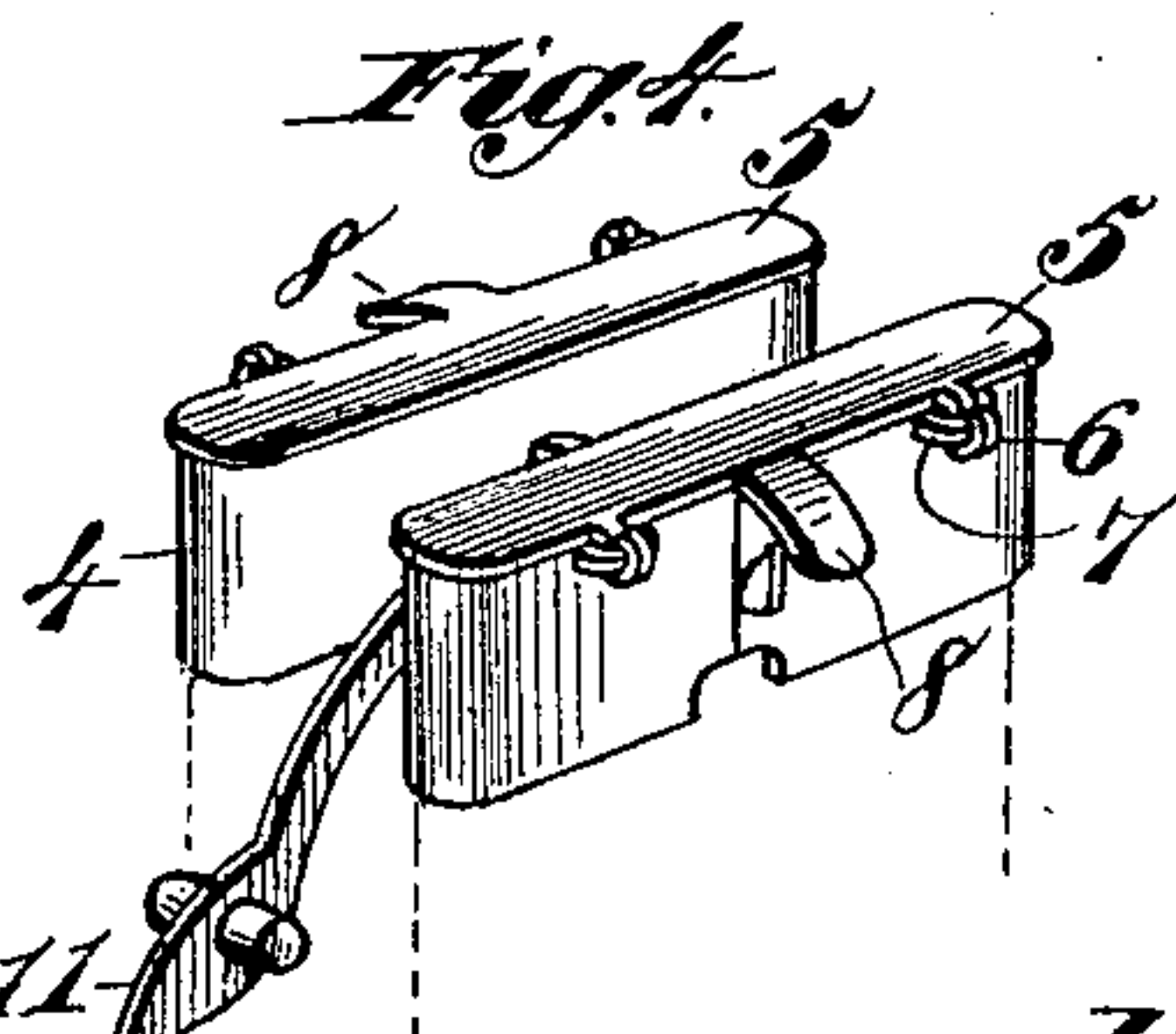
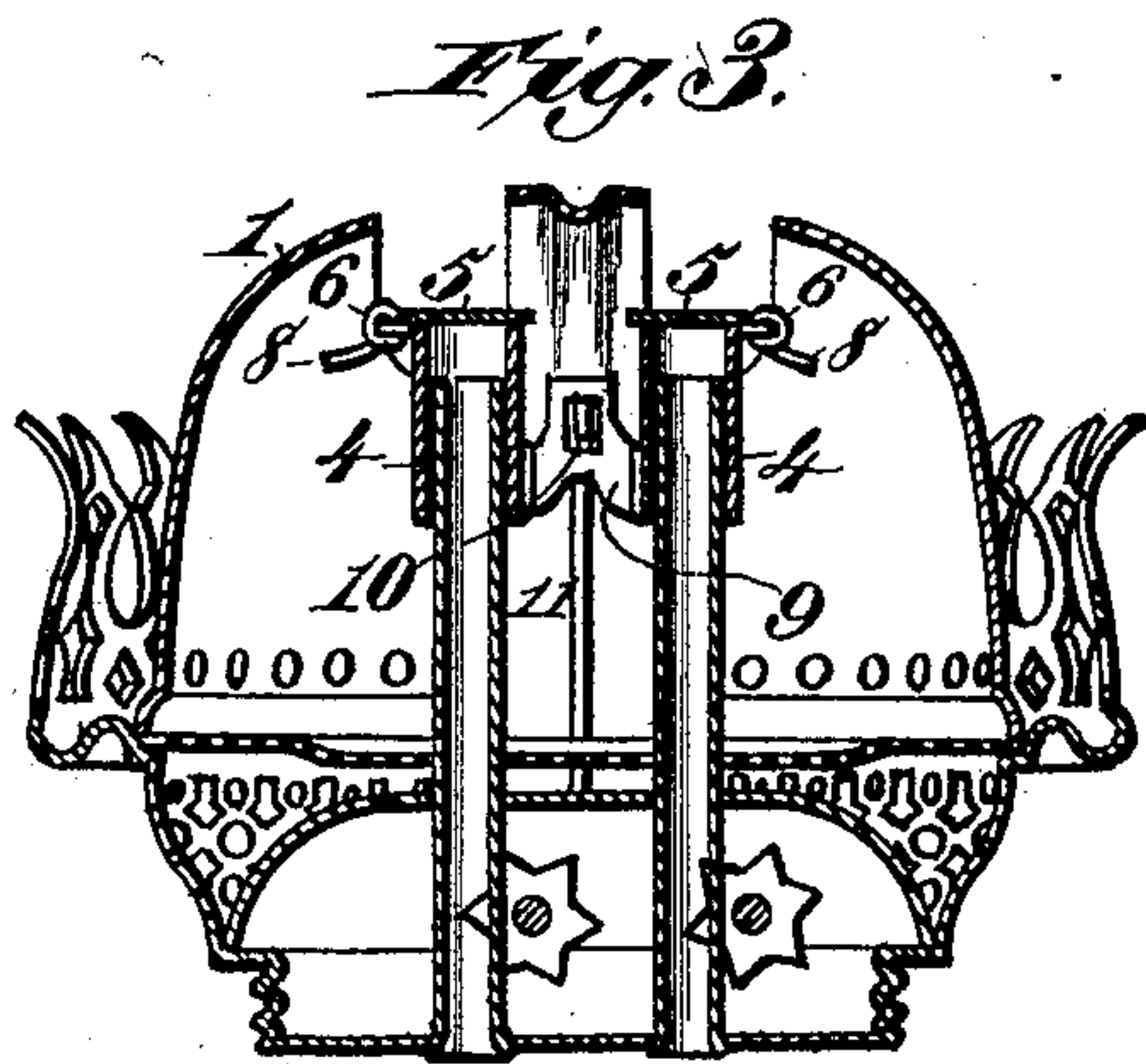
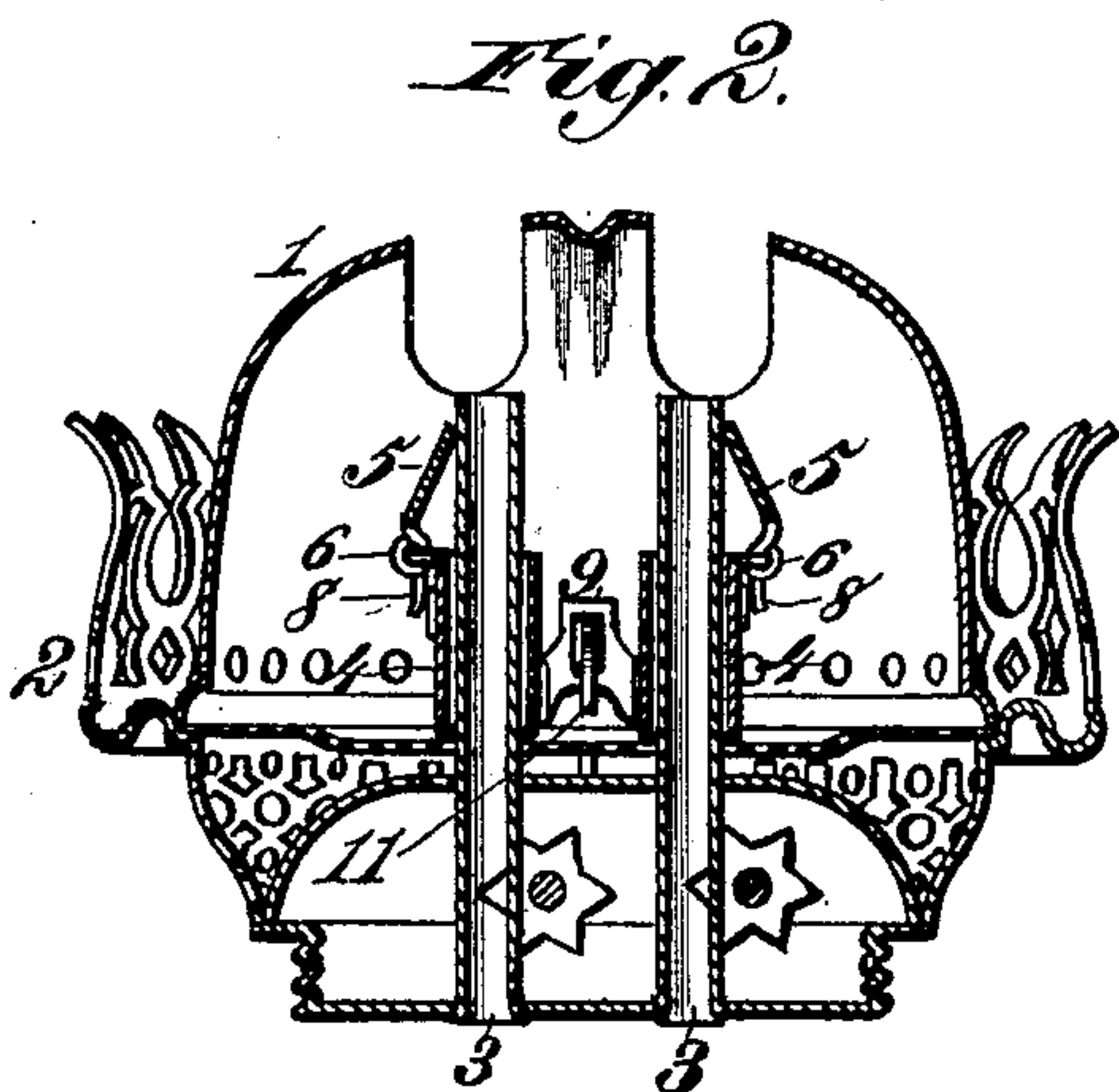
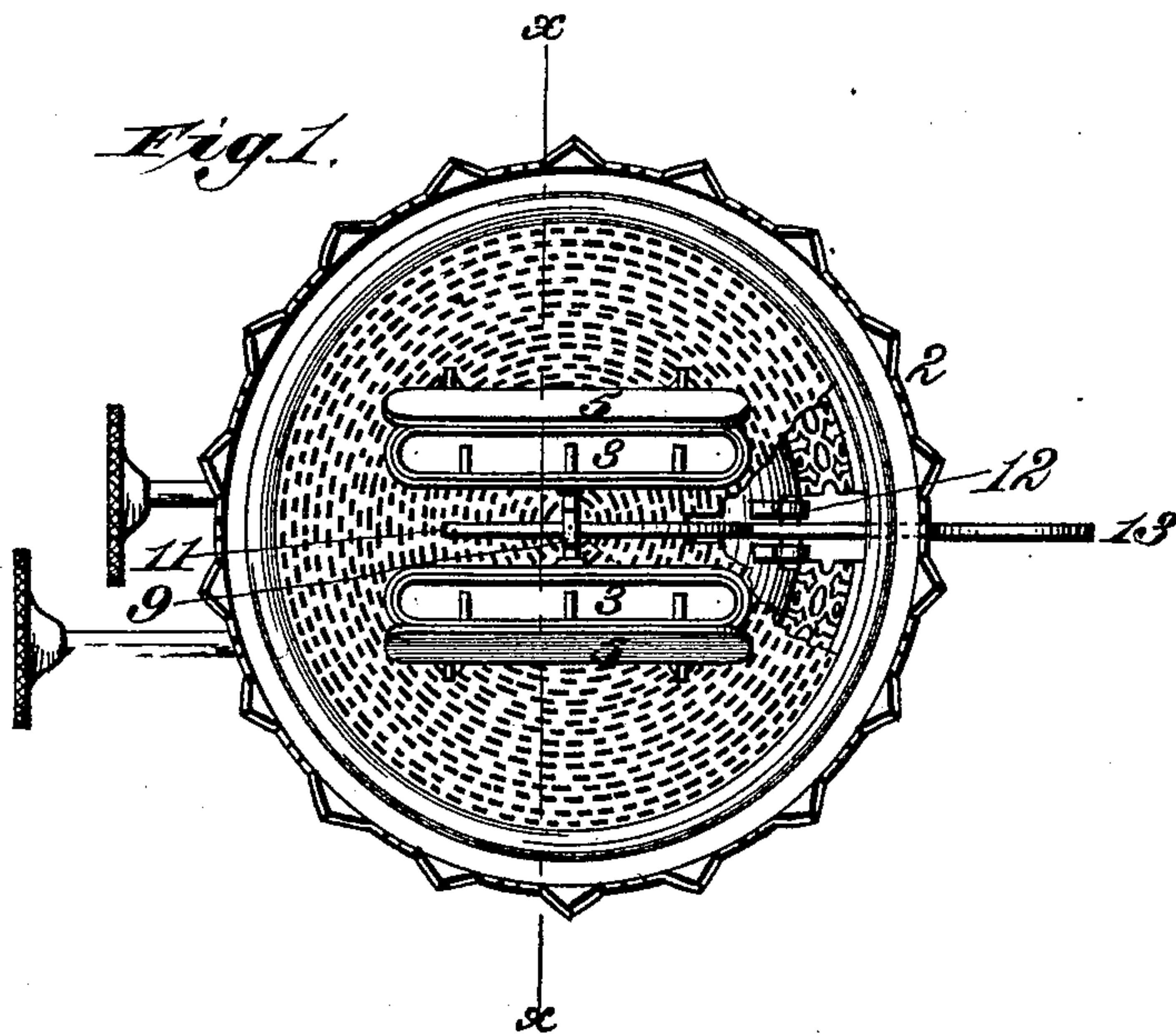


(No Model.)

H. W. HAYDEN.  
LAMP EXTINGUISHER.

No. 390,078.

Patented Sept. 25, 1888.



Witnesses:  
*Alfred Bratt.*  
*J. L. Coombs.*

Inventor:  
*Hiram W. Hayden.*  
By *James L. Norris.*  
*Atty.*



# UNITED STATES PATENT OFFICE.

HIRAM W. HAYDEN, OF WATERBURY, CONNECTICUT, ASSIGNOR TO HOLMES,  
BOOTH & HAYDENS, OF SAME PLACE.

## LAMP-EXTINGUISHER.

SPECIFICATION forming part of Letters Patent No. 390,078, dated September 25, 1888.

Application filed September 26, 1887. Serial No. 250,732. (No model.)

*To all whom it may concern:*

Be it known that I, HIRAM W. HAYDEN, a citizen of the United States, residing at Waterbury, in the county of New Haven and State of Connecticut, have invented new and useful Improvements in Lamp-Extinguishers, of which the following is a specification.

My present invention relates to lamp-extinguishers, and the purpose thereof is to provide a simple, inexpensive, and easily-operated device whereby the flame of a lamp may be instantly extinguished, and whereby the use of a spring or springs is entirely avoided.

The invention consists in the several novel features of construction and new combinations of parts hereinafter fully set forth, and definitely pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view of the lamp-top, showing my invention. Fig. 2 is a vertical section in the line  $x x$ , Fig. 1. Fig. 3 is a similar section in the same plane, showing the parts in another position. Fig. 4 is a detail perspective of one of the extinguisher-sleeves and cap or valve, the whole being detached from the wick-tube.

In the said drawings, the reference-numeral 1 denotes the lamp-top, and the numeral 2 the chimney-base. The two wick-tubes 3 are located parallel to and at a short distance from each other to constitute what is known as a "duplex" burner.

Upon each wick-tube 3 is mounted a sleeve, 4, closely surrounding said tube, but free to move thereon. Upon the upper end of each sleeve is hinged a cap or valve, 5, mounted by means of hooks 6 upon eyes 7, formed upon the sleeve 4, and preferably arranged upon the outer edges of said sleeves, so that the caps 5 will fall and rise toward and from the center. Upon the outer edge of each cap 5 is formed or mounted a finger, 8, which, as the cap rises, strikes the outer surface of the sleeve 4 and holds the free edge of said cap closely against the wick-tube. The opposite side walls of the sleeves are of uniform height, so that the caps or valves, when closed, will stand at right angles to the sleeve, and each depending finger 8 is formed and located at an obtuse angle to the plane of the surfaces of the flat rectilinear plate comprising the cap or valve in such

manner that when the sleeves are depressed the fingers quickly strike the latter, so that neither cap nor valve can assume an erect or perpendicular position, but will stand and be held at an acute angle to the wick-tubes, thereby insuring their falling by gravity to a horizontal position over the wick-tubes when the sleeves are elevated. By this arrangement of the finger 8 at an obtuse angle to its cap or valve to prevent the latter assuming a perpendicular position, or approximately so, I avoid the use of springs to act on tail-pieces of the valves to throw the latter over the wick-tubes.

The sleeves 4 are connected by a rigid central brace, 9, having a slot or opening, 10, with which the end of an actuating-lever, 11, engages. This lever is fulcrumed upon a bracket, 12, arranged upon any suitable part of the device, and its end or handle 13 projects outward, where it may be conveniently reached.

In order to extinguish the lamp, the operator simply depresses the handle of the lever 11, thereby raising the sleeves 4 until they project beyond the tops of the wick-tubes, whereupon the caps or valves 5 close by gravity, causing an instantaneous and complete extinguishment of the flame. The caps 5 are held by the fingers 8 in an inclined position when open, as will be seen by Figs. 2 and 3, and as the sleeves 4 rise said caps will close down more or less rapidly, according to the rapidity of movement of the sleeves, the under surfaces of the caps resting and riding upon the edges of the wick-tubes. The fingers 8, also, are arranged at such an angle with the caps 5 that when the latter are opened to their widest extent and resting against the outside of the wick-tubes the said fingers will be pressed against the sleeves 4 under a slight tension, whereby all rattling of the parts is avoided and the closing of the caps is aided.

By this invention I wholly dispense with springs, which would speedily become inoperative, their temper being drawn by the heat of the lamp.

The upward movement of the sleeves may be limited by the lever 11 striking the bottom of the slot in which it moves, and the downward movement ceases when the lower ends



of the sleeves strike the chimney-base. In these particulars, however, as well as others, my invention may be modified without any essential departure therefrom.

5 I do not claim vertically-movable and rigidly-connected sleeves raised by a lever and provided with valve-plates having tail-pieces acted on by a spring to throw the plates over the wick-tubes; nor do I broadly claim a  
10 sleeve raised by a lever and having a hinged valve-plate provided with a tail-piece to strike the sleeve when the latter is depressed. My invention resides solely in the combination specifically set forth and embracing flat plates  
15 comprising the caps or valves having depending fingers formed and located at an obtuse angle to the surfaces of the plates, so that when the sleeves are lowered the fingers so strike the sleeves that the plates cannot assume an  
20 erect or perpendicular position, but are held inclined at acute angles to the wick-tubes, to thereby insure their falling by gravity over the wick-tubes at right angles thereto when the sleeves are elevated.

25 What I claim is—

1. The combination, with the wick-tube of a lamp-burner, of a vertically-sliding sleeve

on the tube provided at its upper edge with laterally-projecting eyes, and a cap or valve formed integral with lateral hooks engaging  
30 said eyes, and with a depending finger arranged at an obtuse angle to the surfaces of the cap or valve to strike the sleeve when the latter is depressed and hold said cap or valve at an  
35 acute angle to the wick-tube and from assuming a perpendicular position, substantially as described.

2. The combination, with the wick-tubes of a duplex burner, of the rigidly-connected sleeves, a pivoted lever for simultaneously raising both  
40 sleeves, and caps or valves pivoted to the outer edges of the sleeves and provided with depending fingers formed and located at obtuse angles, respectively, to the surfaces of the caps  
45 or valves to hold them at acute angles to the wick-tubes and prevent said caps assuming perpendicular positions, substantially as described.

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

HIRAM W. HAYDEN.

Witnesses:

GEO. H. BENHAM,  
GLOVER S. HASTINGS.