

(No Model.)

S. P. HILL & F. VAN WINKLE.  
NON-REFILLABLE BOTTLE.

No. 572,302.

Patented Dec. 1, 1896.

FIG. 1.

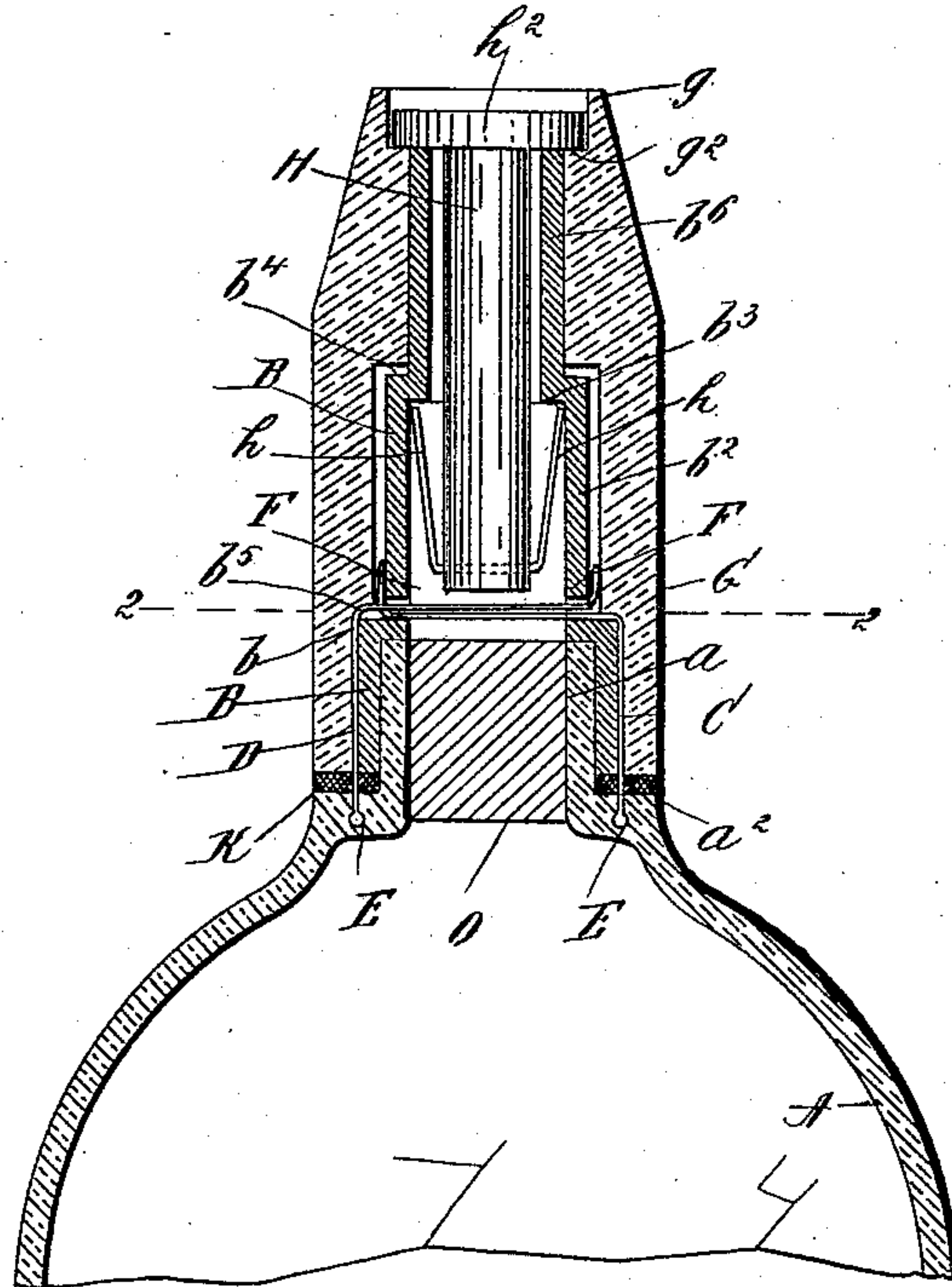
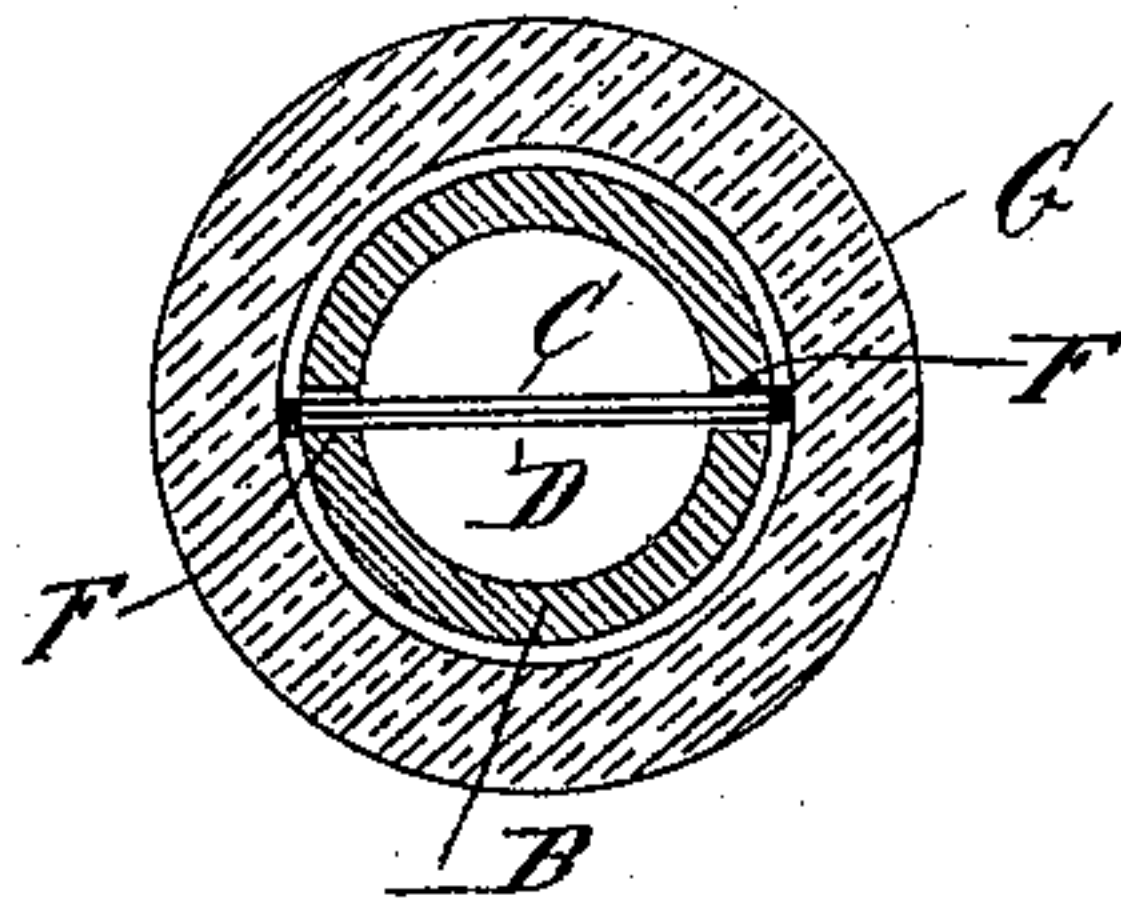


FIG. 2.



WITNESS:

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# UNITED STATES PATENT OFFICE.

SYLVESTER P. HILL AND FRANK VAN WINKLE, OF NEWARK, NEW JERSEY.

## NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 572,302, dated December 1, 1896.

Application filed May 7, 1896. Serial No. 590,511. (No model.)

*To all whom it may concern:*

Be it known that we, SYLVESTER P. HILL and FRANK VAN WINKLE, citizens of the United States, and residents of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Bottles, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts.

This invention relates to bottles, jugs, jars, and similar vessels; and the object thereof is to provide a vessel of this class with a neck attachment which is 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.

The invention is fully disclosed in the following specification, in which we have shown our invention applied to a bottle, in which—

Figure 1 is a central vertical section of the upper part of a bottle and our improvement applied thereto, and Fig. 2 a section on the line 2 2 of Fig. 1.

In the practice of our invention we provide a bottle or other vessel A, having a neck  $a$ , at the lower end of which is an annular shoulder  $a^2$ , and we also provide a tube B, which is inwardly contracted at  $b$ , so as to form an annular shoulder which rests on the neck  $a$  of the bottle, and above which is a tubular extension  $b^2$ , which is inwardly contracted at  $b^3$ , so as to form an inwardly-directed annular shoulder, and annular shoulders  $b^4$  and  $b^5$  are formed on the outer sides of the tube where the contractions are formed, and above the annular shoulder  $b^4$  is an extension  $b^6$ , which is also tubular in form, and when thus constructed the tube B consists of three parts, the central part being smaller in diameter than the lower part and the upper part being smaller in diameter than the central part, and said parts are preferably substantially the same in length.

We also provide two fine wires C and D, the ends of which are secured in the bottom of the neck of the bottle, as shown at E, at the

time that the bottle is made, and in practice we form transverse openings or passages F in the bottom part of the central portion of the tube B, just over the annular shoulder  $b^5$ , and in securing the tube B to the neck  $a$  the lower end of said tube is placed over the neck, as shown in Fig. 1, and the wires D and C are passed transversely through the openings F in opposite directions and wound around the lower portion of the central part of the tube B.

We also provide a tubular casing G, the central bore of which is formed to correspond with the form of the tube B, being enlarged at its lower end, contracted at the central portion, and still further contracted at the upper end thereof, and said casing is adapted to be inserted over the tube B, as shown in Fig. 1, and the central and lower portions of the bore formed therein are slightly larger in diameter than the central and lower portions of the tube B. This casing G is placed in position after the tube B has been secured in position, as hereinbefore described, and the upper end thereof is provided with an annular chamber  $g$ , which is larger in diameter than the upper portion of the bore of the tubular casing, whereby an annular inwardly-directed shoulder  $g^2$  is formed, and we also provide a rod or plug H, which is adapted to be inserted into the upper end of the tube B and to extend downwardly to or approximately to the lower end of the central portion of said tube, and which is provided with two upwardly and outwardly directed springs  $h$ , which are formed by passing a strong wire through the lower end of the plug and bending the ends thereof upwardly, and when said plug is forced into position the springs  $h$  will operate in connection with the inwardly-directed annular shoulder  $b^3$  on the tube B to hold said plug in place, and the plug H is provided with a circular head  $h^2$ , which rests on the upper end of the tube B, and also on the annular shoulder  $g^2$  on the casing G, and thus holds said casing in place.

We also provide a ring K, of packing material, which is placed on the annular shoulder  $a^2$  at the lower end of the neck  $a$  of the



bottle, and the tube B and the tubular casing G rest on this packing-ring and the wires C and D are passed therethrough.

The operation will be readily understood from the foregoing description, when taken in connection with the accompanying drawings and the following statement thereof:

The bottle or vessel A must first be filled before the neck attachment is applied, and having been filled with the desired contents the tubular attachment B is placed thereon and the wires C and D are passed therethrough and wound around the central portion thereof, as hereinbefore described, after which the tubular casing G is placed in position and the plug H is then forced into the upper end of the tube D, and said casing will be held in place by the cap or head  $h^2$  on the plug H, and the tube B will be held in place by the wires C and D, and the bottle cannot be opened or emptied without inserting a cutting instrument beneath the bottom of the casing G and cutting the wires C and D, and when this is done the casing and the tube B may be easily removed. We may also employ an ordinary stopper or cork O, by means of which the neck of the bottle may be closed before the neck attachment is applied, and this cork may be used in the ordinary manner after the attachment is removed, and the removal of these parts, as hereinbefore described, will be proof of the fact that the bottle has once been filled and emptied, and it will thus be seen that we accomplish the object of our invention by means of a device which is simple in construction and operation and which is well adapted to accomplish the result for which it is intended.

Having fully described our invention, we claim as new and desire to secure by Letters Patent—

1. A bottle or other vessel, provided with a neck, an annular shoulder or projection at the base thereof, a tubular attachment which is adapted to be placed on, and inclose said neck, and which is provided with transverse openings in the sides thereof, wires secured in the bottle at the base of the neck and adapted to be passed transversely through said openings, a tubular casing which is adapted to be inserted over said tubular attachment, and which is provided at its upper end with an inwardly-directed annular shoulder, and a plug which is adapted to be forced into the upper end of said tubular attachment, and provided with springs which are adapted to operate in connection, with an inwardly-directed annular shoulder formed therein, and with a cap or head which is adapted to rest upon the upper end of said tubular attachment, and in the annular chamber formed within said tubular casing, substantially as shown and described.

2. A bottle or other vessel provided with a neck, an annular shoulder or projection at the base thereof, a tubular attachment which

is adapted to be placed on, and inclose said neck, and which is provided with transverse openings in the sides thereof, wires secured in the bottle at the base of the neck, and adapted to be passed transversely through said openings, a tubular casing which is adapted to be inserted over said tubular attachment, and which is provided at its upper end with an inwardly-directed annular shoulder, and a plug which is adapted to be forced in the upper end of said tubular attachment, and provided with springs which are adapted to operate in connection with an inwardly-directed annular shoulder formed therein, and with a cap or head which is adapted to rest upon the upper end of said tubular attachment, and in the annular chamber formed within said tubular casing, said tubular attachment being provided with a central contracted portion, which is smaller than the base thereof, and with an upper portion which is contracted and smaller than the central portion, and the central bore through the tubular casing being similarly formed, substantially as shown and described.

3. A bottle or other vessel, provided with a neck, at the base of which is an annular outwardly-directed shoulder or projection, and a tubular attachment connected therewith, the lower end of which is adapted to inclose said neck, said neck being provided with wires which are secured therein, at the base of the neck and which are adapted to be passed therethrough and a tubular casing which is adapted to inclose said tubular attachment, and the upper end of which is provided with an annular chamber, and a plug which is adapted to be inserted into said attachment, and which is provided at its lower end with springs which are adapted to operate in connection with an annular inwardly-directed shoulder or projection in said tubular attachment, said plug being provided at its upper end with a disk or head, which is adapted to rest on said tubular attachment and the bottom of the annular chamber which is formed in said tubular casing, substantially as shown and described.

4. A bottle or other vessel provided with a neck, a tubular attachment connected therewith, and adapted to be secured thereto, a tubular box or casing inclosing said attachment, and means for closing the upper end of said attachment and for holding said tubular casing in place, substantially as shown and described.

5. A bottle, or other vessel, provided with a neck, a tubular attachment connected therewith, and adapted to be secured thereto, a tubular box or casing inclosing said attachment, and means for closing the upper end of said attachment and for holding said tubular casing in place, consisting of a plug, the lower end of which is provided with a spring or springs which operate in connection with an annular shoulder or projection in



said tubular attachment and the upper end of which is provided with a head or disk which rests on said tubular attachment, and on the bottom of an annular chamber formed  
5 in said casing, substantially as shown and described.

In testimony that we claim the foregoing as our invention we have signed our names, in

presence of the subscribing witnesses, this 4th day of May, 1896.

SYLVESTER P. HILL.  
FRANK VAN WINKLE.

Witnesses:

M. J. McCARTY,  
A. ARMSTRONG.