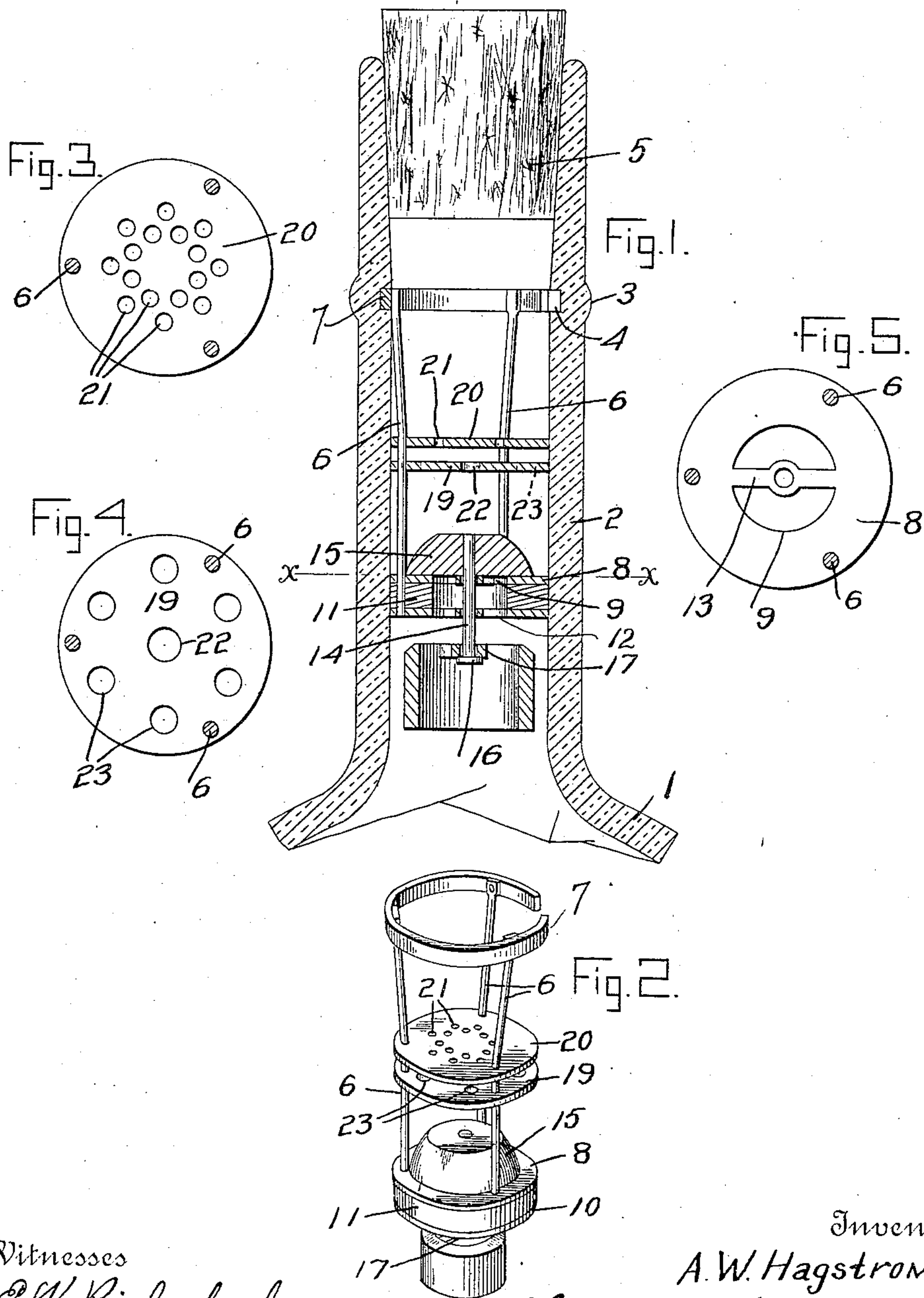


No. 891,772.

PATENTED JUNE 23, 1908.

A. W. HAGSTROM.  
NON-REFILLABLE BOTTLE.  
APPLICATION FILED FEB. 17, 1908.



Witnesses

*C. H. Reichenbach.*  
*C. H. Griesbamer.*

Inventor

*A. W. Hagstrom*

By *A. B. Wilson & Co.*

Attorneys



# UNITED STATES PATENT OFFICE

AUGUST W. HAGSTROM, OF CHINO, CALIFORNIA.

## NON-REFILLABLE BOTTLE.

No. 891,772.

Specification of Letters Patent.

Patented June 23, 1908.

Application filed February 17, 1908. Serial No. 416,360.

*To all whom it may concern:*

Be it known that I, AUGUST W. HAGSTROM, a citizen of the United States, residing at Chino, in the county of San Bernardino and State of California, have invented certain new and useful Improvements in Non-Refillable Bottles; and I do 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.

My invention relates to bottles and particularly to non-refillable bottles, and the object of the invention is to provide a device of this character which will be simple in construction, easy of application to the bottle, which will be cheap to manufacture and which will absolutely prevent refilling of the bottle.

A further object of the invention will appear as the specific description which follows is read in connection with the accompanying drawings, which form a part of this application, and in which,

Figure 1 is a sectional view through the bottle showing the attachment therein, Fig. 2 is a detail perspective view of the attachment removed from the bottle neck, Fig. 3 is a top plan view of the upper disk, Fig. 4 is a top plan view of the lower disk, and Fig. 5 is a transverse section on the line  $x-x$  of Fig. 2 with the valve removed.

Referring more especially to the drawings, 1 represents the top of the bottle, and 2 the neck thereof, which is provided with an external annular flange 3, in the inner part of which is formed an annular groove 4, to be hereinafter described. The inner part of the neck is preferably tapered from its upper part where the cork 5 is seated to a point adjacent the body 1.

The non-refillable attachment which is used comprises a skeleton frame composed of vertical uprights 6, to the upper end of which is secured an open ended ring adapted to seat, when the device is in position in the annular groove, formed in the flange 3. To the lower end of the upright 6 there is secured a washer 8, which is centrally apertured at 9, to form a liquid passage. Riveted to the washer 8 is a similar washer 10, and between the two is secured a friction disk or washer 11, preferably of some material which has expansion upon being wet. Any material which will swell upon being wet is sufficient for the purpose, but I pref-

erably use fiberoid disks. The washers 8 and 10 have bridge pieces 13 extending across the apertures 9 and 12 formed therein, both of which are centrally apertured to receive the guiding spindle 14, of the valve 15, which rests upon the disk 8 and covers the aperture 9 therein. The spindle 14 is headed as at 16, so as to bear upon the under side of a bridge piece 17, connected to the cylindrical or cup-shaped weight which holds the valve 15 upon its seat. The aperture in the bridge piece is somewhat larger than the spindle 14 so that it may have free movement thereon to allow the weight to fall and pull the valve upon its seat when the bottle is in any position except inverted. In order to prevent spurious or illegal filling of the bottle I secure to the uprights 6 two separated disks 19 and 20 intermediate the ring 7 and the washer 8. The upper one 20 has a plurality of small apertures 21 arranged in the form of an eight pointed star, and the disk 19 has a large central aperture 22 and a plurality of smaller apertures 23 arranged around the disk adjacent its periphery, all of which are larger than the apertures formed in the upper disk 20.

As will be seen from an inspection of Fig. 2, an instrument inserted in the bottle neck for the purpose of raising the valve 15 might pass through one of the apertures 21, but the other apertures being out of alinement with the apertures 21, the instrument cannot pass through both without bending it to such an extent that it would be impossible to utilize it as a tool for raising the valve. The device is made up into a unitary structure which is inserted into the bottle neck and forced down thereinto until the open ring 7 springs into the groove 4 and locks the device in position. At this time the washer 11 is in close engagement with the inside neck of the bottle and prevents any escape of liquid therearound.

Having thus described my invention what I claim and desire to secure by Letters-Patent is:—

1. In a non-refillable bottle, a valve closing the inlet thereto, and a pair of apertured disks arranged above the valve and separated from each other, the apertures in one disk being larger than those of the other and out of alinement therewith.

2. In a non-refillable bottle, a valved inlet thereto, a series of uprights supporting said valve in the bottle neck, and a pair of sepa-



rated disks carried by the uprights and having apertures to permit the exit of the liquid.

3. In a non-refillable bottle, a plurality of uprights, a resilient open ended ring adapted  
5 to engage the bottle to hold the uprights therein, a valve carried by the uprights, and a pair of disks arranged intermediate the valve and the ring and having apertures  
10 therein, the apertures of one disk being staggered or out of alinement with the apertures of the other disk and of a different diameter.

4. In a non-refillable bottle, an annular groove in the neck thereof, a plurality of  
15 apertures, a resilient ring carried thereby adapted to engage the groove to hold the uprights in the bottle, an apertured washer carried by the lower end of said uprights, a bridge piece extending across said washer, a

valve seated upon said washer and having 20 its stem sliding in an aperture in said bridge piece, a swinging weight carried by the end of said stem and adapted to hold the valve upon its seat in all positions of the bottle except inverted, and a pair of separated 25 disks carried by the uprights, each disk being provided with a plurality of apertures, the apertures of one disk being staggered with relation to those of the other and of a different diameter. 30

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

AUGUST W. HAGSTROM.

Witnesses:

ADOLPH LINDO,  
F. A. BRADLEY.