

No. 772,255.

PATENTED OCT. 11, 1904.

L. RUSSELL.
FLUE STOPPER.

APPLICATION FILED JAN. 27, 1904.

NO MODEL.

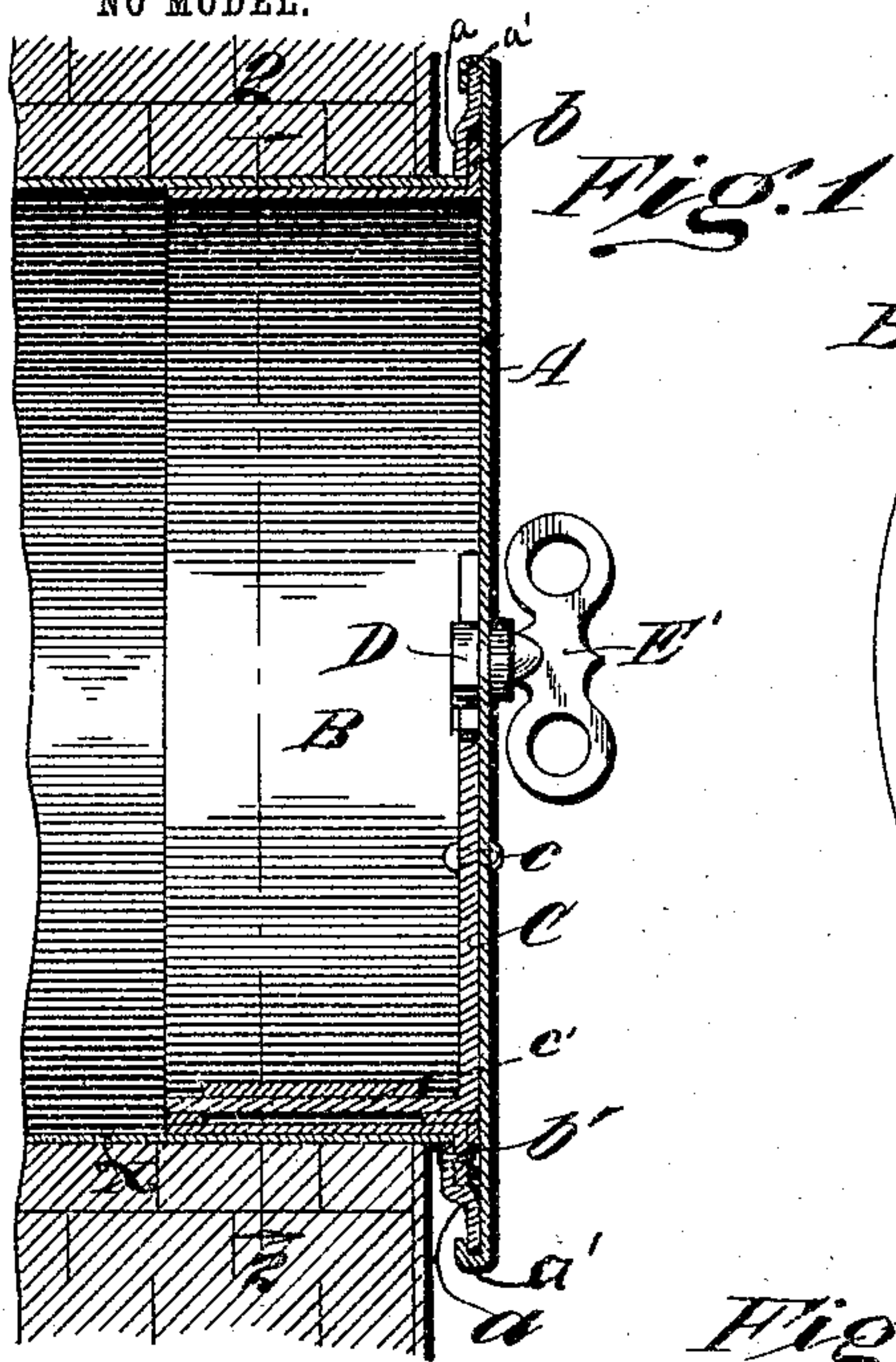


Fig. 1

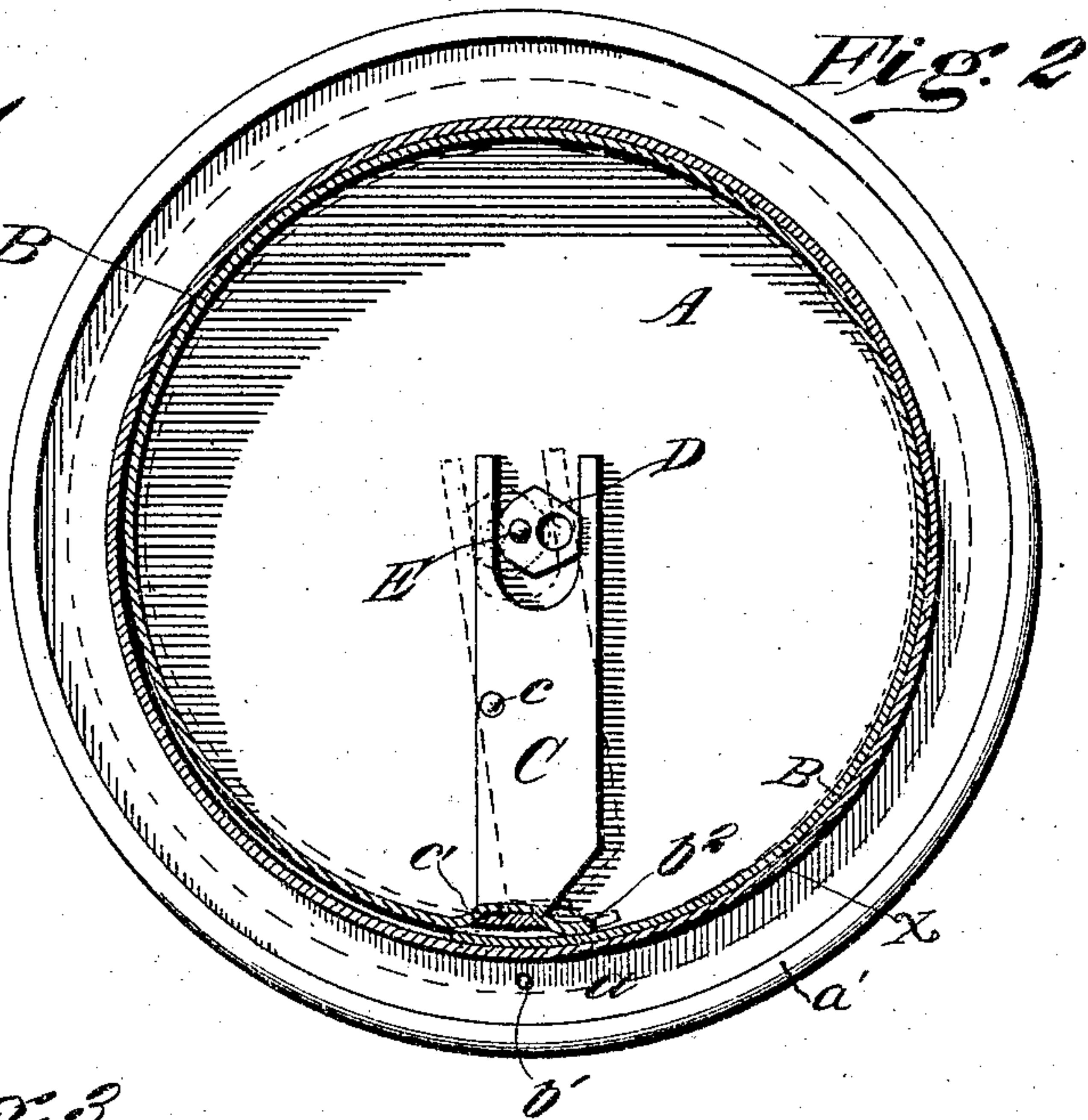


Fig. 2

Fig. 3

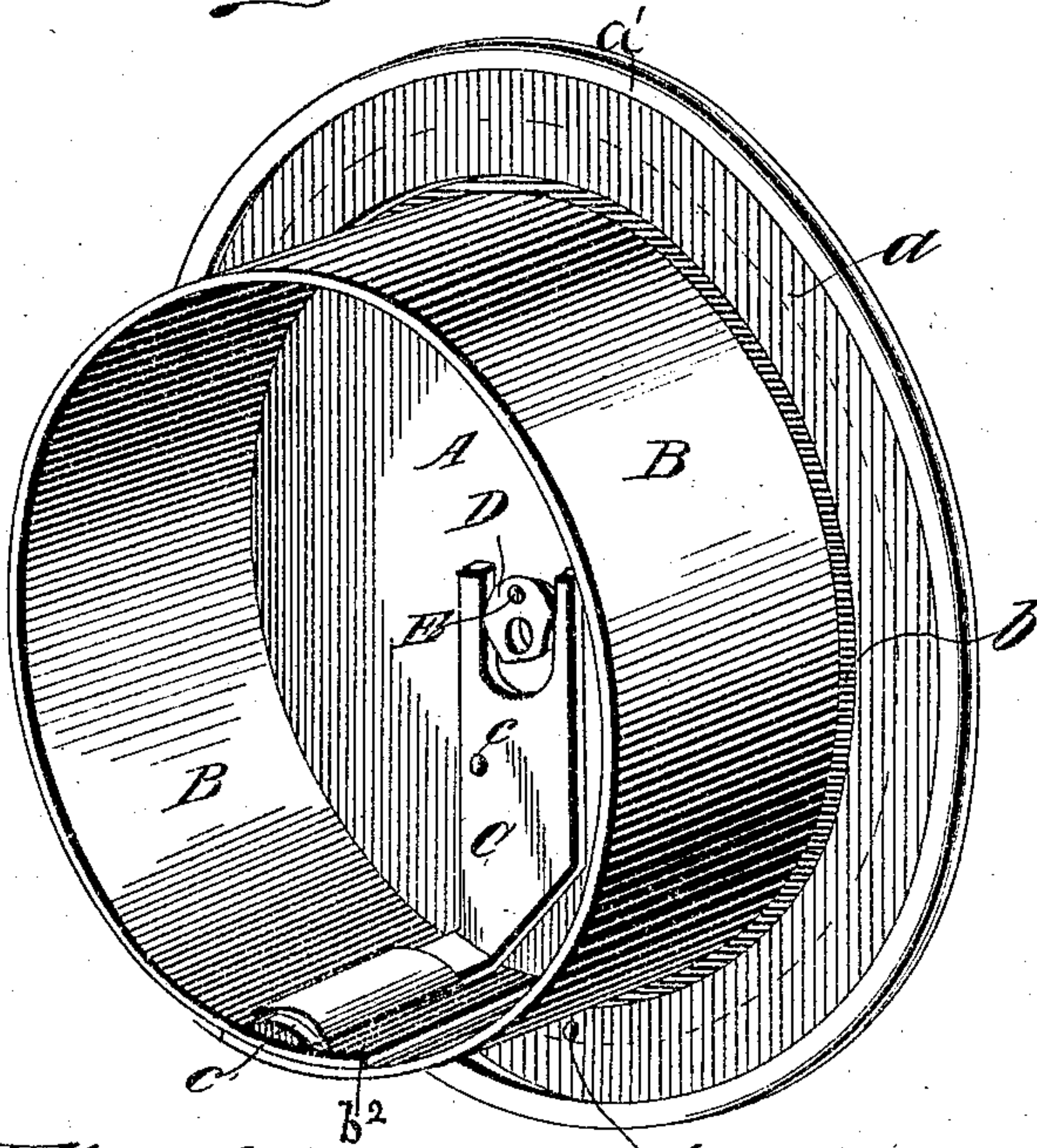
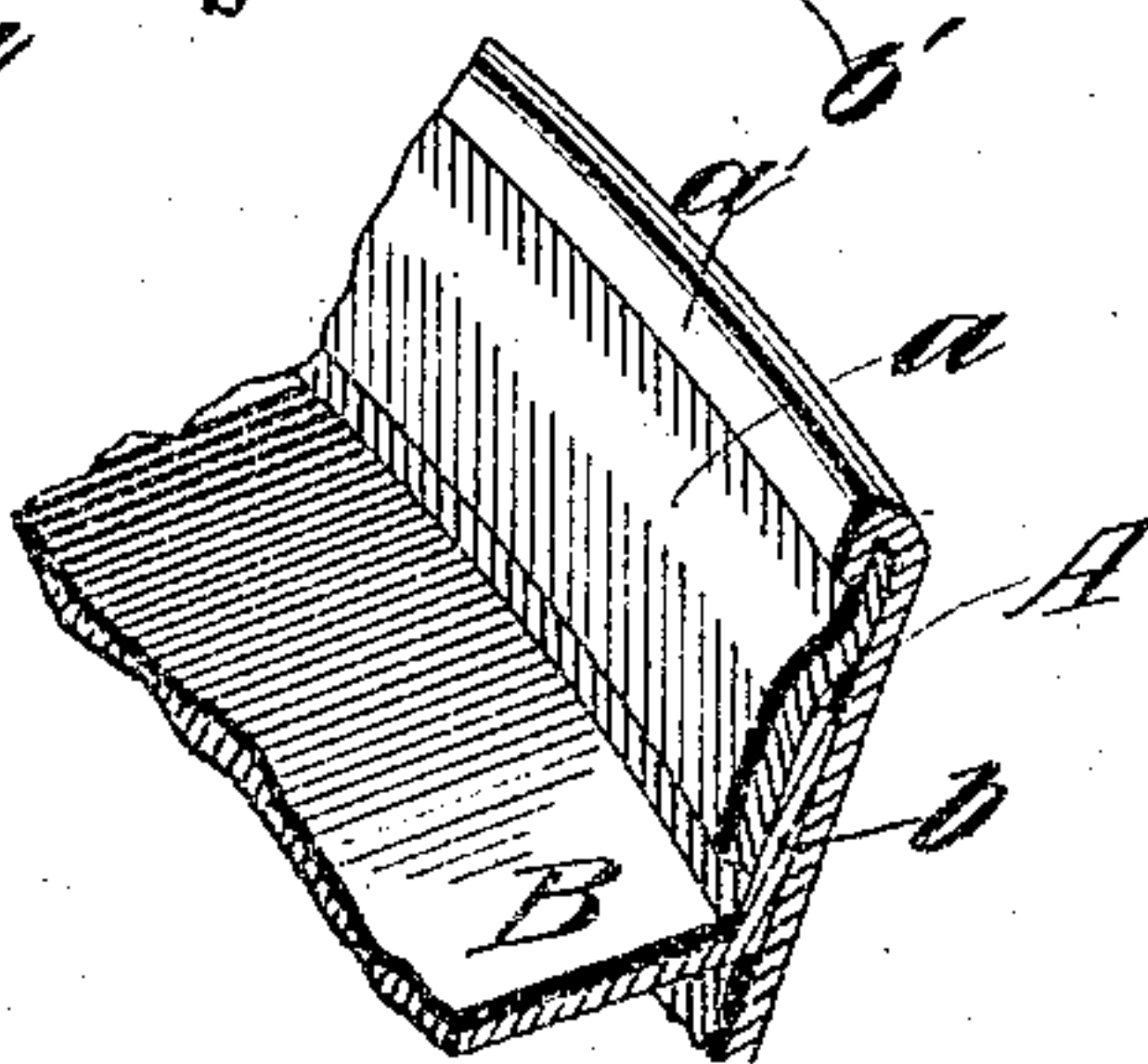
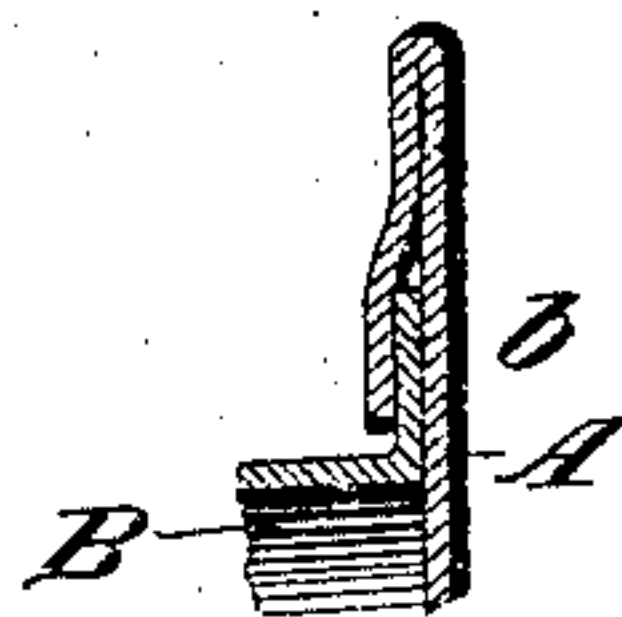


Fig. 4

Fig. 5



WITNESSES:

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UNITED STATES PATENT OFFICE.

LOREN RUSSELL, OF CARTHAGE, ILLINOIS.

FLUE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 772,255, dated October 11, 1904.

Application filed January 27, 1904. Serial No. 190,799. (No model.)

To all whom it may concern:

Be it known that I, LOREN RUSSELL, a citizen of the United States, and a resident of Carthage, in the county of Hancock and State of Illinois, have made certain new and useful Improvements in Flue-Stoppers, of which the following is a specification.

The object of my invention is to provide an improved flue-stopper which shall be adapted to be easily inserted in and removed from a flue or thimble and which will close the latter tightly when duly secured in place, and thereby exclude dust, dirt, or soot from a room or apartment in which the flue or thimble is located.

The details of construction, arrangement, and operation of the parts composing the flue proper are as follows, reference being had to the accompanying drawings, in which—

Figure 1 is a central transverse section of my invention applied to a flue or thimble secured in a chimney or side wall. Fig. 2 is a section on line 2 2 of Fig. 1. Fig. 3 is a perspective view of the flue-stopper. Fig. 4 is a sectional perspective of a portion of the rim of the flue-stopper. Fig. 5 is a detail section illustrating a modification of a part of the device.

The body or main portion of the flue-stopper consists of two parts—namely, the disk or head-plate A, having an annular flange *a*, which projects inward from the edge of the former, and an elastic band B, having a flange *b*, (see especially Fig. 4,) which is arranged at right angles thereto and projects beneath the flange *a* of the head-plate A, but is adapted to slide easily thereunder. The means for adjusting the elastic band B, whereby it may be expanded or contracted, as required, for securing the flue-stopper in a flue or thimble X, as shown in Fig. 1, are a right-angular lever C, which is pivoted to the head-plate A, and an eccentric D, that engages the lever and is mounted upon a short rock-shaft E, which passes through the head-plate A and is provided on the outer side thereof with a thumb-piece E'.

I will now further describe details, so that the operation of the parts composing the flue-stopper may be more definitely understood.

As shown in several figures, the disk or head-plate A has an inturned rim *a'*, beneath which the annular flange *a* is secured and from which the flange projects inward, its inner edge being raised, as shown in Figs. 1 and 4, to allow due space for the flange *b* of the band B. The latter is pivoted to the head-plate A at the point *b'*. (See Figs. 1, 2, 3.) In other words, the two flanges *a* and *b* are pivoted together at *b'*. The ends of the band B overlap and are adapted to slide on each other, as will be understood by reference to Fig. 2, whereby the band is adapted to expand and contract, as required, for securing the stopper in the flue or thimble X. The right-angular lever C is pivoted to the head-plate at *c* on the inner side of the same, and its outer end *c'* is bent at a right angle and connected with the band B. This connection may be effected in various ways; but I prefer to slit the band at two opposite points and to raise the portion between the slits, which then forms a socket adapted to receive the prong or arm *c'* of the lever C. The inner end of the lever C is forked, and an eccentric D is arranged in the fork, the same being fixed on a rotatable shaft E, which passes through the head-plate at the center thereof and is provided on the outer side with a thumb-piece E' and a collar, which serves to hold the eccentric close to the inner side of the disk. The eccentric D is preferably made polygonal, so that it may better retain any desired engagement with the fork of the lever.

From the foregoing description the operation of my improved flue-stopper will now be readily understood. It is apparent that when the eccentric D is thrown in one direction—say as shown by full lines, Fig. 2—the lever C will be rocked or turned on its pivot *c*, so as to expand the band B, whereby it may be held tightly in the flue or thimble X. On the other hand, by adjusting the eccentric E in the opposite direction the lever C will be thrown into the position indicated by dotted lines, Fig. 2, and thus the band B will be contracted, so that it may be readily inserted in flue or thimble X. When duly inserted therein, the eccentric is turned in the opposite position, whereby the lever C is thrown to the original

position, (indicated by full lines in Fig. 2,) and thereby the movable inner end b^2 of the band B is slid back to the original position. In other words, the band B is thus expanded again, with the result that it fits tightly in the flue or thimble X, and thereby the flue-stopper is tightly secured in place. It will be seen that while the flue-stopper as a whole is thus held securely in the flue by reason of the expansion of the band B and its friction with the flue the admission of dust, dirt, soot, and gases to the room or apartment of which the flue forms an exit is effectually prevented.

In Fig. 5 I show the disk or head-plate A provided with a flange, which extends inward farther than that illustrated in the other figures. This integral flange will take the place of the separate or disconnected flange a . In some cases this construction may be preferred.

It will be seen that my improved flue-stopper is composed of few parts, is very durable, and may be easily manipulated to effect its insertion in or removal from a flue and that when in place it is most efficient in closing the flue.

What I claim is—

1. The improved flue-stopper comprising a head-plate having an annular flange projecting inward from its edge, an elastic band secured at one end to the head-plate flange and having itself a radial flange which projects and is slidable beneath the flange of the head-plate, a lever pivoted to the head-plate and one end thereof engaging the aforesaid band, an eccentric which engages the other end of the lever, and a rock-shaft carrying said eccentric and having a thumb-piece on the outer side of the head-plate for use in manipulating the eccen-

tric as required for contracting or expanding the band in the manner described.

2. The improved flue-stopper comprising a head-plate having an annular flange projecting inward from its edge, an elastic band having a right-angular flange which projects beneath the flange of the head-plate and is adapted to slide easily thereunder, the two flanges being secured together at one point, a right-angular lever which is pivoted to the head-plate, within the band, the outer arm of the lever engaging the inner slidable end of the band, the opposite end of the lever being forked, and an eccentric arranged within the fork and having a device which projects on the outer side of the head-plate and is adapted for use in manipulating the eccentric as required for shifting the lever to contract or expand the band as described.

3. In a flue-stopper, the combination, with the head-plate having its outer portion provided with a circumferential groove, of an elastic band having a radial flange arranged slidably in the said groove, one end of the band being secured to the head-plate and its free end being slitted and provided with a raised portion forming a socket, the lever pivoted to the head-plate and its outer end inserted in the band-socket, and a device engaging the inner end of said lever for adjusting it for the purpose of contracting or expanding the band, substantially as described.

LOREN RUSSELL.

Witnesses:

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