

No. 680,518.

Patented Aug. 13, 1901.

P. F. CASSIDY.  
STOPPER.

(Application filed Nov. 8, 1900.)

(No Model.)

Fig. 1.

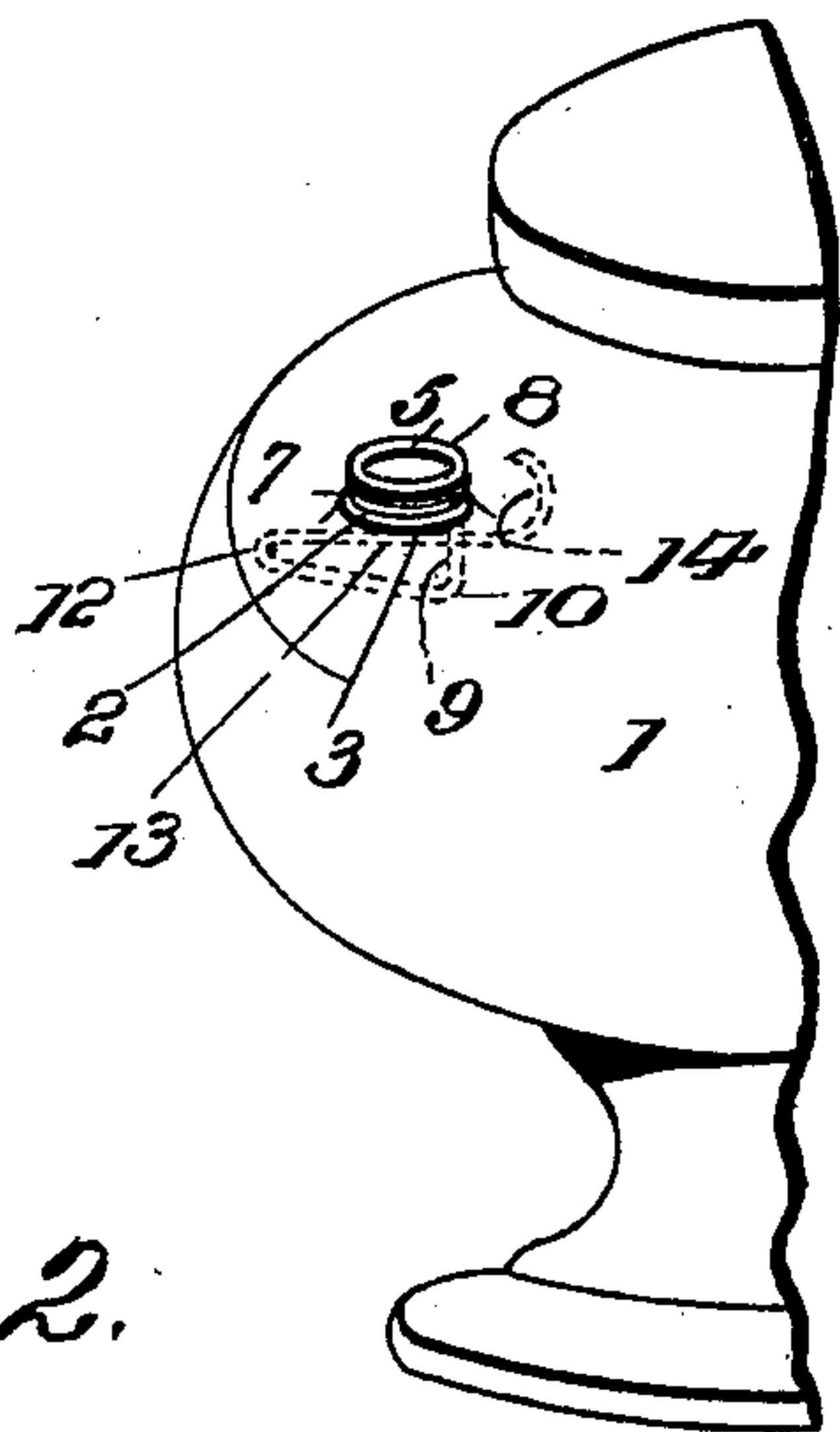


Fig. 2.

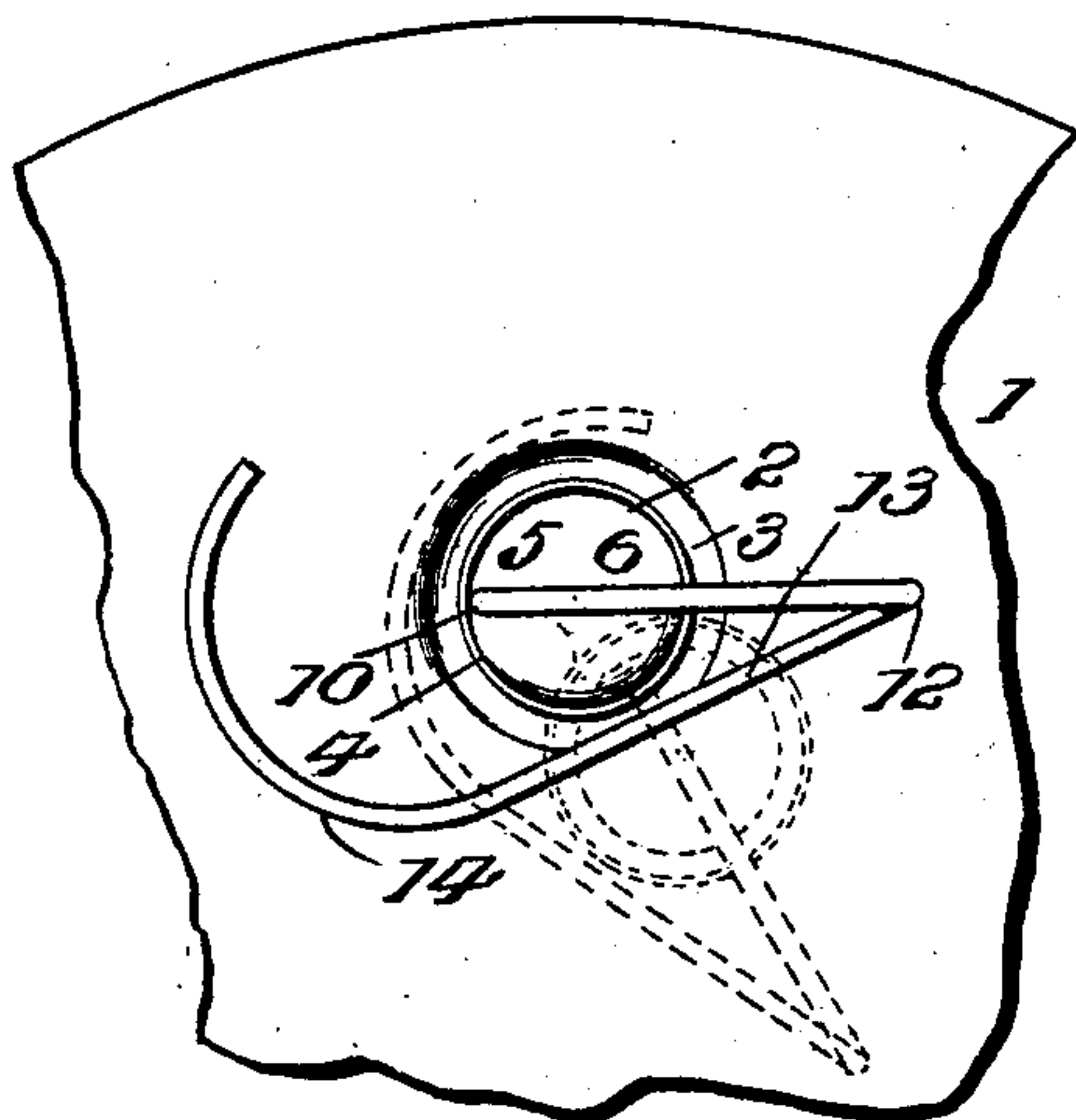


Fig. 3.

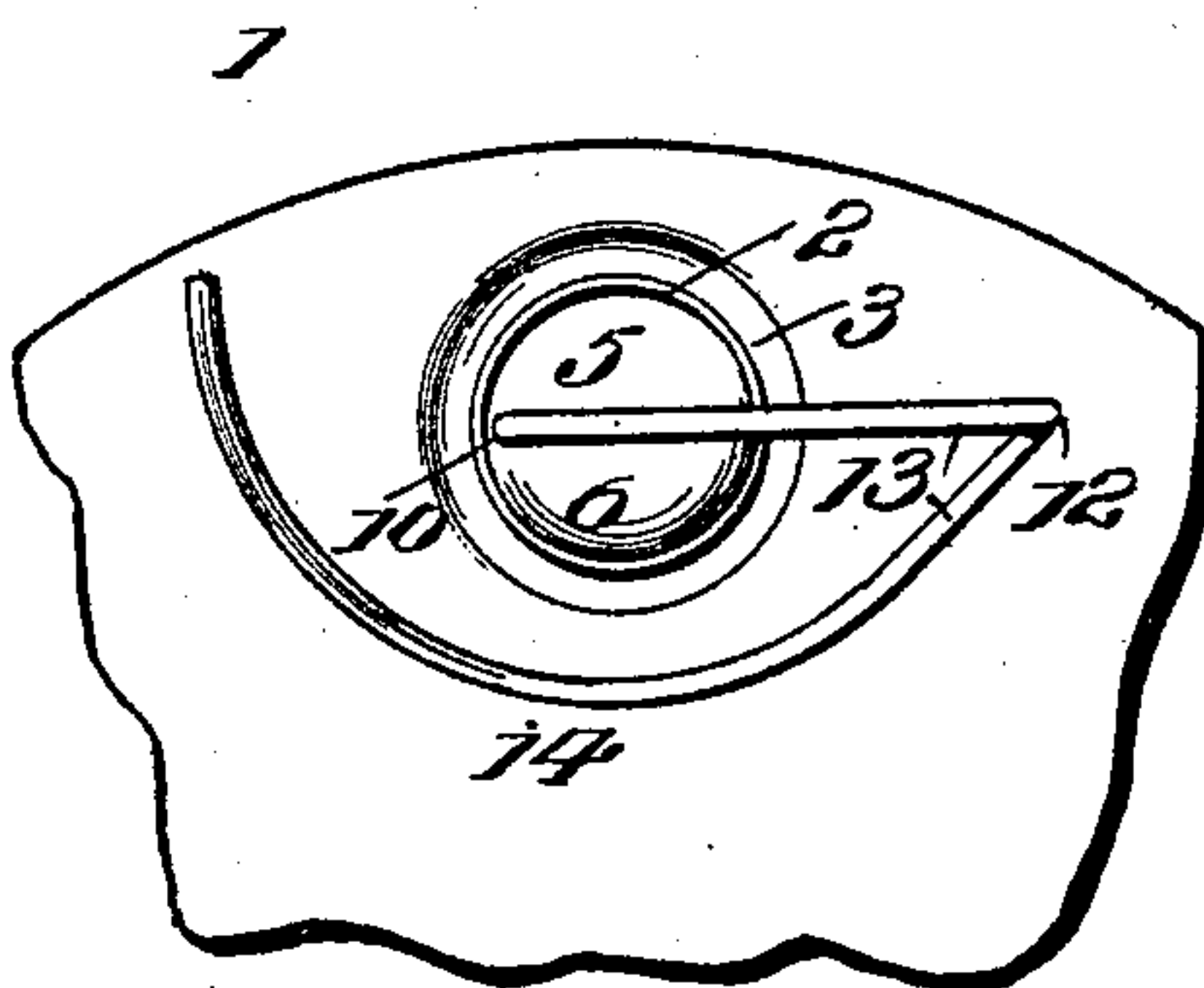
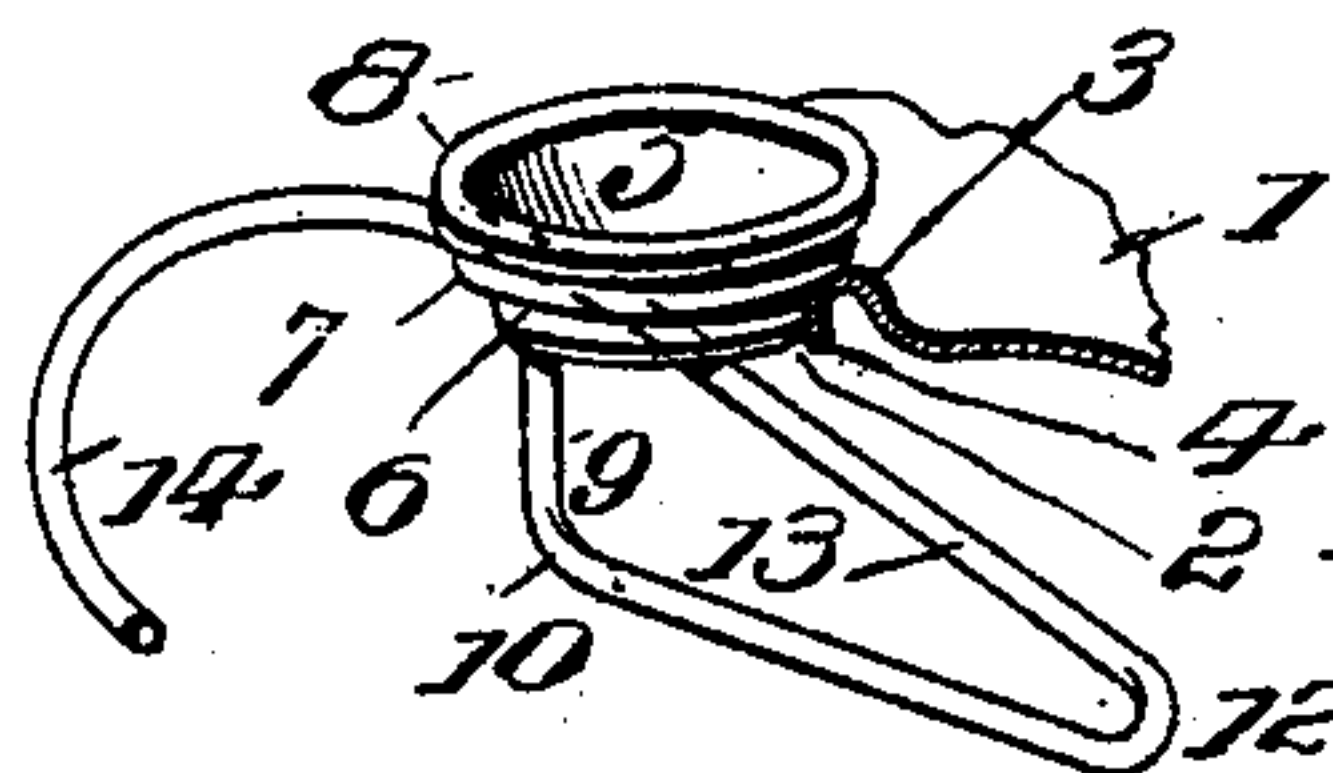


Fig. 4.



Witnesses

*Johnnie  
L. H. H.*

Inventor

*Patrick F. Cassidy*

By

*[Signature]*

Attorney

# UNITED STATES PATENT OFFICE.

PATRICK F. CASSIDY, OF BOSTON, MASSACHUSETTS.

## STOPPER.

SPECIFICATION forming part of Letters Patent No. 680,518, dated August 13, 1901.

Application filed November 3, 1900. Serial No. 35,345. (No model.)

*To all whom it may concern:*

Be it known that I, PATRICK F. CASSIDY, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in 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.

10 This invention relates to stoppers or closures for lamp-founts, oil-cans, and other vessels having charging-openings.

15 The primary object of the invention is to provide a holding device requiring no securing or fastening means for attaching it to the fount-casing.

The invention will be hereinafter fully set forth, and particularly pointed out in the claims.

20 In the accompanying drawings, Figure 1 is a view showing a portion of a lamp-fount with my improved stopper. Fig. 2 is a bottom plan view. Fig. 3 is a similar view showing the charging-opening nearer the side of the fount. Fig. 4 is a view of the stopper and holding device removed.

30 Referring to the drawings, 1 designates a portion of the casing of a lamp-fount formed with a charging-opening 2. This opening is made, preferably, by striking out a piece of the metal, and in doing so the latter is struck up or embossed to form an annular seat 3 and a smooth inwardly-extended flange 4.

35 5 is the stopper, which is of the usual formation, with the exception that the plug portion 6 thereof is not threaded. A washer 7 on the plug adjacent to the annular flange 8 is designed to rest against the seat 3 when the stopper is in the charging-opening. To 40 the stopper is secured a holding device of such construction that the stopper is always held either within the charging-opening or in such relation thereto at one side thereof that it cannot be removed entirely from the 45 casing and can be instantly reseated by a sidewise movement. This device is shown in the form of a wire spring secured at one end to the plug of the stopper and carried inwardly at 9 and bent at 10 and 12 to form a 50 straight portion 13 and a curved portion 14, the portions 13 and 14 being constantly in

engagement with the under side of the fount-casing in proximity to the charging-opening. The constant tension of the portions 13 and 14 serves to firmly hold the stopper in the opening and also when moved to one side. 55 To remove the stopper from the opening, it is only necessary to push sidewise on the latter or slightly lift the same by grasping the flange 8. The extent to which the stopper 60 may be laterally displaced is limited by the straight portion 9 of the holding device contacting with the flange 4. The angularity of the portions 13 and 14 of the spring holding device relatively to the remaining portions 65 thereof and to the stopper is such that at no time will they extend transversely of the charging-opening. Hence they form no obstruction in charging the fount. To reseat the stopper, a sidewise movement thereof will 70 under the action of the spring result in its being drawn over the opening and held to its seat. If the opening in the fount be located in the top thereof in proximity to the side, the stopper will have a uniform line of movement in opening and closing the charging-opening, the bend 12 and the end of the curved portion 14 upon engaging such sides acting as stops to prevent the stopper being 75 thrown out of its course. 80

The advantages of my invention are apparent. It will be observed that by making the holding device from a continuous wire bent in substantially the manner stated sufficient tension will be constantly exerted to retain 85 the stopper in the opening or in close relation thereto and insure its ready reseating and also that the bends of the spring-wire are such that the latter forms no obstruction in filling the vessel. By making the holding 90 device in the manner stated from a single spring-wire no means is required for attaching it to the casing, its contact with the latter being frictional, thus permitting the stopper and holder to be turned at will. 95

While I have specified my improvement as being specially applicable to a lamp-fount, it is obvious that the same may be used in connection with various vessels having charging-openings. 100

I claim as my invention—

1. The combination with a vessel having a



charging-opening in one of its walls, of a stopper, and a holding device therefor, the latter by its tension holding said stopper in said opening, and being itself held by friction  
5 when the stopper is removed from said opening, as set forth.

2. The combination with a vessel having a charging-opening in one of its walls, of a stopper, and a holding device therefor secured at  
10 one end to said stopper and extended through said opening, its other end being free, said device, when the stopper is removed from said opening, being in frictional engagement with the inner side of said wall, as set forth.

15 3. The combination with a vessel having a charging-opening in one of its walls, of a stopper, and a holding device therefor consisting of a spring-wire secured to the stopper at one end, the inner portion of said spring-wire  
20 being in frictional engagement with the inner side of said wall when the stopper is removed from said opening, as set forth.

4. The combination with a vessel having a charging-opening in one of its walls, of a stopper, and a holding device therefor consisting  
25 of a spring-wire secured to the stopper at one end, the inner portion of said spring-wire being formed to clear said opening and in frictional engagement with the inner side of

said wall when said stopper is removed from  
said opening, as set forth. 30

5. The combination with a vessel having a smooth opening and a surrounding seat, of a stopper designed to fit in said opening and bear on said seat, and a holding device con-  
35 sisting of a spring-wire secured at one end to the stopper and extended through said opening, the inner portion of said wire being in frictional engagement with the inner side of said wall when the stopper is removed from  
40 said opening, as set forth.

6. The combination with a vessel having a charging-opening in one of its walls, of a stopper and a holding device therefor, compris-  
45 ing a spring-wire secured to the stopper and projecting downwardly through said opening, and bent to form a horizontal flat portion adapted to bear against the wall of the vessel and terminating in a curve having a greater radius than that of the opening in the vessel,  
50 as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

PATRICK F. CASSIDY.

Witnesses:

ELIZABETH R. PORTER,  
GEORGE A. FLYNN.