

No. 630,929.

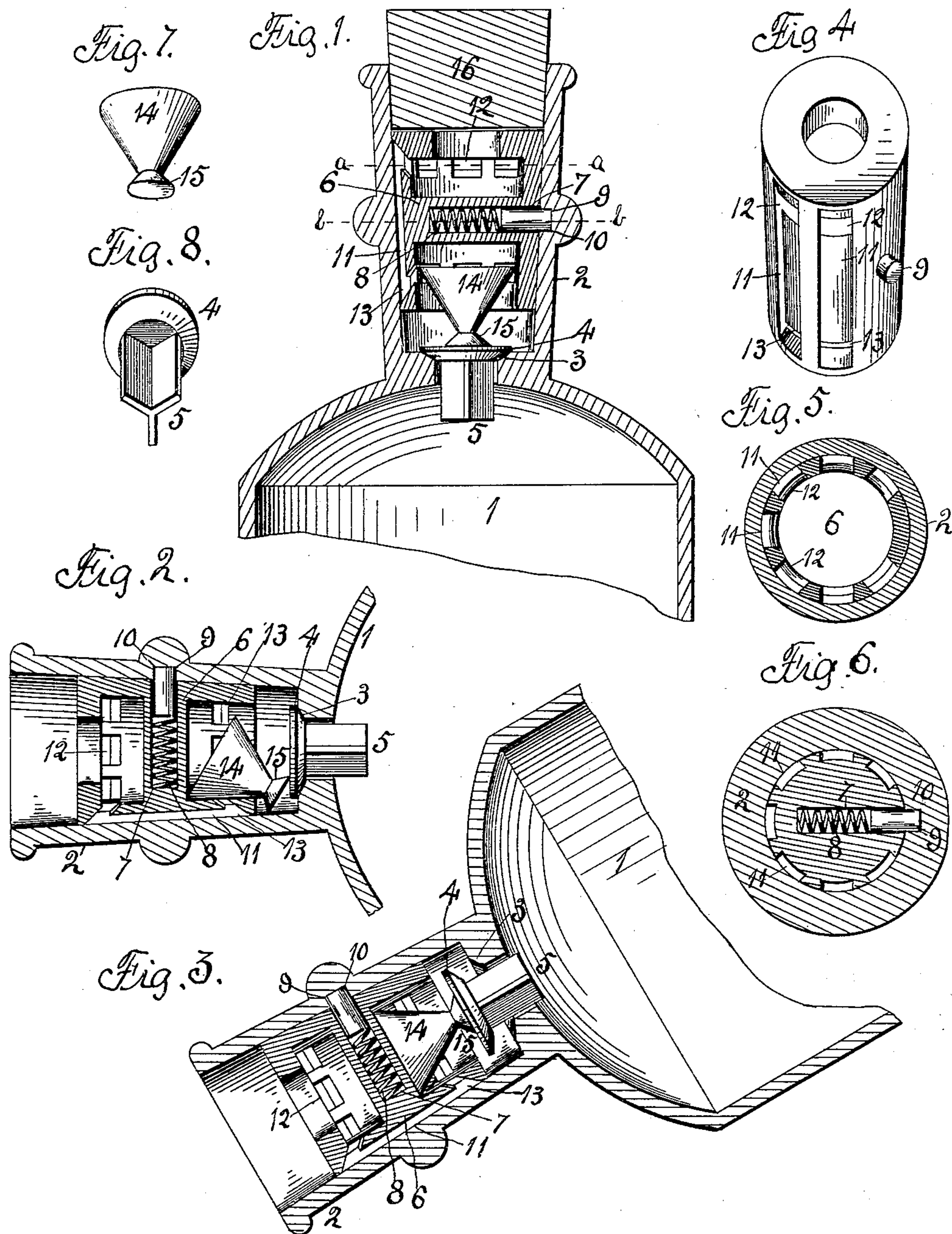
Patented Aug. 15, 1899.

F. D. RAY, B. P. WALTERS & E. S. PERKINS.

NON-REFILLABLE BOTTLE.

(Application filed Feb. 10, 1899.)

(No Model.)



Witnesses:

W. L. Paylor
E. Behl.

Inventors:
Frank D. Ray
Barney P. Walters
Eugene S. Perkins
By A. O. Behl
Attys

UNITED STATES PATENT OFFICE.

FRANK D. RAY, BARNEY P. WALTERS, AND EUGENE S. PERKINS, OF BELVIDERE, ILLINOIS.

NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 630,929, dated August 15, 1899.

Application filed February 10, 1899. Serial No. 705,200. (No model.)

To all whom it may concern:

Be it known that we, FRANK D. RAY, BARNEY P. WALTERS, and EUGENE S. PERKINS, citizens of the United States, residing at Belvidere, in the county of Boone and State of Illinois, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

The object of this invention is to construct a bottle which cannot be refilled, but which permits of the bottle being emptied of its contents.

In the accompanying drawings, Figure 1 is a vertical section through a bottle, showing our improvements, the bottle located in a vertical position. Fig. 2 is a similar view with the bottle located in a horizontal position. Fig. 3 shows the bottle located in a downward oblique position. Fig. 4 is an isometrical representation of the support. Fig. 5 is a section on dotted line *a*, Fig. 1. Fig. 6 is a section on dotted line *b*, Fig. 2. Fig. 7 is an isometrical representation of the weight. Fig. 8 is an isometrical representation of the valve.

The bottle 1 represented in the drawings may be of any ordinary construction, having the tapering cylindrical neck portion 2. A valve-seat 3 is formed at the bottom of the neck portion, being tapered in form. A valve composed of the tapered-head portion 4 and spider-shaped shank 5 is fitted to be seated on the seat 3, forming a water-tight joint. A support having an outline fitted to the inside surface of the neck of the bottle has a center division 6. A radial opening 7 is formed in the center division, within which is placed a coiled spring 8, holding a plunger 9 in a yielding manner. The neck of the bottle has a recess 10 fitted to receive the plunger, and when the support is forced within the neck of the bottle the plunger will enter the recess and prevent the withdrawal of the support. Its outer surface has lengthwise grooves 11, the upper ends opening into the space above the center division by radial openings 12 and the lower ends opening into the space below the center division by radial openings 13, the upper radial openings 12 extending upwardly and the lower radial openings 13 extending downwardly. A weight 14

of conical form has a base 15, which when the bottle is in a vertical position will rest upon the valve, as shown at Fig. 1. If the bottle be turned in the position shown at Fig. 3, the valve will be open, and it will rest against the weight; but if the bottle be turned into a horizontal position, as shown at Fig. 2, the weight will fill the space between the center division 6 of the support and the valve and will hold the valve closed, and after the bottle has been emptied of its contents it cannot be refilled, as the valve will be held closed in any position the liquid would run into it, and if liquid was attempted to be forced into the bottle while in the position shown at Fig. 3 the pressure of the liquid against the valve would close it.

By forming the irregular openings in the outside of the support it will be impossible to insert a wire through them and engage the valve to raise it, and after the bottle has been filled and the support in position the plunger will engage the recess in the neck of the bottle, and the support cannot be withdrawn. The neck of the bottle extends beyond the support for the reception of a cork 16.

We claim as our invention—

1. In a non-refillable bottle, the combination with the bottle-neck having an opening therein, of a valve adapted to close said opening, a non-removable hollow support or plug located in the bottle-neck and divided into two open compartments by a central division-wall, said support being provided on its exterior surface with a plurality of longitudinal grooves which terminate at their opposite ends in inwardly-directed openings affording passage-ways to the said compartments in the support, the walls of said openings being inclined in a direction toward the division-wall, and a bodily-movable weight freely supported in the bottle-neck between the said valve and division-wall, substantially as described.

2. In a non-refillable bottle, the combination with the bottle-neck having an opening therein, of a valve adapted to close said opening, a non-removable hollow support or plug located in the bottle-neck and divided into two open compartments by a central division-wall, said support being provided on its exterior surface with a plurality of longitudinal

nal grooves which terminate at their opposite ends in inwardly-directed openings affording communication to the said open compartments in the hollow support, above and below the division-wall, the top and bottom walls of said openings being inclined in a direction toward the division-wall, and a cone-shaped weight provided at its apex with a conical base of reduced diameter, said weight being located in the bottle-neck between the division-wall and valve in position to cause the said conical base to normally act upon the valve, substantially as described.

3. In a non-refillable bottle, the combination with the bottle-neck having a valve-opening therein, of a valve for closing said opening, a hollow support or plug secured within the bottle-neck and divided into two open compartments by a central division-wall, a plu-

20 rality of longitudinal grooves on the exterior surface of the support which extend upon opposite sides of the division-wall and terminate at their ends in lateral openings which enter the said compartments in the support, and a bodily-movable cone-shaped weight 25 provided at its apex with a conical base of reduced diameter, said weight being located in the bottle-neck between the division-wall and valve in position to cause the said conical base to act upon the valve, substantially as 30 described.

FRANK D. RAY.
BARNEY P. WALTERS.
EUGENE S. PERKINS.

Witnesses:

ALDEN ALGUIN,
WM. W. ALLEN.