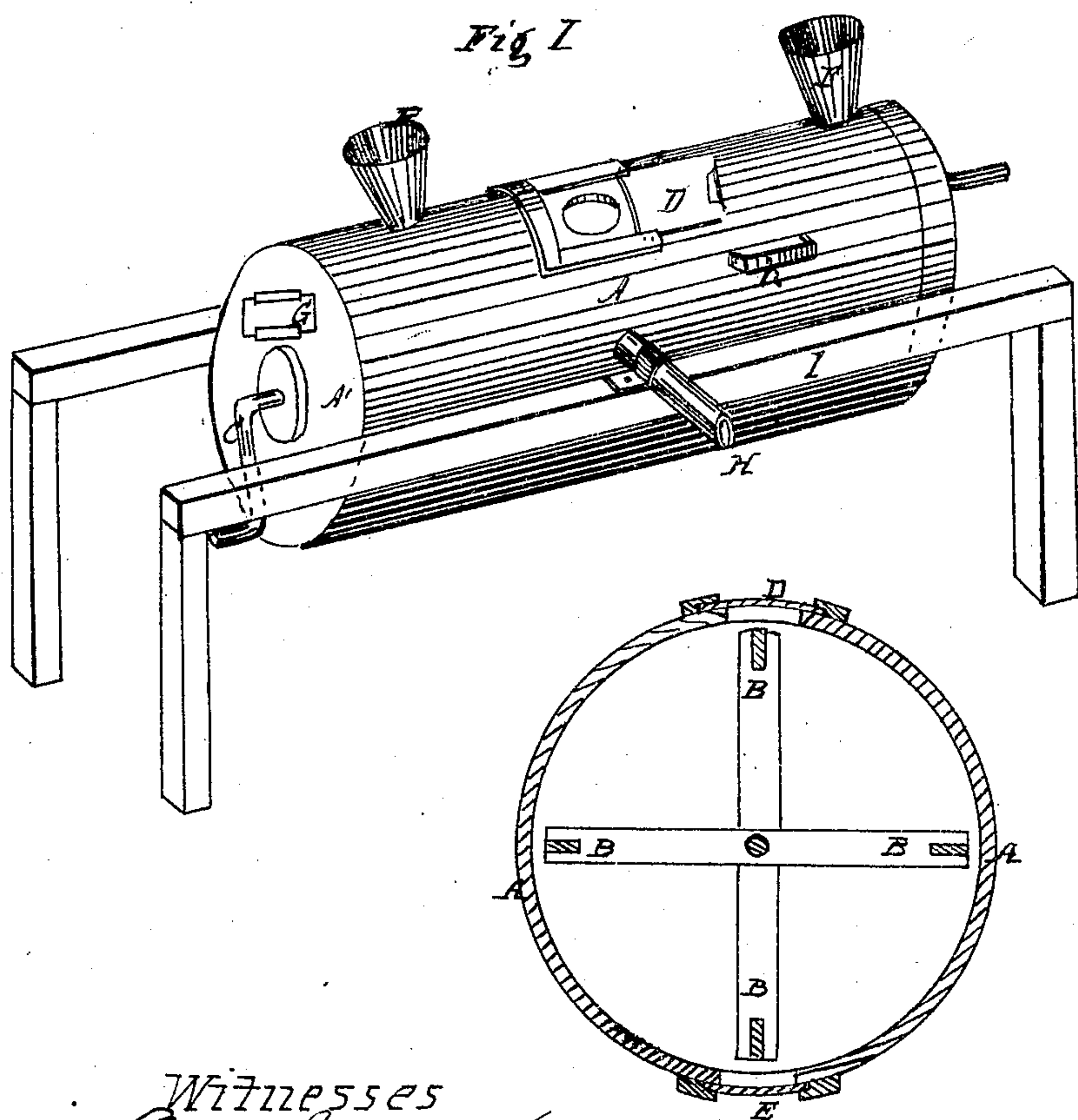


W. A. Thompson.

Treating Ores with Vapor of Mercury.
N^o 73137

Patented Jan. 7, 1868.



Witnesses
E. H. Sprague
Chas. F. Claussen.

W. A. Thompson
Inventor

by D. P. Malloway & Co.
Attys.

United States Patent Office.

WILLIAM A. THOMPSON, OF NEW YORK, N. Y.

Letters Patent No. 73,137, dated January 7, 1868.

IMPROVED MACHINE FOR TREATING ORES OF GOLD AND SILVER WITH VAPOR OF MERCURY.

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, WILLIAM A. THOMPSON, of the city, county, and State of New York, have invented a new and useful Improvement in Machines for Separating Gold and Silver from Ores by the Use of Vaporized Mercury; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a perspective view.

Figure 2 is a vertical transverse section.

Figure 3 is a vertical longitudinal section.

The same letters are employed in both figures for the indication of the same parts.

My improvement relates to that class of machines in which gold-bearing quartz, after having been pulverized, is subjected to the action of vaporized mercury, by which the gold is separated from the quartz, and consists in an improved arrangement of machinery, as will be set forth in the following description and claims.

In the annexed drawings, A is a cylindrical case, closed by heads A'. Within this case is a shaft with radial arms, with floats B, to be turned by a winch, C, or by a pulley and belt, for the purpose of stirring the ingredients introduced into the cylinder. D is an opening in the top of the cylinder, to permit a ladle to be introduced to dip out part of the contents. Another opening, E, in the bottom, is for the purpose of drawing off the contents. Both are closed by slides. Funnels F F, on top of the cylinder, are for the introduction of the material to be operated upon. Windows G G are placed in each end of the cylinder, precisely opposite one another. They are closed by plates of glass, and intended to be used for the purpose of looking in to ascertain the density of the vapor. The cylinder is hung by hollow trunnions upon a frame, I. One of these trunnions is connected by a pipe with a retort, in which quicksilver may be vaporized; the other is connected by a pipe with a steam-generator, for the introduction of steam, to keep the cylinder at a temperature sufficient to maintain the quicksilver in a state of vapor. When the particles of gold or silver have been taken up by the quicksilver, the cylinder may be turned on its trunnions so as to depress one end of the cylinder, and enable the contents to be poured off through an opening left in the end for that purpose. The handles K are intended to facilitate this operation.

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

1. The cylinder A, when suspended upon hollow trunnions H, one of which is connected with a retort for vaporizing mercury, and the other with a steam-generator, and so suspended that one end may be turned down to allow the contents to be drawn off, substantially as set forth.

2. The cylinder A, suspended upon hollow trunnions, and constructed with opposite windows, G, and openings, D, E, and F, and used in combination with the stirrer B, substantially as and for the purpose set forth.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

WM. A. THOMPSON.

Witnesses:

G. H. STANLEY,

NINA CHAPMAN.