

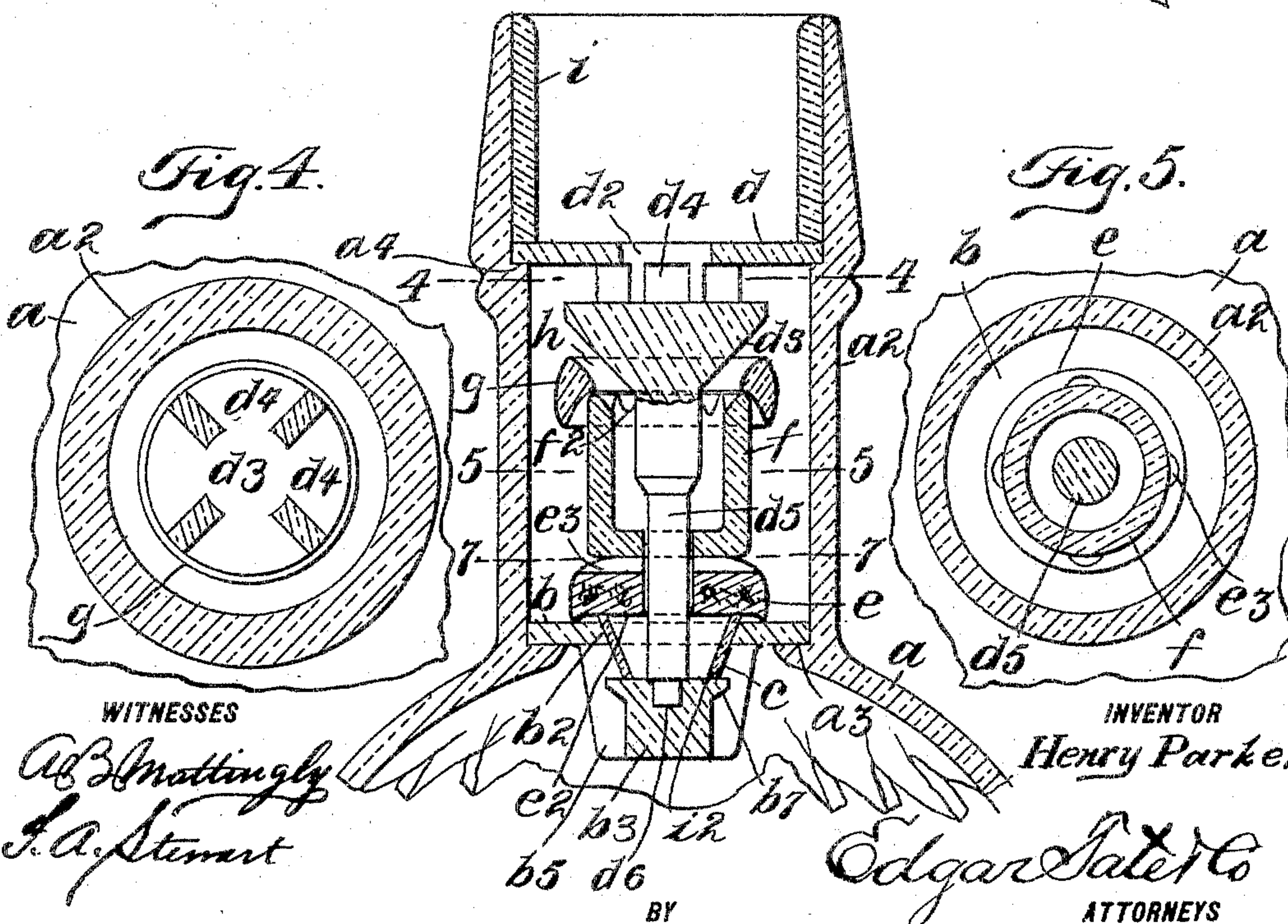
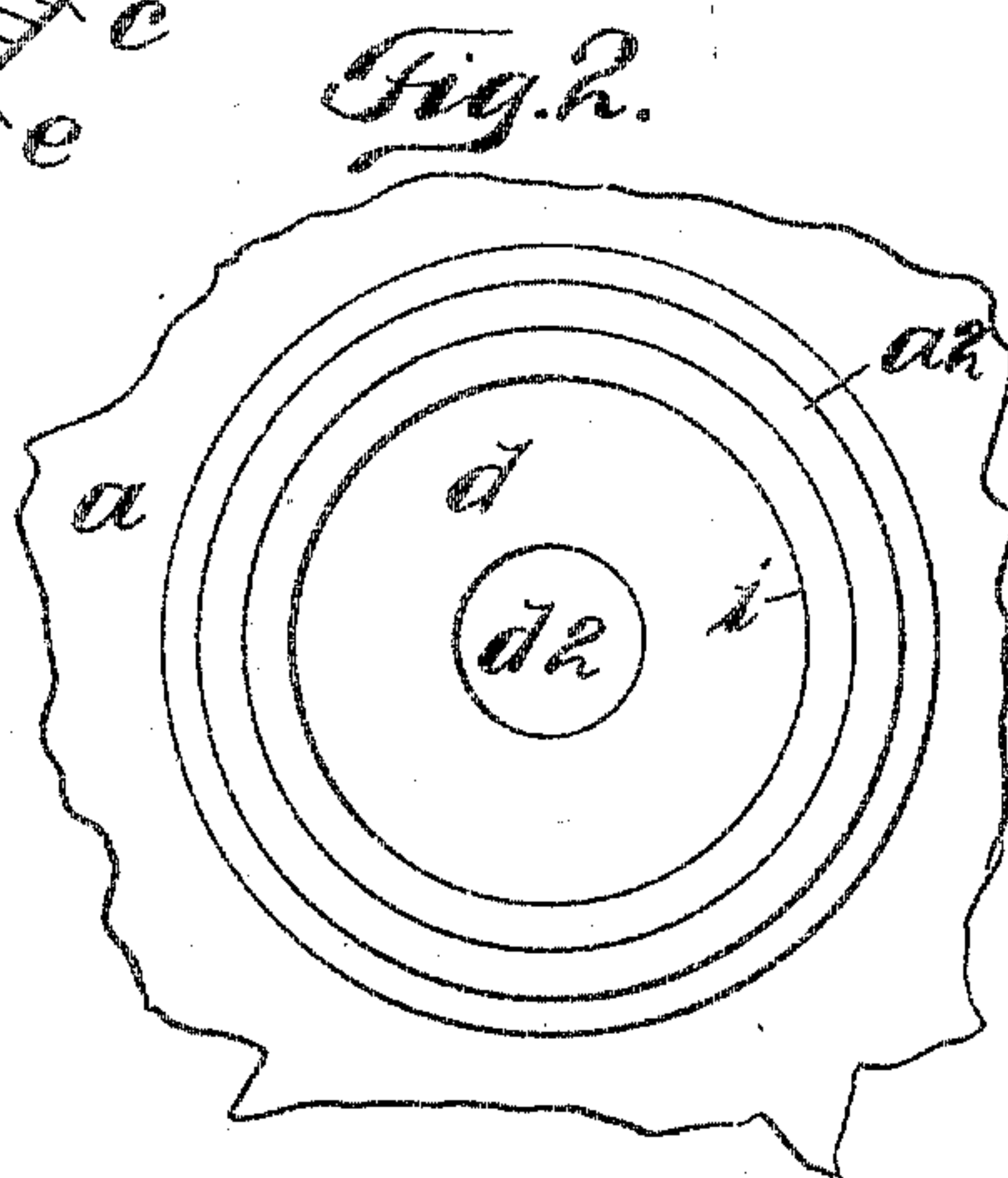
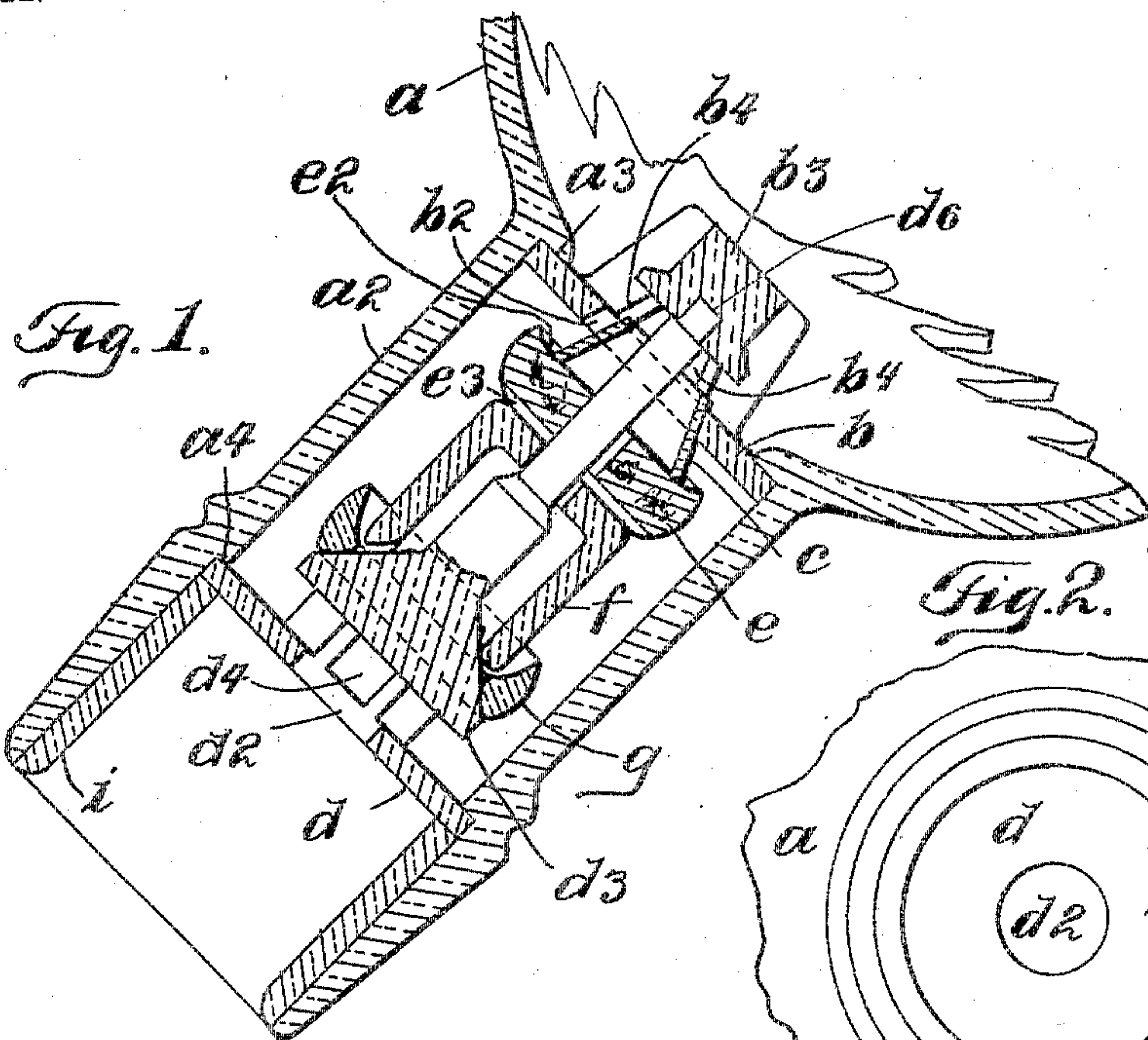
No. 776,679.

PATENTED DEC. 6, 1904.

H. PARKER.  
NON-REFILLABLE BOTTLE.  
APPLICATION FILED JUNE 4, 1904.

NO MODEL.

2 SHEETS—SHEET 1.



**WITNESSES**

**INVENTOR**

*Henry Parker*

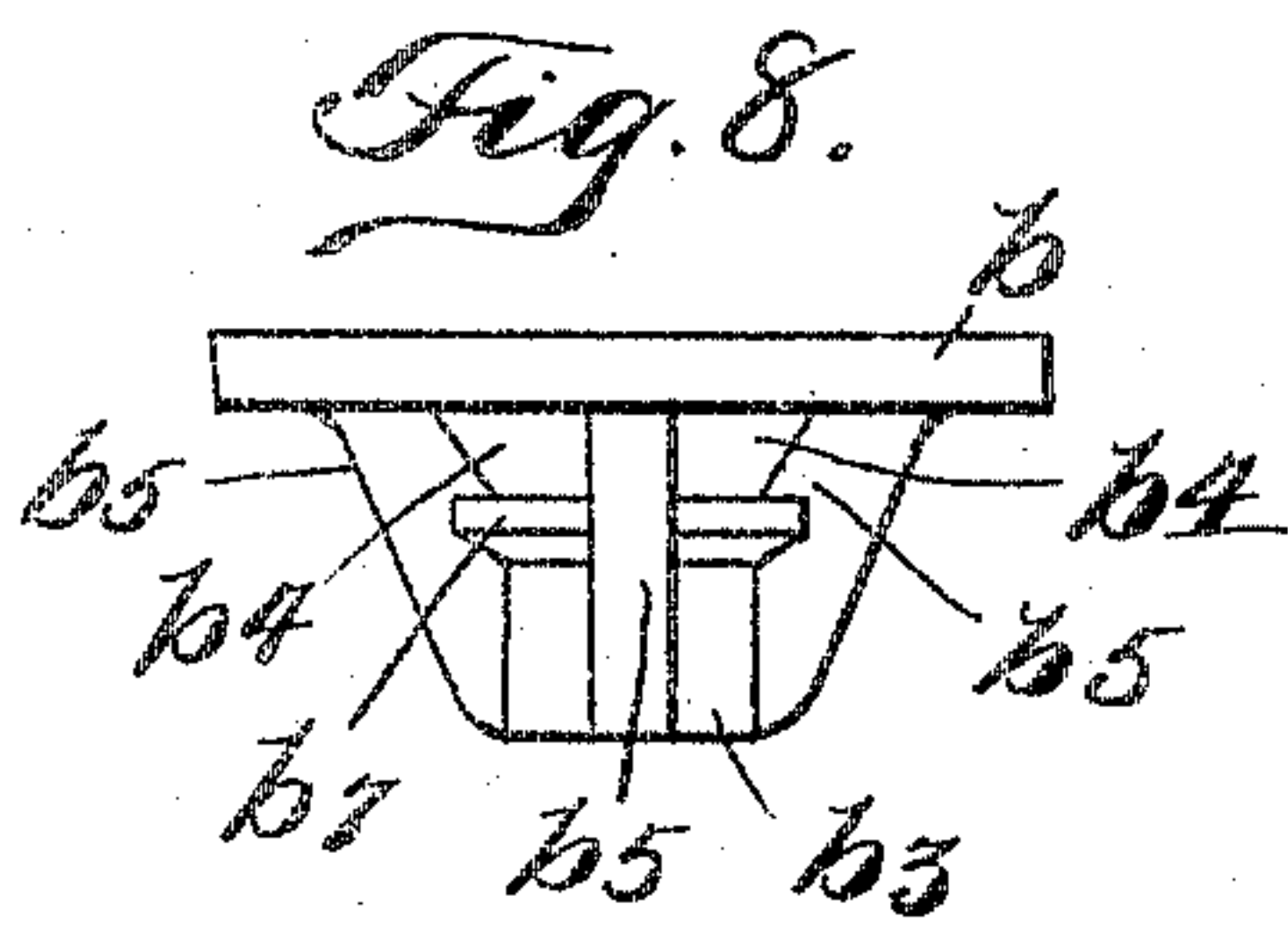
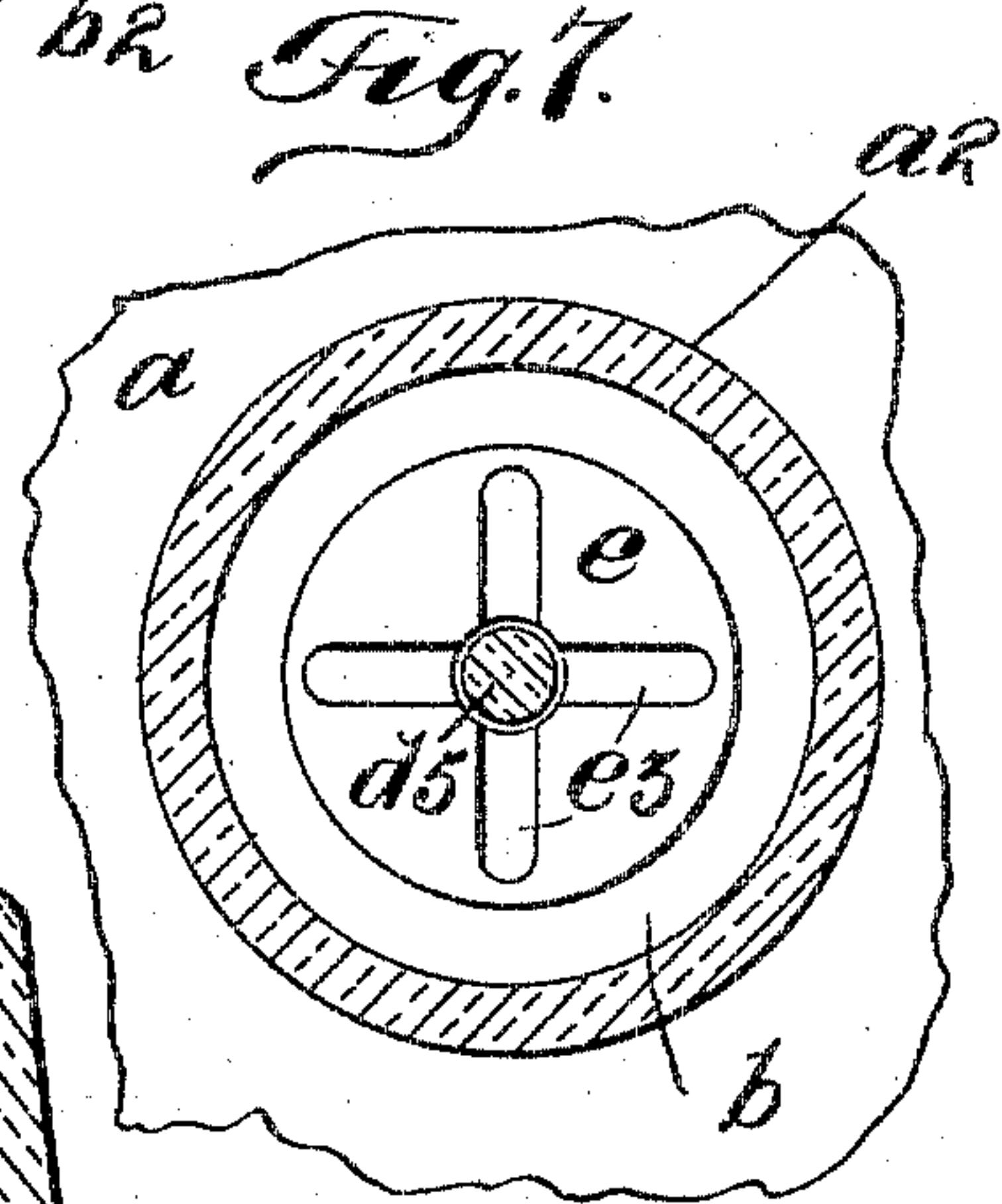
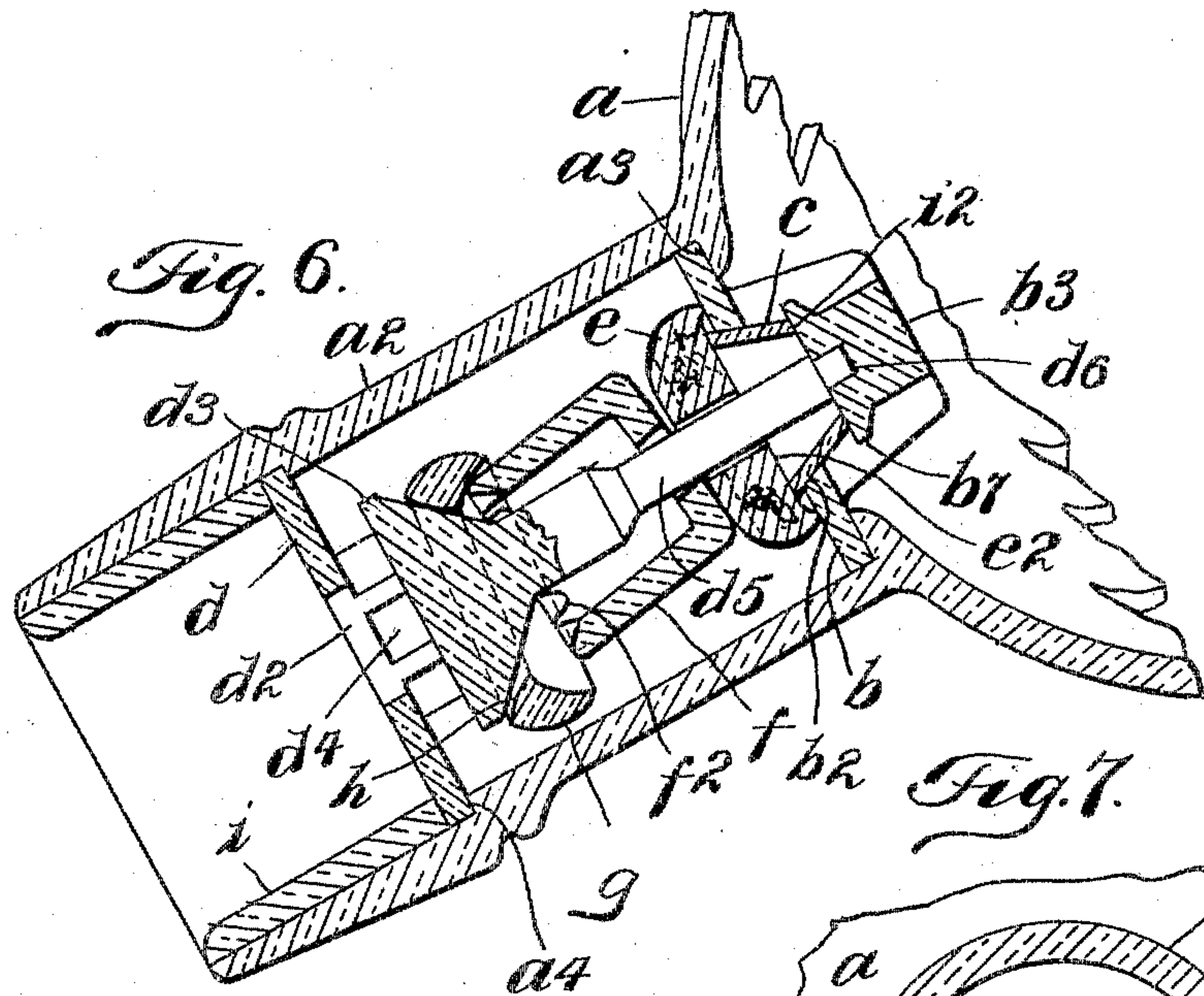
**ATTORNEYS**



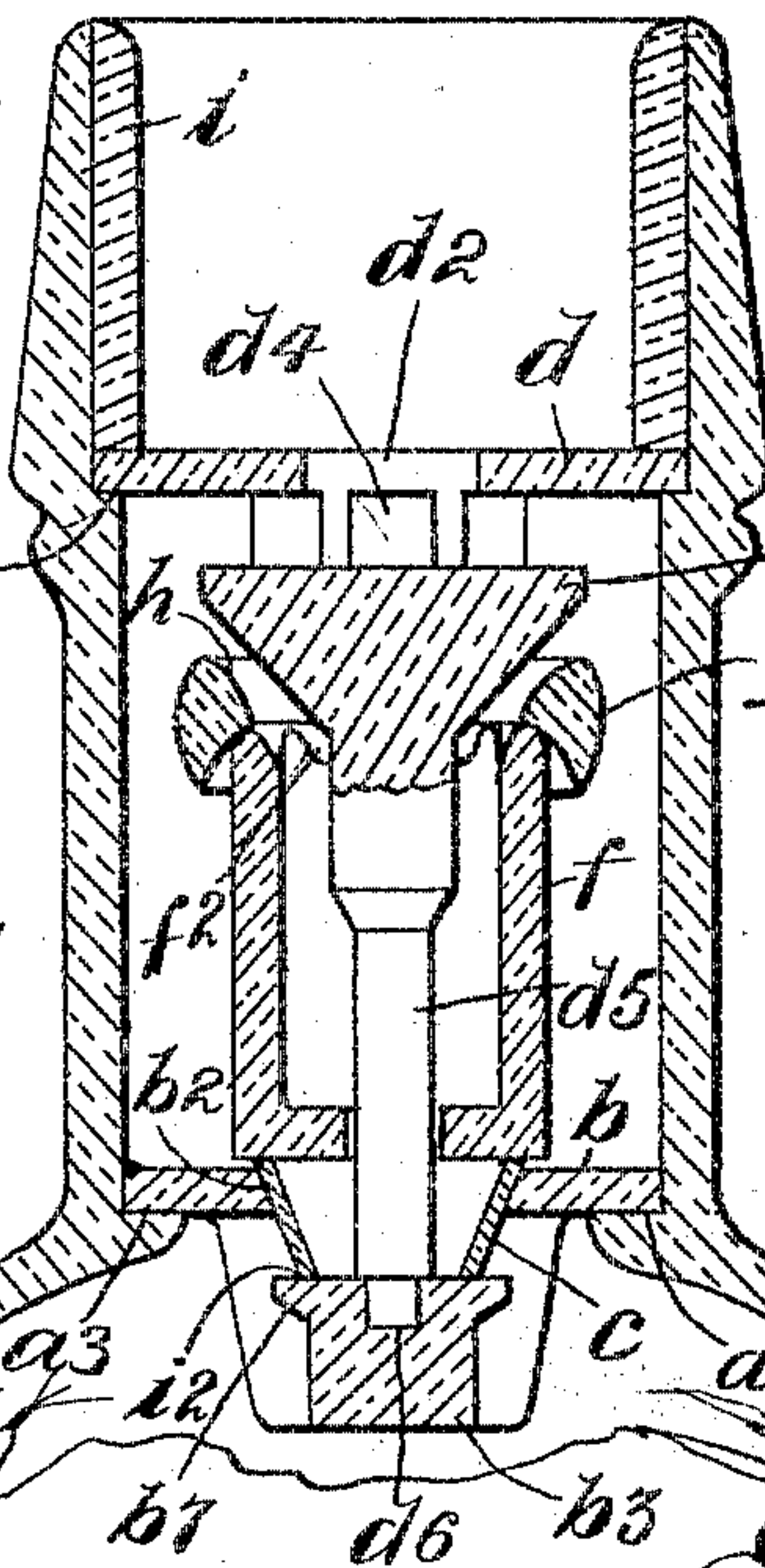
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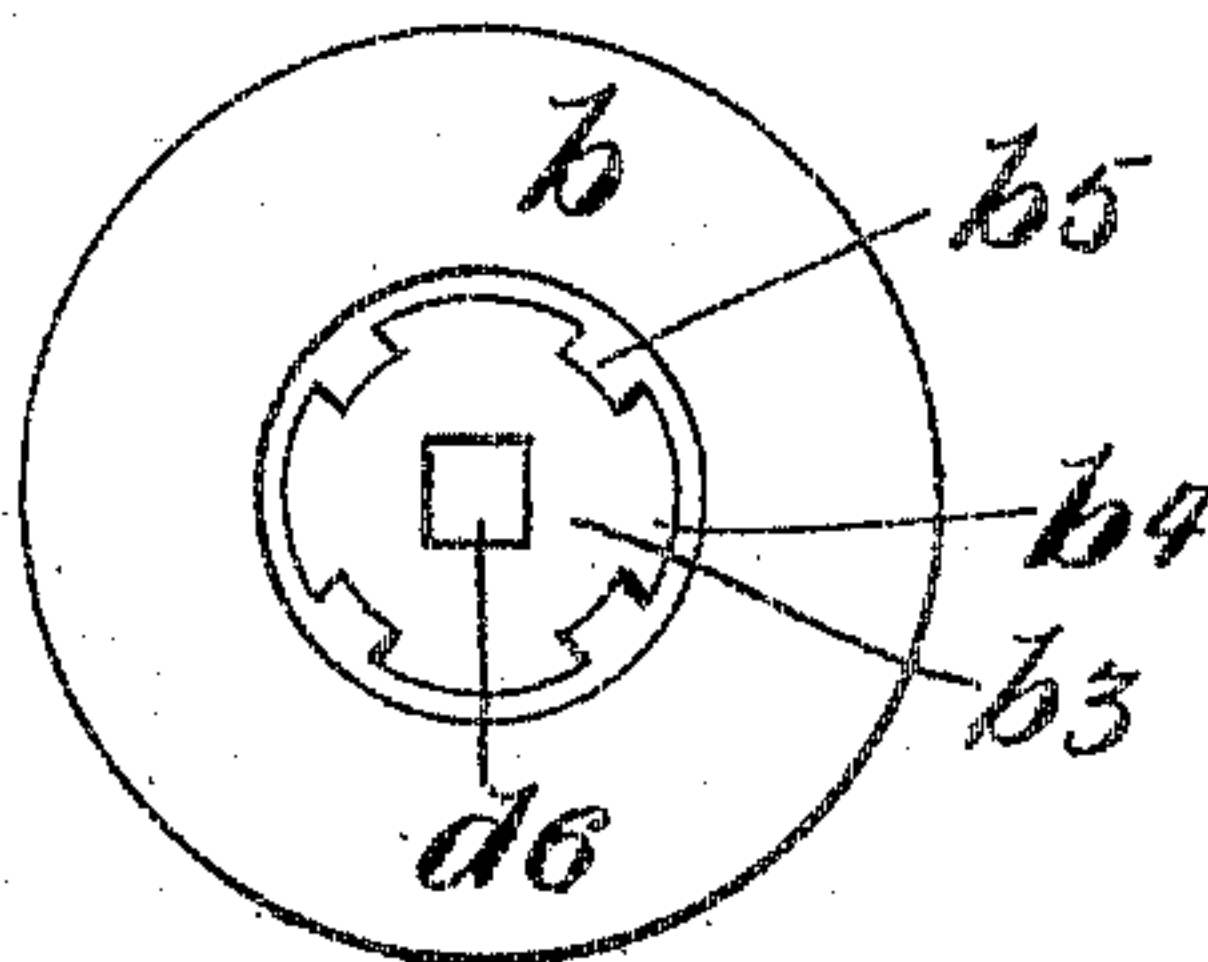
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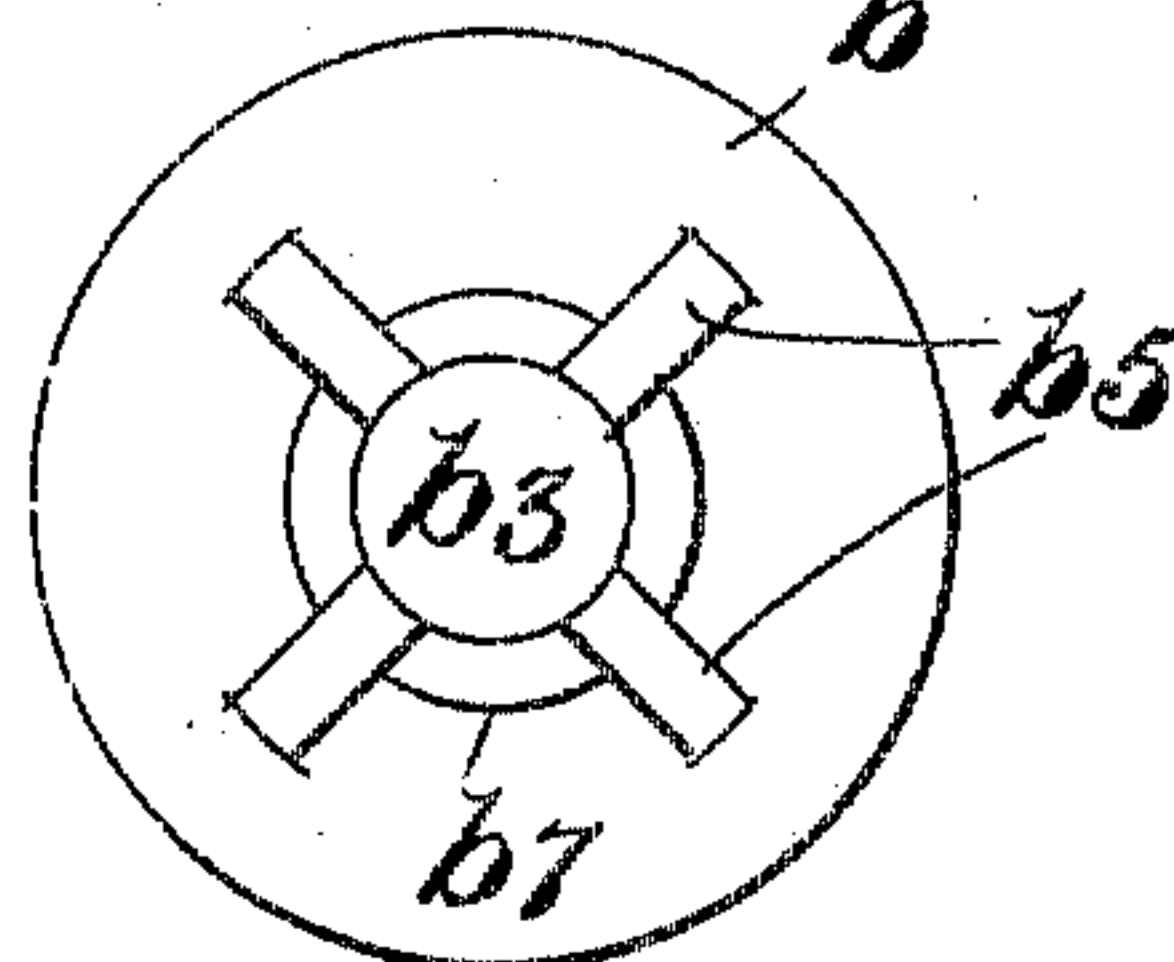
*Fig. 11.*



*Fig. 9.*



*Fig. 10.*



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BY



# UNITED STATES PATENT OFFICE.

HENRY PARKER, OF BROOKLYN, NEW YORK.

## NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 776,679, dated December 6, 1904.

Application filed June 4, 1904. Serial No. 211,132. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY PARKER, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to bottles, jugs, jars, and similar vessels; and the object thereof is to provide a vessel of this class having a neck and a neck attachment, the neck and neck attachment being so constructed that when the vessel has been filled and the neck attachment applied the vessel may be emptied of its contents, but cannot be refilled or reused.

In the accompanying drawings I have shown my improvement applied to a bottle, and the invention is fully disclosed in the following specification, of which said drawings form a part, in which the separate parts are designated by suitable reference characters in each of the views, and in which—

Figure 1 is a central vertical section of the neck and upper part of the bottle provided with my improved neck attachment, the bottle being tilted or partially inverted, as in the operation of pouring liquids therefrom; Fig. 2, a plan view thereof; Fig. 3, a view similar to Fig. 1, but showing the bottle in an upright position; Fig. 4, a section on the line 4 4 of Fig. 3; Fig. 5, a section on the line 5 5 of Fig. 3; Fig. 6, a view similar to Fig. 1, but showing the bottle tilted or inverted to a less extent than in Fig. 1; Fig. 7, a section on the line 7 7 of Fig. 3; Fig. 8, a side view of a valve-seat device which forms a part of the neck attachment; Fig. 9, a plan view thereof; Fig. 10, a bottom plan view thereof; and Fig. 11, a view similar to Fig. 3, but showing a modification.

In the drawings forming part of this specification I have shown at  $a$  the top portion of a bottle provided with a neck  $a^2$ , at the bottom of which is an inwardly-directed annular shoulder  $a^3$  and the top portion of which is enlarged, so as to form another annular shoulder,  $a^4$ , within said neck. On the bottom annular shoulder  $a^3$  is placed a disk or plate  $b$ , having a central port or passage  $b^2$ , the walls of which are beveled to form a seat for a hollow inverted conical valve  $c$ , which is designed to close the port or passage  $b^2$ , and the disk or plate  $b$  is provided on the bottom thereof with a hanger  $b^3$ , which is formed integrally therewith and provided with side ports or passages  $b^4$ , and the disk or plate  $b$ , with the hanger  $b^3$ , is shown in detail in Figs. 8, 9, and 10, and the hanger  $b^3$  consists of a body member supported directly under the port or passage  $b^2$  in the plate  $b$  by radially-arranged arms  $b^5$ , between which are the ports or passages  $b^4$ .

Placed on the annular shoulder  $a^4$  in the top portion of the neck  $a^2$  is a disk or plate  $d$ , having a central port or passage  $d^2$ , below which is an inverted-cone-shaped guard  $d^3$ , formed integrally with the plate  $d$ , and between which and said plate are ports or passages  $d^4$ , and the inverted cone-shaped guard  $d^3$  is provided with a depending standard  $d^5$ , the upper portion of which in the form of construction shown is larger than the lower portion thereof, and the lower end of which is set into a recess in the hanger  $b^3$ , as shown at  $d^6$ , and the part  $b$ , the hanger  $b^3$ , connected therewith, the part  $d$ , the inverted-cone-shaped guard  $d^3$ , and the standard  $d^5$  are all made of glass and constitute when in position the movable parts of the neck attachment, and the lower end of the standard  $d^5$  passes downwardly through the port or passage  $b^2$  in the disk or plate  $b$  and through the valve  $c$ .

On the lower end of the standard  $d^5$  and movable thereon is placed a disk  $e$ , preferably composed of cork, but which may be composed of any desired material, and the bottom of which is preferably countersunk, as clearly shown at  $e^2$  in Figs. 1, 3, and 6, and the top of which in the form of construction shown is provided with transverse grooves  $e^3$ .

Placed on the standard  $d^5$  and above the disk  $e$  and movable on said standard is a thimble-shaped member  $f$ , the top of which is preferably corrugated, as shown at  $f^2$ , and the thick-



ness of the disk  $e$  and the height of the thimble-shaped attachment  $f$  are such that when the bottle is in an upright position, as shown in Fig. 3, the top of the thimble attachment 5 is about in the same horizontal plane as the apex of the inverted-cone-shaped guard  $d^3$  or the top of the standard  $d^5$ , and mounted on the thimble attachment  $f$  or placed thereon and inclosing the bottom portion of the inverted-cone-shaped guard  $d^3$  is an annular member or ring-shaped device  $g$ , the bottom inner wall of which is flared and concave in cross-section and the top inner wall of which is flared and in the form of construction shown 15 convex in cross-section, and said annular member or ring-shaped device  $g$  when the bottle is in an upright position rests on the top of the thimble-shaped member  $f$ , as clearly shown in Fig. 3, and between the same and the inverted-cone-shaped guard  $d^3$  is an annular space  $h$ ; but when the bottle is inverted or partially inverted, as shown in Fig. 1, this annular member or ring-shaped device  $g$  rests on the inverted-cone-shaped guard  $d^3$ , as shown in Fig. 25 1, and when said bottle is inverted to a less extent, as shown in Fig. 6, the said annular member  $g$  rests on both the guard  $d^3$  and the top of the thimble-shaped member  $f$ , and said member  $f$  also rests on the bottom of said guard, and the annular or ring-shaped member  $g$  is also preferably composed of glass.

The operation of this form of construction will be readily understood from the foregoing description when taken in connection with the 35 accompanying drawings and the following statement thereof. In practice the bottle  $a$  is first filled with the desired liquid, after which the neck attachment or the separate parts thereof are secured in position in the following manner: The disk or plate  $b$  is first inserted or passed downwardly into the neck until it rests on the annular shoulder  $a^3$ , and the valve  $c$  is then dropped into position and the disk  $e$  is placed on the valve  $c$ . The thimble-shaped member  $f$  is then placed on said disk, and the annular or ring-shaped member  $g$  is placed on the thimble-shaped member  $f$ , and the disk or plate  $d$ , with the guard  $d^3$  and standard  $d^5$ , is placed in position, the stand- 45 ard  $d^5$  passing down through the parts  $g$ ,  $f$ ,  $e$ , and  $c$ , and the disk or plate  $d$  is secured in position by a sleeve  $i$ , inserted into the top portion of the neck and secured therein by cement or in any suitable way, after which the neck is closed by a cork or plug inserted 55 into the sleeve  $i$ , which forms the inner wall of the top of the neck in the usual manner. Whenever it is desired to empty the bottle or discharge a portion of its contents, the bottle 60 is inverted or partially inverted, as shown in Fig. 1. In this operation the separate movable parts of the neck attachment or the members  $g$ ,  $f$ , and  $e$  move downwardly into the

position shown in Fig. 1, the valve  $c$  leaves its seat, and the contents of the bottle are free to 65 flow out through the ports or passages  $b^4$ ,  $b^2$ ,  $d^4$ , and  $d^2$ , and this operation may be continued or repeated until the bottle is entirely empty.

The object of making the bottom portion 70 of the disk  $e$  concave or countersinking the same is to cause it to more closely fit the top of the valve  $c$  and also to enable the perimeter thereof when the parts are in the position shown in Fig. 3 to rest on the disk or plate  $b$ , 75 and the object of the grooves  $e^3$  in the top of the disk  $e$  is to enable any liquids which pass outwardly through the valve  $c$  when the parts are in the position shown in Fig. 1 to flow through the central opening in the disk  $e$  and 80 out over the top thereof.

When the bottle has been fully emptied of its contents, if an attempt be made to refill the same by pouring liquids therein to the various parts of the neck attachment will at 85 once assume the position shown in Fig. 3, the valve  $c$  will be seated, and no liquids can enter the bottle, and this operation will be the same in any position in which the bottle can be held in an attempt to pour liquids 90 therein to, and if an attempt be made to fill the bottle by forcing the neck thereof downwardly into the liquids while the bottle is held in an upright position the part  $e$  will operate as a float and will rise and force the 95 valve  $c$  to its seat and no liquids can enter the bottle. If the bottle is only partially inverted, as shown in Fig. 6, and an attempt be made to force liquids therein to, the thimble-shaped member  $f$  and the annular member or ring-shaped device  $g$  will assume the position shown in said figure and the disk  $e$  will be forced against the valve  $c$  and said valve will be forced to its seat, the thimble-shaped member  $f$  being tilted on the standard 105  $d^5$  by the operation of the annular or ring-shaped member  $g$ . This operation of said parts is facilitated by the shape of the bottom portion of the guard  $d^3$  and the hole in the bottom of the thimble-shaped member  $f$  being large enough to allow said member to tilt on the standard  $d^5$  and the top of said thimble member being much larger than the bottom portion of the guard  $d^3$  and the top portion of the standard  $d^5$ , and the object of corrugating the top of the thimble-shaped member  $f$ , as shown at  $f^2$ , is to occasion less friction between the said top of said member and the inverted-cone-shaped guard  $d^3$  when the top of said thimble-shaped member comes in 120 contact therewith, and the object of forming the inner bottom walls of the annular member  $g$  concave in cross-section is to facilitate the operation of said member in connection with the top of the thimble-shaped part  $f$ , 125 and the object of making the top inner walls



of said member *g* convex in cross-section is to reduce the friction between the same and the guard *d*<sup>3</sup>. It will therefore be seen that no matter in what position the bottle be held liquids cannot be forced thereinto nor poured thereinto.

Although I have described the seat of the valve *c* as being in the disk or plate *b*, it will be observed that the bottom of the valve when seated also rests on the body portion of the hanger *b*<sup>3</sup>, which is an integral part of the disk or plate *b*, and the valve *c* therefore has two seats, one of which is on the top of the body portion of the hanger *b*<sup>3</sup>, as shown at *v*<sup>2</sup>, and the object of this arrangement is to prevent liquids from passing up through the parts *c*, *e*, *f*, and *g* in an attempt to force said liquids into the bottle by immersing the neck of the bottle in the liquids or by employing a pump while the bottle is held in an inverted position.

In Fig. 11 I have shown a modification which is exactly the same in all respects as the construction shown in Figs. 1 to 10, inclusive, and hereinbefore described, except that the disk *e*, which operates as a float, is omitted, and the thimble-shaped member *f* is made longer. The operation of the parts in this form of construction would be the same as that shown in Figs. 1, 2, and 6 if an attempt be made to pour liquids into the bottle or to force liquids into the bottle when the latter was held in a slightly-tilted position or on its side, and if the parts *f* and *g* were made of material which would enable them to serve as floats liquids could not be forced into the bottle in any position in which the latter might be held, nor by inserting the neck of the bottle into the liquids. In this form of construction the bottom of the thimble-shaped member *f* operates directly in connection with the valve *c* and forces the valve to its seat, as will be readily understood.

Although I have described the disk *e* as preferably composed of cork, it may be made of any desired material, but is preferably made of such material as to enable it to operate as a float, and although I have described the other parts of the neck attachment as preferably composed of glass they also may be made of any preferred material.

It will be understood, of course, that the top portion of the guard *d*<sup>3</sup> is intended to prevent the insertion of a tool or instrument through the port or passage *d*<sup>2</sup> in an attempt to interfere with the operation of the movable parts of the attachment when an effort is made to refill the bottle, and said guard may be of any desired diameter, all that is necessary in this connection being that it be so formed as to permit liquids to pass around it, and in forming the body portion of the hanger *b*<sup>3</sup> the top thereof is preferably pro-

vided with an annular flange or rim *b*<sup>7</sup>, on which the valve *c* rests when in its normal position.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A vessel of the class described provided with a neck, and a neck attachment comprising a plate at the bottom of the neck provided with a central port or passage beneath which is a hanger between which and the plate are ports or passages, a hollow conical valve adapted to be seated in the plate and on said hanger, another plate in the top portion of the neck provided with a port or passage and a depending member comprising a guard below said port or passage provided with a depending standard which is passed through said valve and seated in said hanger, an inverted-thimble-shaped member mounted on said standard and movable thereon below said guard and adapted to rest on said valve, and an annular member mounted on the top of the thimble-shaped member and operating in connection therewith and with said guard, said guard being cone-shaped on its bottom side, substantially as shown and described.

2. A vessel of the class described, provided with a neck, a plate in the bottom portion of the neck provided with a central port or passage, and below said port or passage with a hanger between which and the plate are side ports or passages, a hollow conical valve adapted to be seated in said plate and on said hanger, another plate in the top portion of the neck provided with a port or passage and a depending member comprising a guard below said port or passage and a standard connected with said guard which passes downwardly through said valve, a disk mounted on said standard above said valve and operating in connection with the latter, an inverted-thimble-shaped member mounted on said standard above said disk and operating in connection with the latter and with said guard and a ring-shaped member mounted on said thimble-shaped member and operating in connection therewith and with said guard, the bottom portion of said guard being cone-shaped in form, substantially as shown and described.

3. A vessel of the class described provided with a neck, a plate in the bottom portion of the neck provided with a central port or passage, another plate in the top portion of the neck provided with a port or passage and a depending member comprising a guard below said port or passage and a standard connected with said guard which passes downwardly through the plate in the bottom portion of the neck, a valve mounted on said standard and adapted to close the port or passage in the bottom portion of the neck, a thimble-shaped member mounted on said standard and mov-

able thereon and operating in connection with  
said valve and with said guard and a ring-  
shaped member mounted on said thimble mem-  
ber and operating in connection therewith and  
5 with said guard, the bottom portion of said  
guard being conical in form, substantially as  
shown and described.

In testimony that I claim the foregoing as

my invention I have signed my name, in pres-  
ence of the subscribing witnesses, this 3d day 10  
of June, 1904.

HENRY PARKER.

Witnesses:

F. A. STEWART,

C. E. MULREANY.