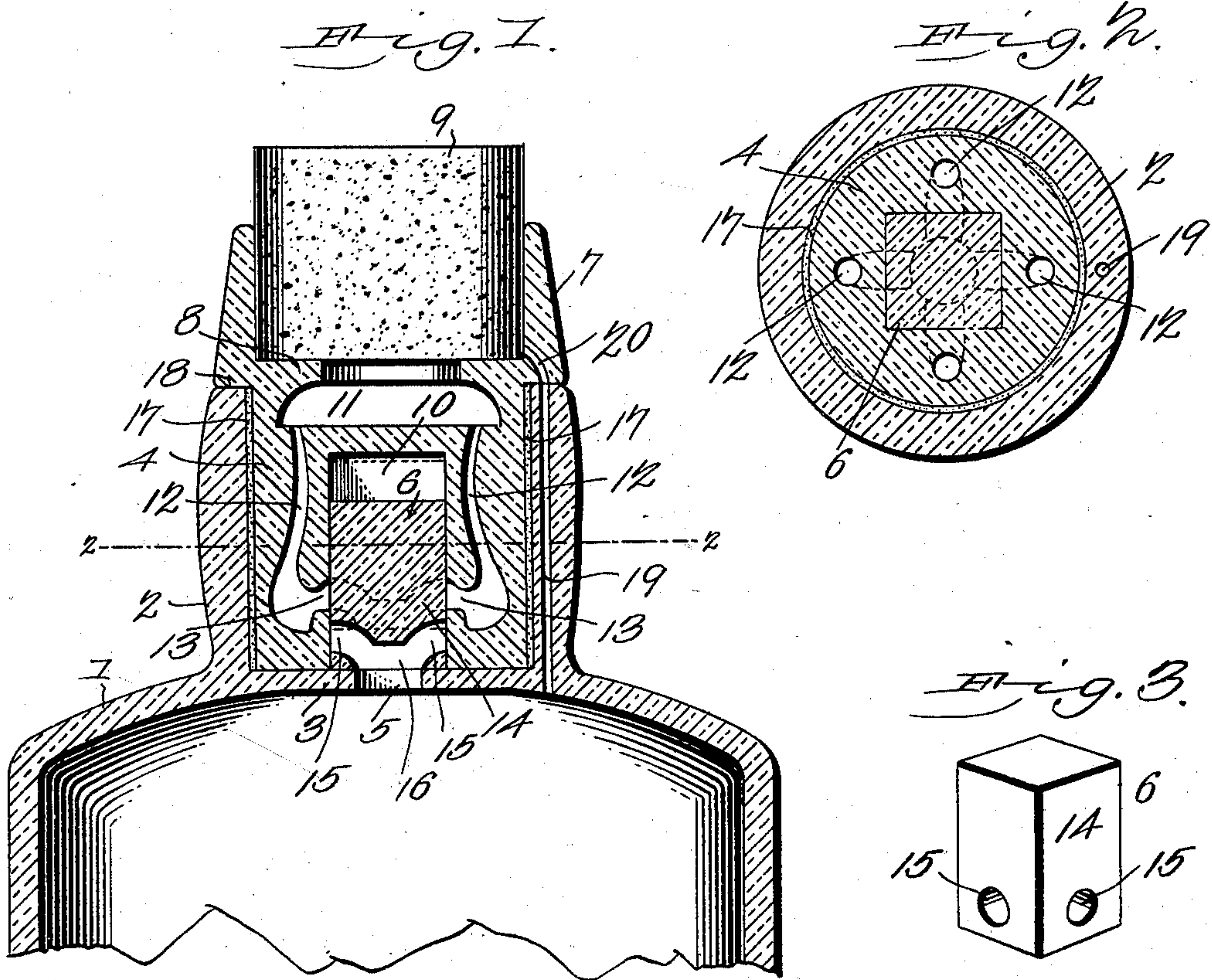


No. 720,035.

PATENTED FEB. 10, 1903.

R. KOCH.
NON-REFILLABLE BOTTLE.
APPLICATION FILED JULY 3, 1902.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

ROYAL KOCH, OF BETHLEHEM, PENNSYLVANIA.

NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 720,035, dated February 10, 1903.

Application filed July 3, 1902. Serial No. 114,273. (No model.)

To all whom it may concern:

Be it known that I, ROYAL KOCH, a citizen of the United States, residing at Bethlehem, in the county of Northampton and State of Pennsylvania, have invented a new and useful Non-Refillable Bottle, of which the following is a specification.

The invention relates to improvements in non-refillable bottles.

10 The object of the present invention is to improve the construction of non-refillable bottles and to provide an exceedingly simple and inexpensive one capable of effectually preventing a liquid from being introduced
15 into it after it has received its original contents, whereby surreptitious refillings and fraudulent adulterations are prevented.

The invention consists in the construction and novel combination and arrangement of
20 parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a vertical sectional view of a non-refillable bottle constructed in accordance with this invention.
25 Fig. 2 is a horizontal sectional view on the line 2 2 of Fig. 1. Fig. 3 is a detail view of the vertically-movable valve.

Like numerals of reference designate corresponding parts in all the figures of the drawings.
30

1 designates a bottle; but the improvements may be readily applied to any other receptacle having a neck, as will be apparent, and
35 the said bottle is provided with a neck 2, and it has an inwardly-extending horizontal flange 3, arranged at the base of the neck and forming a seat for a valve-casing 4. The horizontal flange 3 also forms a reduced opening 5,
40 and it provides a seat for a valve 6. The valve-casing, which extends above the neck of the bottle, is provided at the base of its upper portion 7 with a flange 8, forming a seat for an ordinary stopper or cork 9 to enable the
45 bottle to be sealed in the ordinary manner. The lower portion of the valve-casing is provided with a valve-chamber 10, extending upward from the lower end of the casing and terminating short of the shoulder or seat 8
50 and receiving the movable valve 6, as clearly shown in Fig. 1 of the drawings. The valve-casing is provided above the valve-chamber

with an intermediate recess or space 11, located below the stopper-supporting seat or flange 8 and communicating with a series of
55 vertical bores or passages 12, which extend longitudinally of the valve-casing and which communicate with the valve-chamber 10, near the lower end thereof. These upright passages, which are tapered toward their upper
60 ends, are provided with bottom recesses 13, located below the points where the passages communicate with the valve-chamber and adapted to receive a wire or similar device should the same be introduced into the pas-
65 sages in an attempt to manipulate the valve. The bores or passages may be of any desired number, and the valve 6, which is capable of movement longitudinally of the valve-chamber, has a solid upper portion 14 and is pro-
70 vided in its lower portion with passages or openings 15, communicating with a central bottom opening 16 and adapted when the bottle is inverted and the valve moved outward to the limit of its movement to register with the
75 passages to permit the contents of the bottle to be decanted. If desired, a solid valve may be employed of a length that will permit it to uncover the lower or inner ends of the passages when the bottle is inverted. This will
80 permit the liquid to flow more freely from the bottle; but the flow of the liquid may be accelerated by the means hereinafter explained.

The valve-casing, which may be secured within the neck of the bottle in any suitable
85 manner, is preferably retained therein by cement 17, arranged as shown in Figs. 1 and 2, and in order to prevent access to the cement when the parts are assembled the upper portion of the valve-casing is enlarged to pro-
90 vide an exterior shoulder 18, which fits against the upper edge of the neck of the bottle. This construction serves to conceal the cement and prevent access to the same.

The neck of the bottle may be provided with
95 a fine bore or perforation 19, extending from its upper edge to the interior of the bottle and adapted to register with a small perforation or passage 20 of the valve-casing. The passage 20 extends from the shoulder 18 to
100 the upper portion of the said casing and is closed by the cork or stopper, and in practice the said passage 20 is designed to be smaller than the passage or bore 19 to prevent the bot-

tle from being refilled through such perforation or passage. The passages 19 and 20 may be omitted, or they may be duplicated, and when they are employed the neck of the receptacle and the valve-casing will be provided with suitable marks for enabling the passages to be readily arranged to register with each other.

It will be seen that the non-refillable bottle is exceedingly simple and inexpensive in construction, that it is adapted to be sealed similar to an ordinary receptacle, and that it will effectually prevent fraudulent adulterations or refillings. In assembling the parts the valve may be temporarily supported in an open position by means of a wire or thread, which may be removed when the bottle is filled.

What is claimed is—

1. In a device of the class described, the combination with a receptacle having a neck and provided with an interior supporting-flange, a valve-casing fitting snugly within the neck and provided with a valve-chamber extending inward from its lower end, said valve-casing being also provided in its walls with upright passages extending outward from the valve-chamber and tapering toward their outer ends and provided at their inner ends with recesses, and a valve arranged within the valve-chamber and supported by the said flange, substantially as described.

2. In a device of the class described, the combination with a receptacle having a neck and provided with an interior supporting-flange, of a valve-casing fitting snugly within the neck of the receptacle and provided with a lower valve-chamber and having an upper

stopper-receiving portion located above the neck of the bottle, said valve-casing being also provided in its walls with a passage extending from the valve-chamber to the upper stopper-receiving portion, and a valve arranged within the valve-chamber, substantially as described.

3. In a device of the class described, the combination with a receptacle having a neck and provided with a supporting-flange, a valve-casing secured within the neck and provided with a valve-chamber extending inward from its lower end, said valve-casing being also provided with a passage extending outward from the valve-chamber, and a valve arranged within the valve-chamber and having a passage adapted to register with the passage of the valve-casing, substantially as described.

4. In a device of the class described, the combination of a receptacle having a neck and provided with a bore or passage extending through the same, a casing secured within the neck and provided with a valve-chamber and having an upper cork-receiving portion communicating with the valve-chamber and provided with a passage or bore communicating with the said passage or bore of the neck, and a valve arranged within the valve-chamber, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ROYAL KOCH.

Witnesses:

ROBT. J. ZERWECK,
RICHARD A. WAHL.