

No. 670,998.

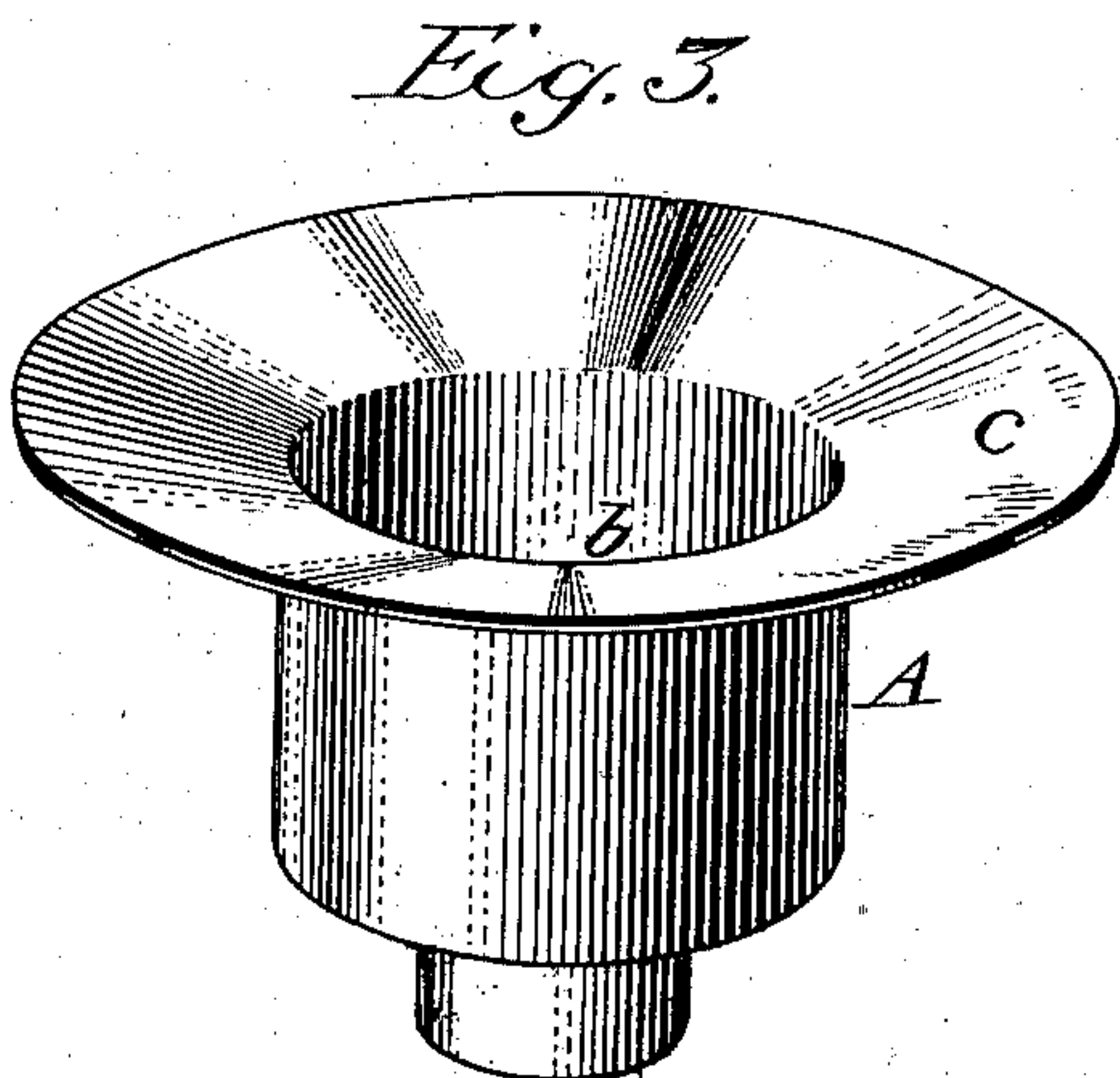
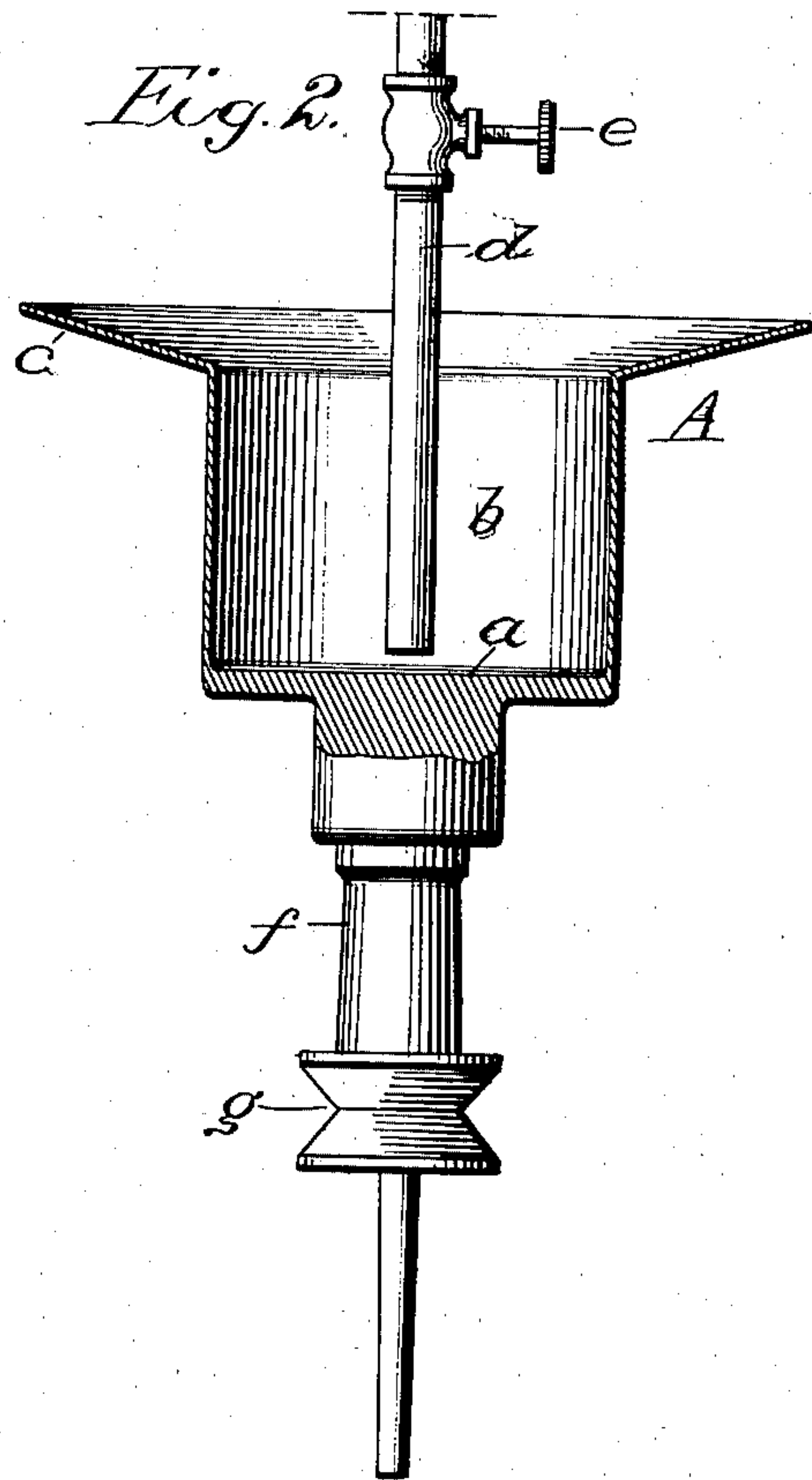
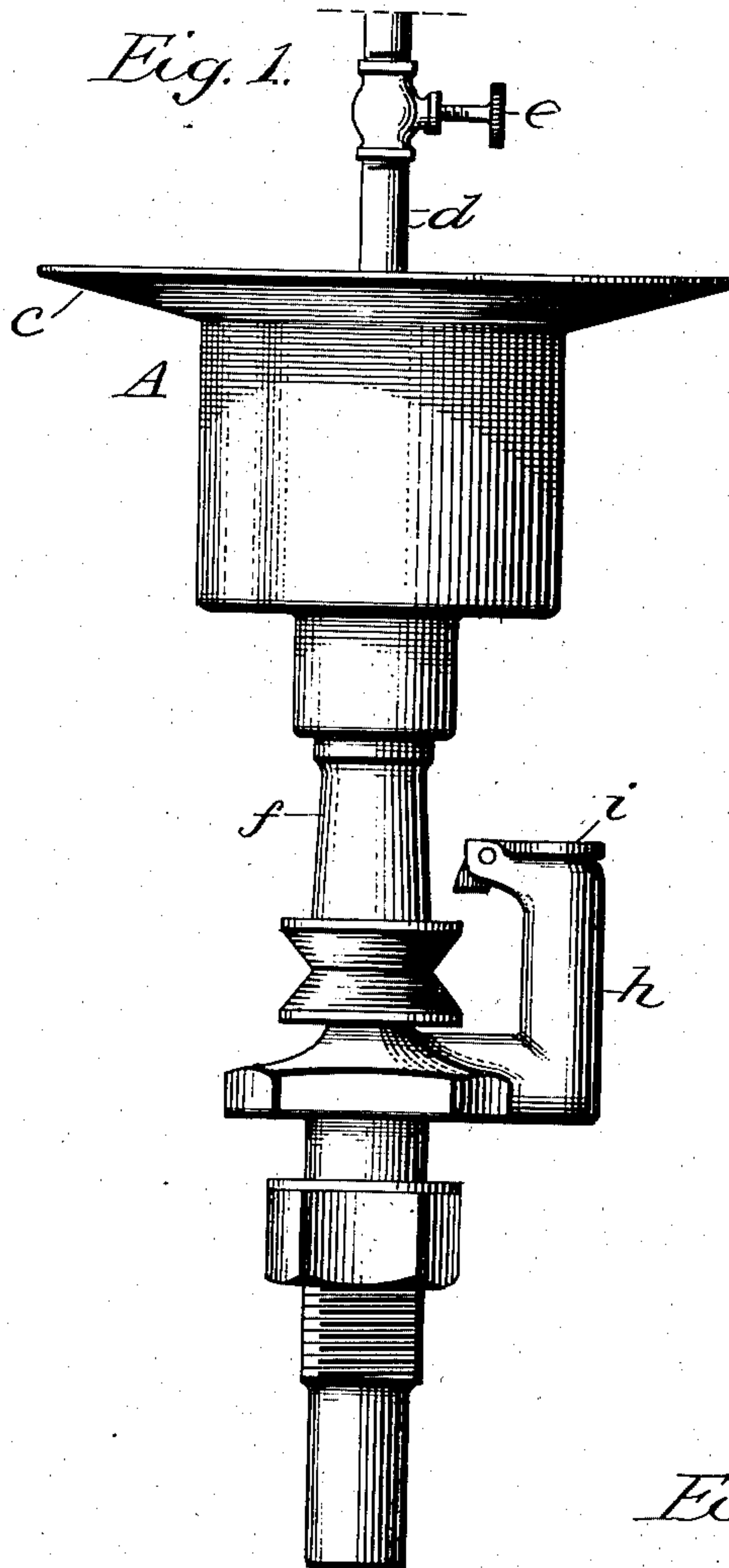
S. F. PATTERSON.

Patented Apr. 2, 1901.

ATOMIZER.

(Application filed Mar. 9, 1899.)

(No Model.)



Attest:
C. C. Burdine
D. E. Burdine

Inventor:
Samuel F. Patterson,
by Dodge and Sons, Att'ys.

UNITED STATES PATENT OFFICE.

SAMUEL FINLEY PATTERSON, OF BALTIMORE, MARYLAND.

ATOMIZER.

SPECIFICATION forming part of Letters Patent No. 670,998, dated April 2, 1901.

Application filed March 9, 1899. Serial No. 708,429. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL FINLEY PATTERSON, a citizen of the United States, residing at Baltimore, Maryland, have invented certain new and useful Improvements in Atomizers, of which the following is a specification.

My present invention pertains to atomizers the construction and advantages of which will be hereinafter set forth, reference being had to the annexed drawings, wherein—

Figure 1 is a side elevation of the device; Fig. 2, a vertical sectional view, and Fig. 3 a perspective view of the upper portion of the atomizer as seen from above.

The object of my invention is to provide a simple and efficient atomizer which will so disintegrate and diffuse the water fed to it that the device may be employed successfully in mills for dampening the atmosphere. Heretofore many devices, more or less complicated, have been employed for producing the necessary humidity in mills, and the aim of my present invention is to produce a simple and highly-efficient apparatus of its kind.

Referring to the drawings, A indicates the main body of the device, comprising a flat bottom or base *a* and an upstanding rim or wall *b*, forming, as it were, a cup. Extending out from the wall and forming a continuation thereof is a rim or lip *c*, which flares slightly upward, as shown most clearly in Figs. 1 and 2. A water-supply pipe *d*, leading from any suitable source, extends centrally into the cup from above and reaches nearly to the base or bottom thereof, as indicated in Fig. 2. A suitable regulating-valve *e* is placed in the pipe, as shown.

To the under side of the base there is fastened or formed a suitable post or stem *f*, upon which is secured a driving-pulley *g*. Any style of bearing may be employed for the stem or post, the construction illustrated being the well-known spindle-bearing provided with a lubricator *h* and a combined oil-hole cover and locking dog or detent *i*, which covers the oil-hole and also serves the function of preventing the stem *f* from being accidentally separated from or lifted off its bearing.

In practice the bearing is firmly secured in any suitable support and the stem mounted

thereon. When the parts are thus assembled, motion is imparted to the atomizer by a band or strap passing about the pulley *g*, the atomizer attaining about ten thousand revolutions per minute in ordinary use. Water is then allowed to enter the cup slowly from pipe *d*, and as soon as it touches the bottom *a* it will be thrown or will travel immediately to the upright wall *b*, moving up the same and finally passing over the face of the lip or rim *c* and leaving the edge thereof in a vapor which is almost imperceptible, or, in other words, a complete diffusion of the liquid fed to the cup is secured.

While the invention is designed primarily for moistening air, it may also be employed to distribute oil or other liquids over cotton laps. Manifestly it may be used wherever it is desired to diffuse any liquid in a film or atomized condition.

It is to be understood that I do not desire to limit myself to the proportions shown, though the dimensions illustrated have given good results in practice.

The device has been found to work admirably in general use, and the degree of moisture which is imparted to the air may be regulated to a nicety by gaging the flow of water into the cup and by varying the speed of revolution of the atomizer.

Manifestly the slight power necessary to drive the device may be derived from the same source which is employed for driving the mill appliances.

Having thus described my invention, what I claim is—

1. An atomizer comprising an open cup-shaped receptacle having substantially vertical side walls and provided with a lip or rim extending outwardly from the upper edge of said wall at approximately right angles thereto; means for supplying liquid to said receptacle; and means for rotating the same.

2. An atomizer comprising a cup-shaped receptacle open at its upper end and having substantially vertical side walls; a lip or rim extending outwardly and inclined slightly upward from the upper edge of said vertical wall; means for supplying liquid to said receptacle; and means for rotating the same.

3. An atomizer comprising a cup-shaped re-

ceptacle formed with a flat bottom *a* with an
upright cylindrical wall *b* extending up there-
from; a rim *c* extending outwardly from the
upper edge of the wall *b* at approximately
5 right angles thereto; a pipe *d* extending down
into said receptacle; and means for rotating
the receptacle.

In witness whereof I hereunto set my hand
in the presence of two witnesses.

SAMUEL FINLEY PATTERSON.

Witnesses:

CHAS. COHEN,
R. W. BROWN.