

(No Model.)

4 Sheets—Sheet 1.

A. JAMIESON.  
PULVERIZER.

No. 382,364.

Patented May 8, 1888.

Fig. 1.

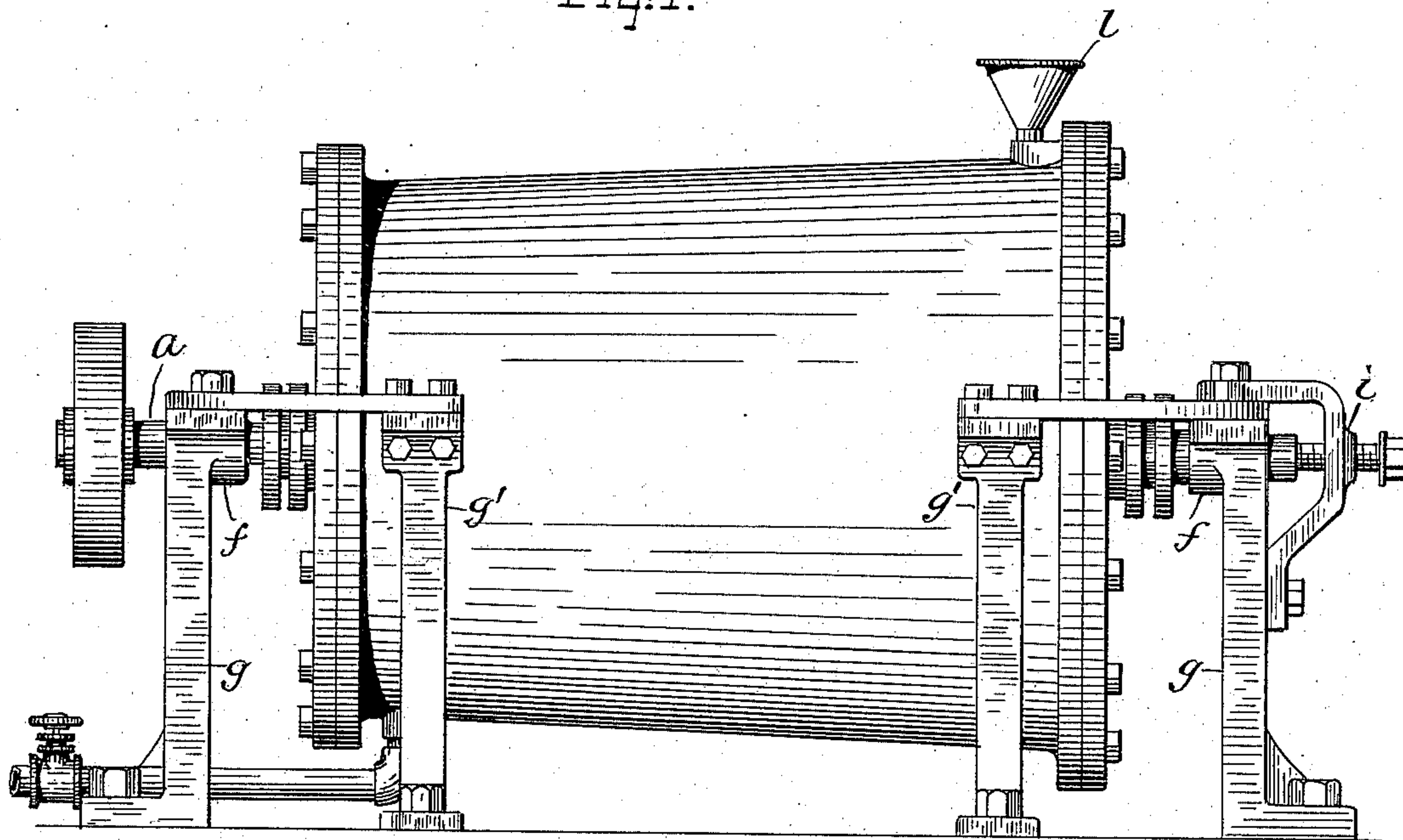
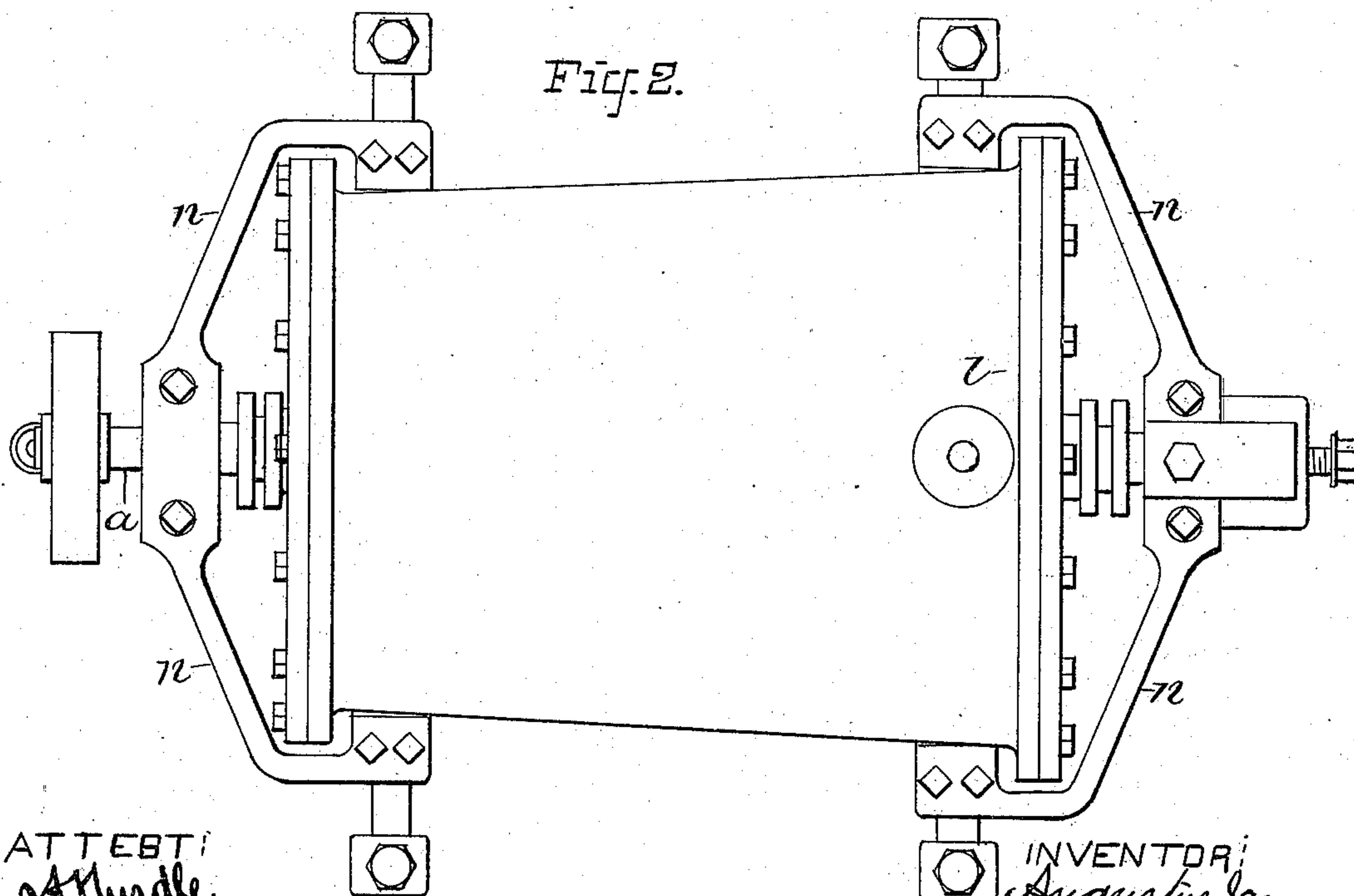


Fig. 2.



ATTEST:  
*J. A. Muddle.*

*John P. Wright.*

INVENTOR:

*Augustus Jamieson*

*Edward P. Thompson*

(No Model.)

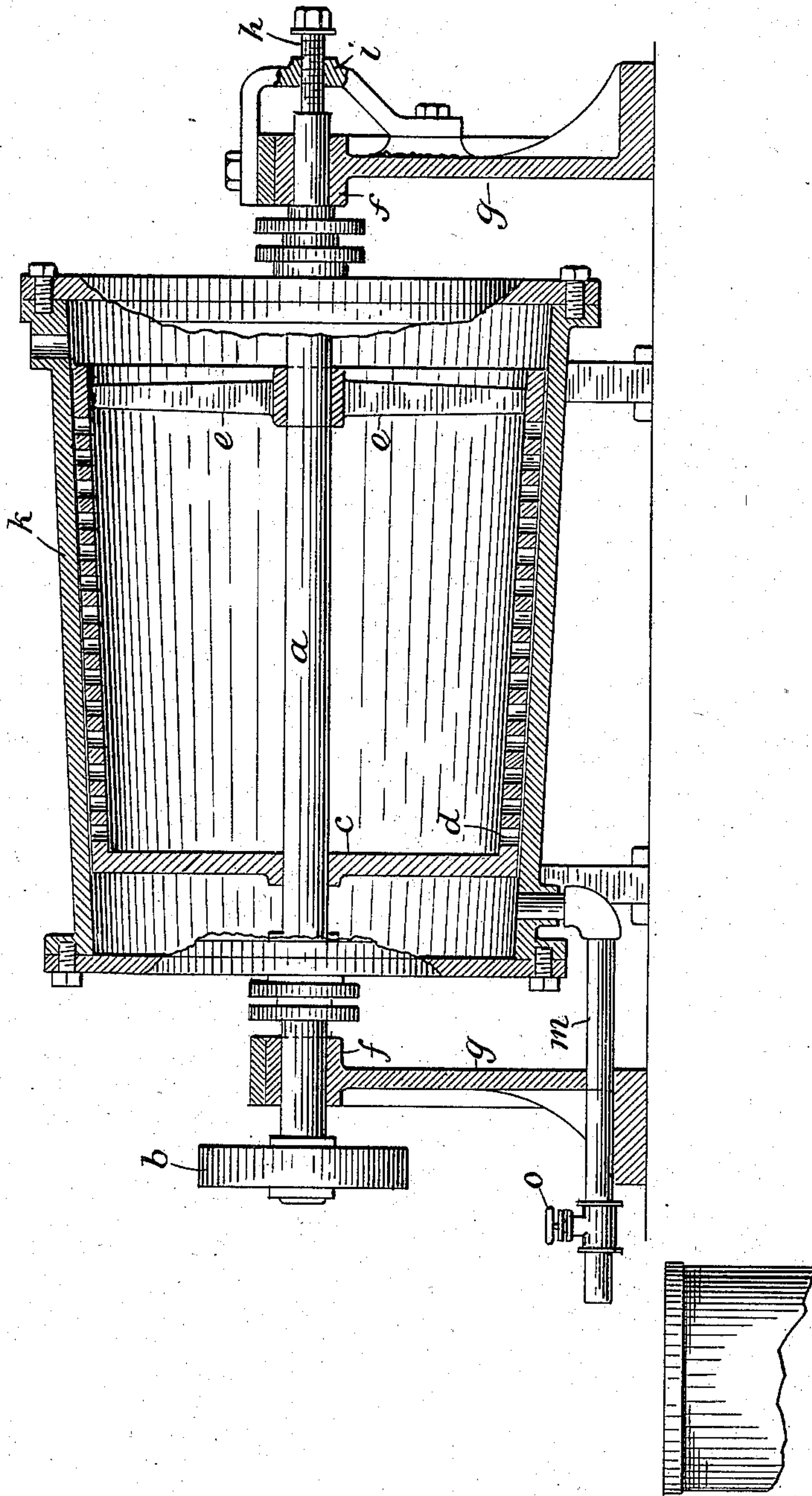
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Fig. 3.



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Fig. 4.

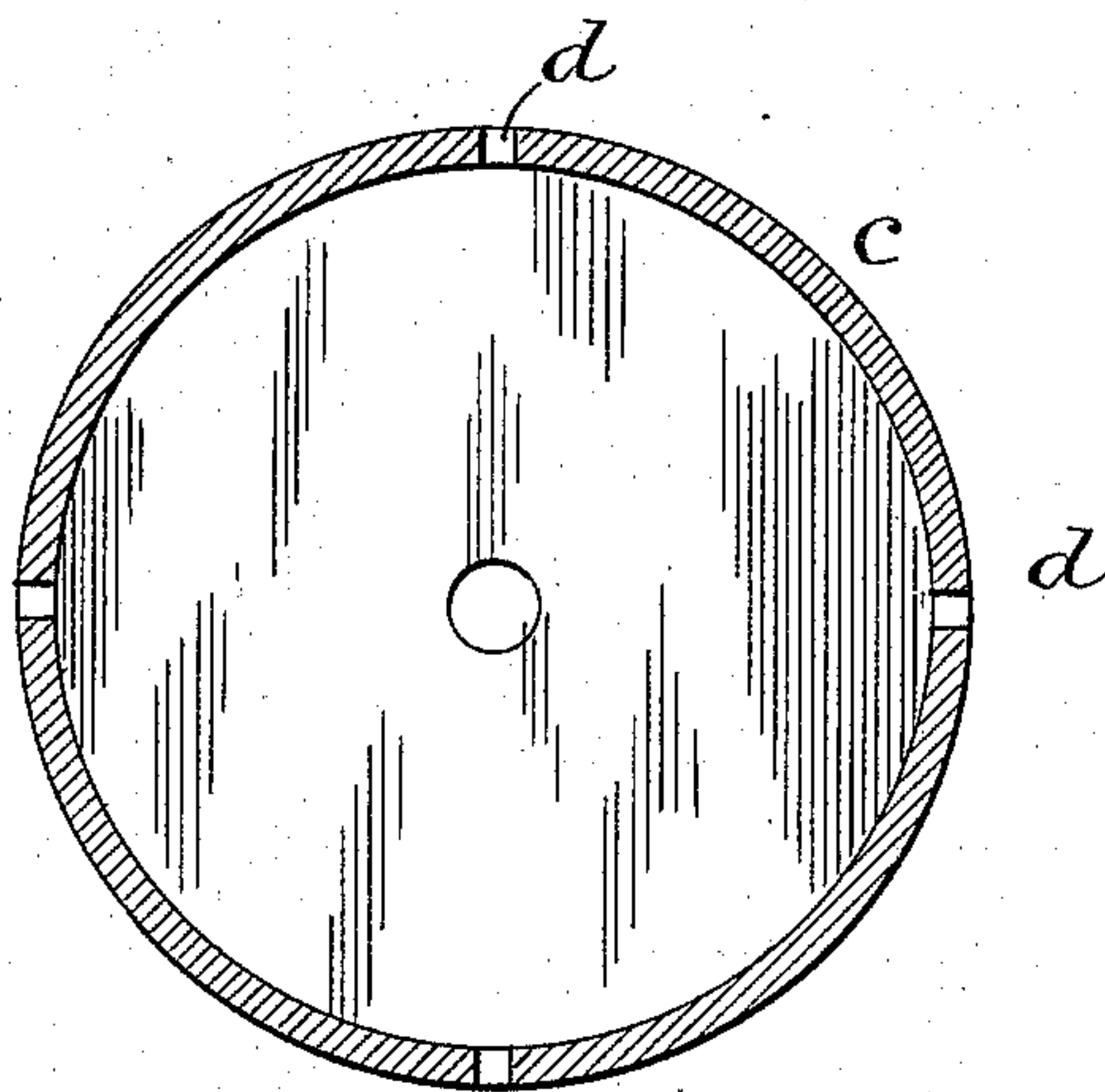
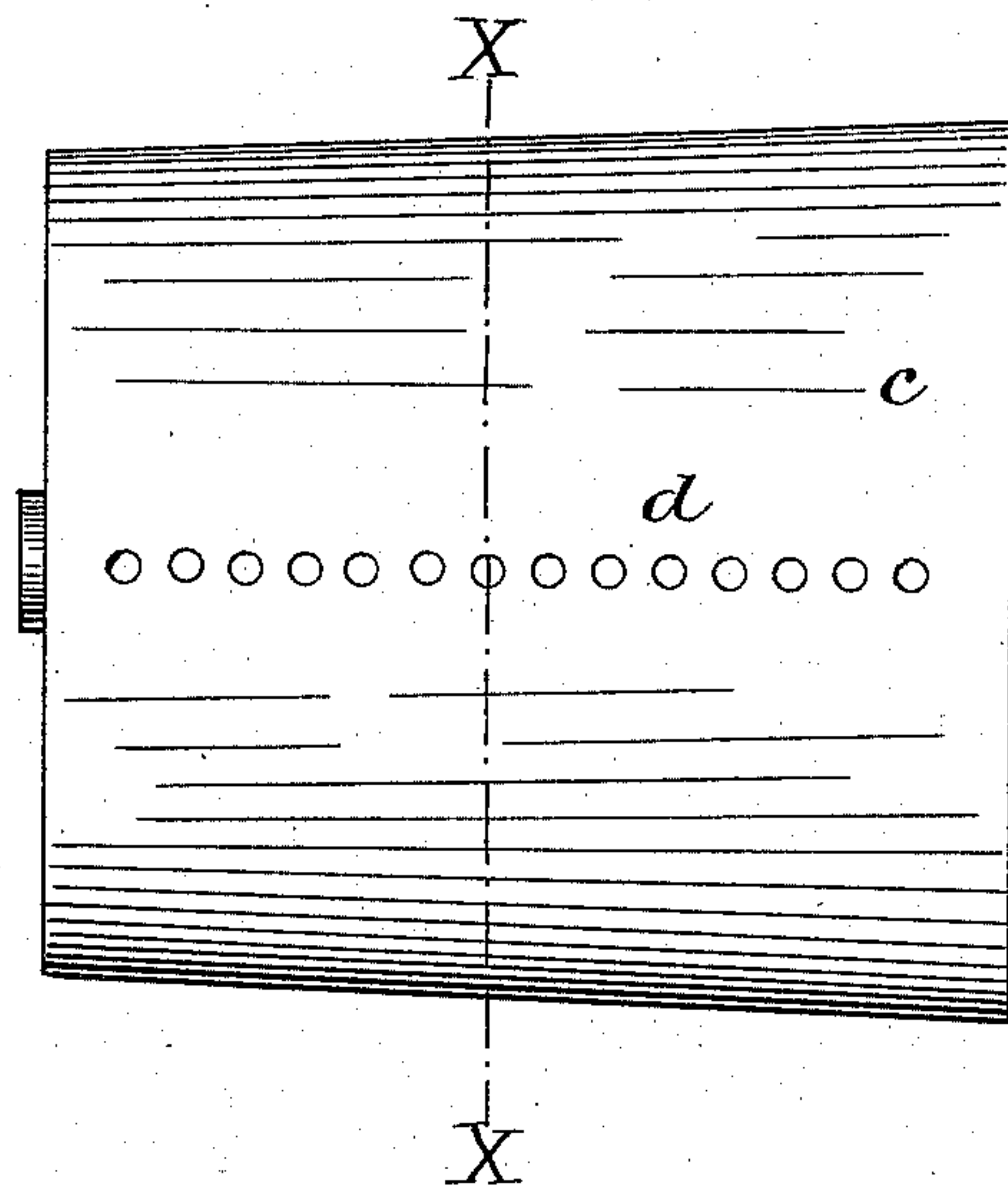


Fig. 5.

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*Edward Thompson*



(No Model.)

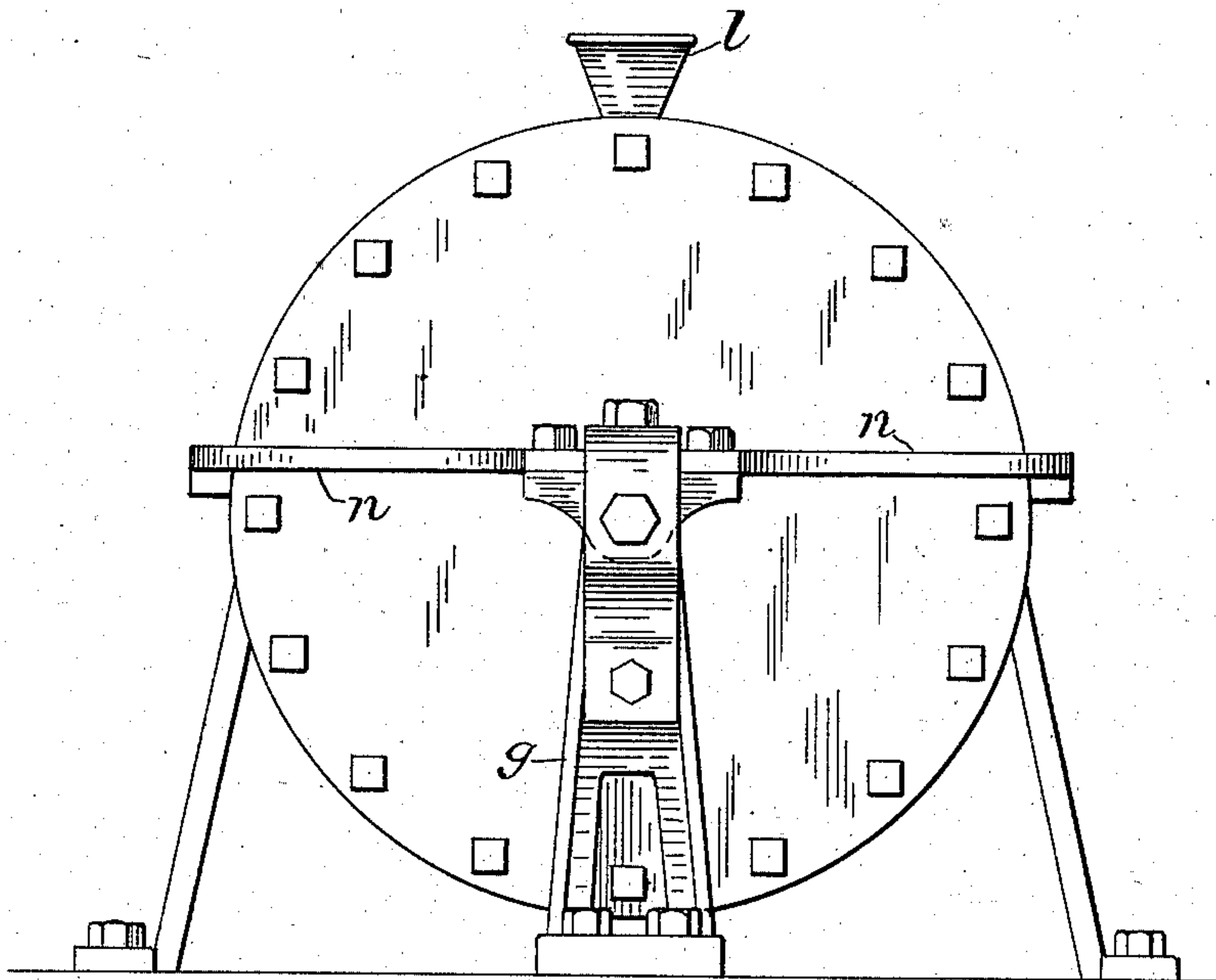
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Fig. 6.



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*Edward P. Thompson.*

# UNITED STATES PATENT OFFICE.

AUGUSTUS JAMIESON, OF ELIZABETH, NEW JERSEY, ASSIGNOR OF ONE-HALF TO WILLIAM A. LOTTIMER, OF NEW YORK, N. Y.

## PULVERIZER.

SPECIFICATION forming part of Letters Patent No. 382,364, dated May 8, 1888.

Application filed May 18, 1887. Serial No. 238,599. (No model.)

*To all whom it may concern:*

Be it known that I, AUGUSTUS JAMIESON, a citizen of the United States, and a resident of Elizabeth, county of Union, and State of New Jersey, have invented certain new and useful Improvements in Pulverizers, of which the following is a specification.

The invention relates to a machine especially adapted to pulverize and mix fire-proof paints. As the pulverizer includes improvements relating especially to its mechanical construction, it can best be described by reference to the accompanying drawings, in which--

Figure 1 is a full side view of the machine. Fig. 2 is a top view of Fig. 1. Fig. 3 is a longitudinal sectional view of Fig. 1, parts of the figure not being in section. Fig. 4 is a top view of the internal perforated cone. Fig. 5 is a sectional view of Fig. 4 at the line X. Fig. 6 is an end view of the right-hand end of Fig. 1. The term "cone" is employed to indicate a tapering cylinder, or a cylinder whose radius gradually diminishes from one end of the cylinder to the other.

The machine consists of the combination of a central shaft, *a*, a fixed pulley, *b*, upon said shaft, an inner cone, *c*, having four rows of holes, *d*, through its surface, the said cone being closed at the left-hand end and having openings between spokes *e* at the right-hand end, and being fixed upon said shaft, and the end that is closed being the smaller end of the cone, fixed bearings *f* for said shaft, supports *g* for said bearings, a regulating-screw, *h*, pressing upon the right-hand end of the shaft *a*, and supported by a nut, *i*, carried by the supports *g*, an external cone, *k*, concentric with the internal cone, *c*, having a funnel opening, *l*, in the larger or right-hand end, and an exit-tube, *m*, in the left-hand or smaller end of the cone, the said cone being otherwise closed at both ends, except where the shaft *a* passes through it, supports *g'* for the outer cone, braces *n*, connecting the supports *g* and *g'* together, and the valve *o* for regulating the exit of the contents of the cones.

The *modus operandi* of the machine is as follows: The inner cone, *c*, is rotated by communi-

cating motion to the pulley *b*. While the cone is rotating the materials to be mixed and pulverized are allowed to flow into the funnel *l*. The materials pass through the holes *d*, and thereby come between the two surfaces of the cones, where the pulverizing takes place. It further passes into the left-hand end of the cone *k*, where it passes out by the tube *m*.

If it is desired to make the machine crush finer, the screw *h* is turned, so as to reduce the distance between the outer surface of the inner cone and the inner surface of the outer cone. By this means the degree of pulverization may be easily regulated.

It is evident that some of the materials may go between the two cones by entering at the extreme right-hand end of the inner cone, without passing through the openings *d*.

The machine may be employed not only for pulverizing and mixing fire-proof paints, but also for treating other paints and varnishes, and also for grinding fertilizers, gums, drugs, ores, and similar materials.

The holes *d* have their axes perpendicular to the axis of the conical part or cone *c*. The spaces between the outer ends of the inner cone and the inner ends of the outer cone are respectively for the entrance and exit of the material to be operated upon.

I claim as my invention--

1. A pulverizer, consisting of the combination of an inner perforated rotatable cone, open at one end and closed at the other, an outer concentric fixed cone having a receiving-opening in the upper part of its larger end and an exit-opening in the lower part of its smaller end, and means for regulating the distance between the outer surface of the inner cone and the inner surface of the outer cone, the closed end of the inner cone being its smaller end, substantially as and for the purpose described.

2. In a pulverizer, the combination of a rotatable shaft, an inner cone fixed to said shaft containing openings, the said cone being closed at its smaller end and open at its larger end, an outer cone loose upon and concentric with said shaft, a screw pressing lengthwise upon



said shaft, the said shaft being adjustable lengthwise, the said outer cone having a receiving-opening in the upper portion of its larger end and an adjustable exit-opening in  
5 the lower part of its smaller end, substantially as and for the purpose described.

In testimony that I claim the foregoing as my

invention I have signed my name, in presence of two witnesses, this 11th day of February, 1887.

AUGUSTUS JAMIESON.

Witnesses:

EDWARD P. THOMPSON,  
JOHN P. WRIGHT.