

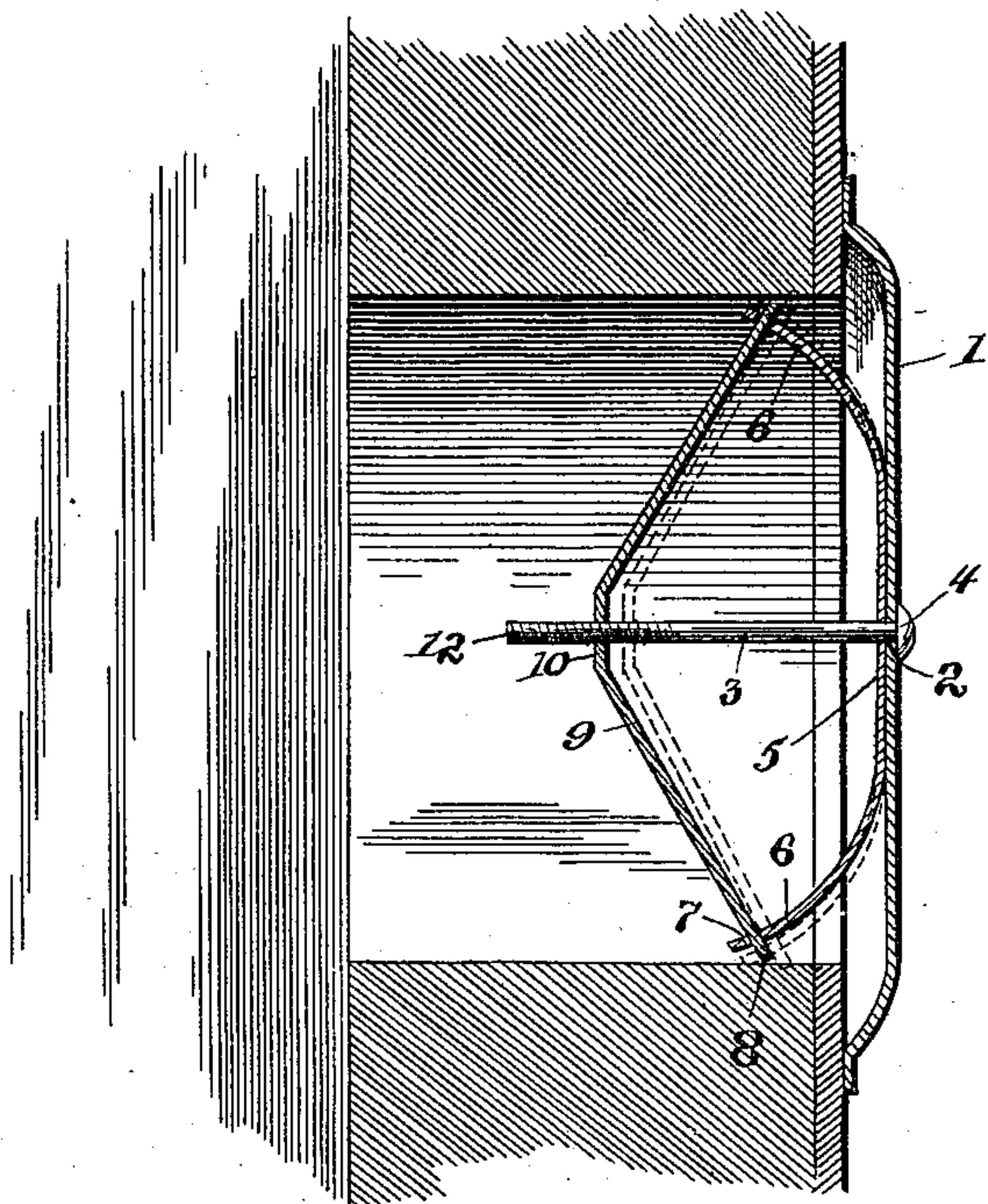
(No Model.)

J. K. RANDLES.  
FLUE STOPPER.

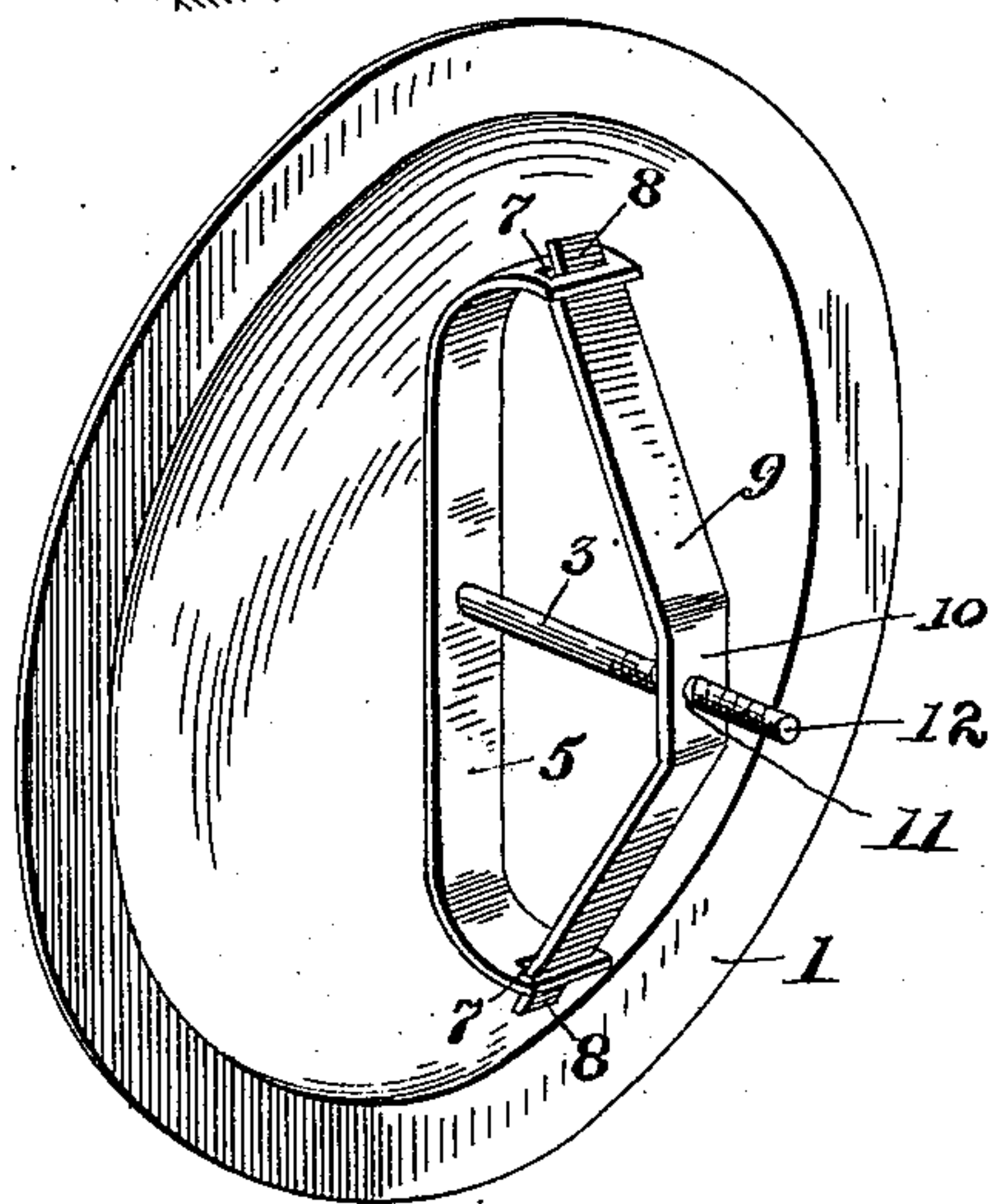
No. 546,555.

Patented Sept. 17, 1895.

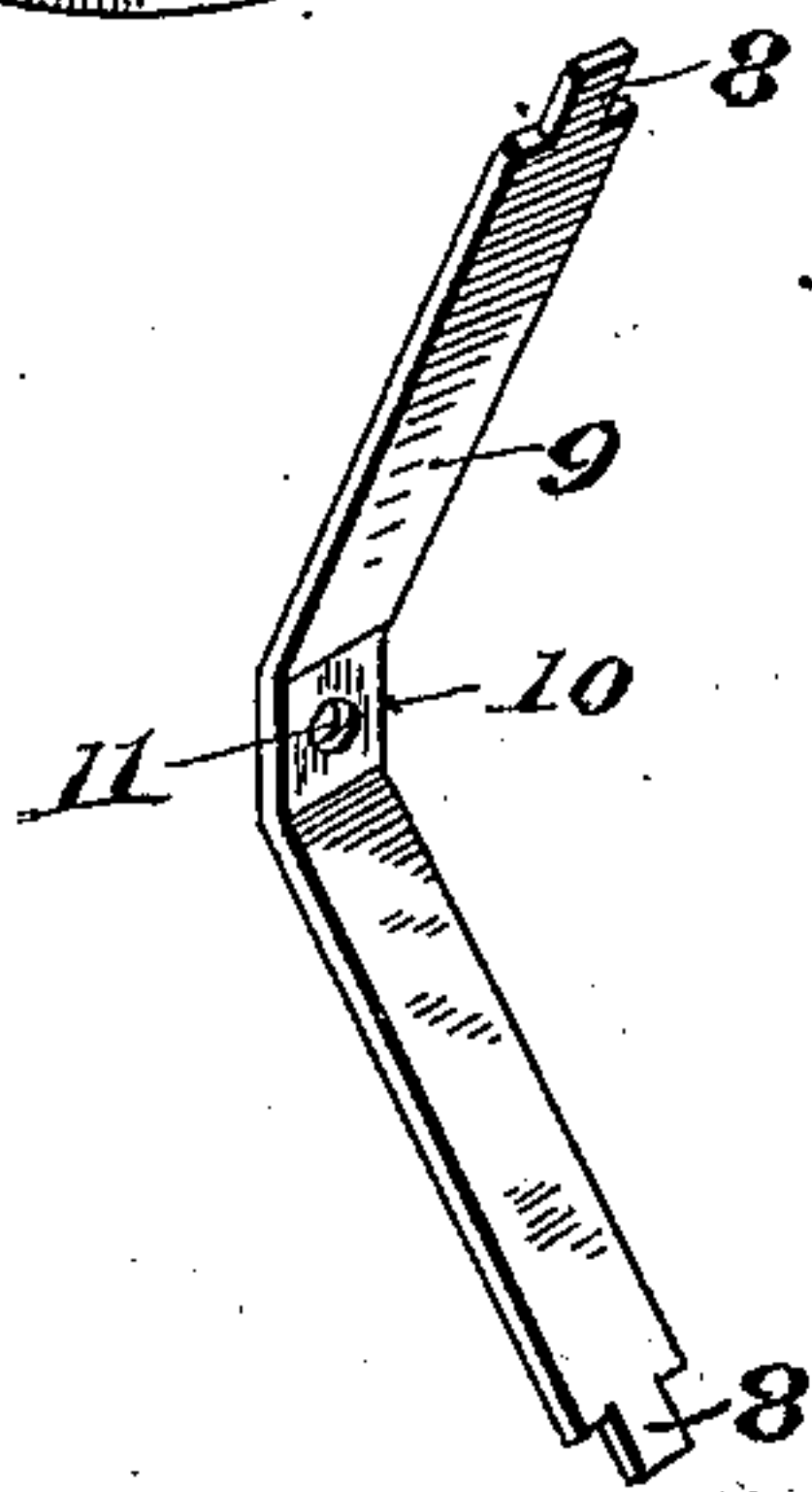
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses.  
Howard W. Orr.  
C. C. Jones.

Inventor,  
Joseph K. Randles  
By Chas J. Gooch  
his Atty.



# UNITED STATES PATENT OFFICE,

JOSEPH K. RANGLES, OF QUINCY, ILLINOIS.

## FLUE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 546,555, dated September 17, 1895.

Application filed May 6, 1895. Serial No. 548,306. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH K. RANGLES, a citizen of the United States, residing at Quincy, in the county of Adams and State of Illinois, have invented certain new and useful Improvements in Flue-Stoppers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to certain improvements, as hereinafter described, in flue-stops.

In the drawings Figure 1 represents a sectional view illustrating the application of my flue-stopper, the full lines indicating the position of the parts in their normal position and as inserted in the flue, and the dotted lines indicating the adjustment of the parts. Fig. 2 represents a perspective view of my flue-stopper. Fig. 3 represents a detail view of the bridge-piece.

The object of my invention is to produce a flue-stop which, while possessing extreme simplicity of construction, also possesses the advantages of a ready application to and removal from position, easy and ready adjustment, and absolute security in operative position.

1 represents the flue-stopping outer disk, which is provided with a central hole 2, through which the adjusting rod or screw 3 passes, the head 4 of said rod or screw 3 having bearing upon said disk and serving to close said central orifice or hole. This disk 2 may be of any approved or desired shape or design, and may have any ornamental characteristic or contour, as desired.

5 represents a flexible metal strap, which is secured by solder or any other suitable known means at or adjacent to its center to the inner or rear face of the disk 2, said strap being of curved or substantially bowed or semicircular shape, as shown, so that its arms or ends 6 shall, when in position, extend inwardly or rearwardly from the disk. These arms 6 are, adjacent to their outer ends, each formed with a slot 7, within which the tenoned ends 8 of a bridge-piece 9 are received, and have bearing, with capability of sliding therein in adjustment, the tenoned ends 8 of said bridge-piece projecting out beyond said slotted ends of the strap to grip the sides of the flue-wall, as will readily appear on reference to the

drawings. This bridge-piece is also formed of a strip of metal; but preferably of somewhat increased thickness to the thickness of the strap, such increased thickness imparting greater strength to said bridge-piece, and thereby securing the necessary amount of rigidity, strength, and gripping power to securely grip the walls of the flue.

It will be observed that the bridge-piece is of angular formation, which additionally increases its gripping power, and at its center has a horizontal apex 10, having a threaded bore 11, with which the threaded inner end 12 of the bolt or screw 3 engages.

The curved or bowed flexible metal strap 5 being secured to the rear or inner face of the flue-stopping disk 2, the tenoned ends 8 of the bridge-piece 9 are then inserted in the slotted ends 6 7, so as to project out through said slots 7. The threaded bolt or screw 3 is then passed through the central hole in the flue-stopping disk 2 and turned therein into slight engagement with the threaded bore 11 in the horizontal apex 10 of the bridge-piece 9. In this, the normal positions of the respective parts, the strap 5 and bridge-piece 9 are in their extreme positions of curvature, and can be readily inserted in the flue-opening. When so inserted, with the flue-stopping disk 2 against and covering the flue-opening, the threaded bolt or screw is turned so as to force its threaded end through the threaded apex of the bridge-piece. As said screw or bolt is thus turned, it draws forwardly the bridge-piece and compresses it upon the flexible strap 5, and compresses said strap into elliptical form, the arms or ends of said strap as they extend carrying with them the projecting tenoned ends of the bridge-piece into gripping contact with the walls of the flue, thereby securely maintaining the flue-stop in position.

This device is adapted for use in flues of varying size and shape, will grip both rough and smooth walls, can be readily applied to and removed from position, and can be cheaply manufactured, as there is no complication in its construction.

What I claim is—

1. A flue-stopper consisting of an outer disk, an inwardly-curved strap secured to the inner face of said disk and having slotted ends, a bridge-piece having slide bearing in

said slotted ends and a bolt or screw connecting said disk, strap and bridge-piece and adapted to adjust said bridge-piece, substantially as and for the purpose set forth.

5 2. A flue-stopper consisting of an outer disk, a strap secured to the inner face of said disk and having inwardly-curved arms having slotted ends, a bridge-piece having tenoned ends having bearing in and projecting outwardly from the slotted ends of said strap, and a bolt or screw connecting said disk, strap and bridge-piece and adapted to adjust said bridge-piece, substantially as and for the purpose set forth.

15 3. A flue-stopper consisting of an outer disk having a central hole, an inwardly-curved

strap secured to the inner face of said disk and having slotted ends, an angular bridge-piece having tenoned ends having bearing in and projecting outwardly from the slotted ends of said strap and a horizontal apex having a threaded bore, and a threaded bolt or screw connecting said disk, strap and bridge-piece and having bearing in the threaded bore of said bridge-piece, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH K. RANGLES.

Witnesses:

H. W. SCHWARZBURG,  
JOHN H. BRINKOP.