

(No Model.)

R. E. MANDLEY.
BOTTLE.

No. 580,138.

Patented Apr. 6, 1897.

FIG. 1.

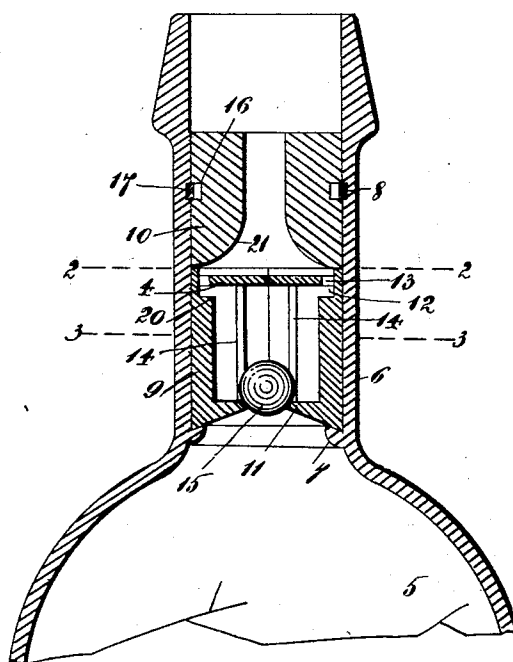


FIG. 2.

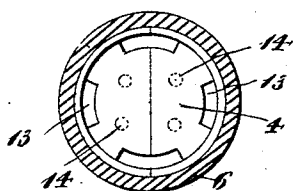
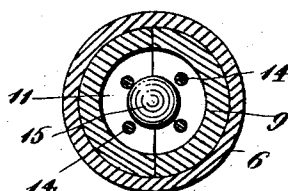


FIG. 3.



WITNESSES

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INVENTOR

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BY *Edgar Tate & Co.*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

RICHARD E. MANDLEY, OF NEW YORK, N. Y.

BOTTLE.

SPECIFICATION forming part of Letters Patent No. 580,138, dated April 6, 1897.

Application filed June 27, 1896. Serial No. 597,237. (No model.)

To all whom it may concern:

Be it known that I, RICHARD E. MANDLEY, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, 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 numerals of reference indicate corresponding parts wherever found throughout the several views.

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 adapted to be secured in position in such manner that it cannot be removed, said attachment being so constructed and arranged 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, of which the accompanying drawings form a part, in which—

Figure 1 is a central vertical section of the upper part of a bottle and the neck thereof provided with my improved neck attachment; Fig. 2, a section on the line 2 2 of Fig. 1, and Fig. 3 a section on the line 3 3.

In the practice of my invention I provide a bottle or other vessel 5, having a neck 6, in the inner walls of which and near the lower end thereof is formed an annular inwardly-directed shoulder or projection 7, and said neck is also provided near its upper end with an annular groove 8.

My improved neck attachment consists of two separate tubular parts 9 and 10, and the part 9, which is adapted to rest upon the annular inwardly-directed shoulder or projection 7, is provided at its lower end with an annular inwardly-directed flange or rim 11 and at its upper end with an annular groove or enlargement 12, and said lower part 9 of the attachment is also provided near its upper end with a partition-plate 4, at the opposite sides of which are formed segmental ports or passages 13, and said partition-plate 4 is preferably formed integrally with the lower part 9 of the attachment, and said attachment and the partition-plate are divided vertically and thus formed in two equal parts,

and said partition-plate and the annular inwardly-directed flange or rim 11 at the bottom of the part 9 of the attachment are connected by vertical rods 14, four of which are preferably employed, and said rods 14, together with the flange or rim 11 and the partition-plate 4, constitute a cage in which is placed a ball-valve 15. The upper part 10 of the attachment is provided with an annular groove 16, which is adapted to register with the annular groove 8 in the neck 6, and placed therein is a split spring-ring 17, which is adapted to hold the attachment in place within the neck, and the central bore thereof is enlarged or bell-shaped in form at its lower end, as clearly shown in Fig. 1.

The operation will be readily understood from the foregoing description when taken in connection with the accompanying drawings and the following statement thereof. When the bottle or vessel has been filled with the desired contents, the part 9 of the attachment is inserted therein and forced downwardly therein until it rests upon the annular inwardly-directed shoulder or projection 7, after which the part 10 is inserted into the neck and forced downwardly until the annular groove 16 therein registers with the annular groove 8 in the neck, and in this position of the parts 9 and 10 the upper part 10 rests upon the lower part 9, and the spring-ring 17 securely locks the attachment in place, and said attachment cannot be removed without breaking off the neck of the bottle or vessel.

The upper end of the neck may be closed by a cork or stopper in the usual manner, and whenever it is desired to empty the bottle or vessel or discharge a portion of its contents it is only necessary to remove said cork or stopper and then invert or tilt the bottle or vessel, when the valve 15 will leave its seat under the action of gravity and the pressure of liquids thereon, and said liquids will flow out through the port or opening in the annular flange or rim 11 and through the ports or passages 13 and through the upper part 10 of the attachment, and this operation may be continued or repeated until the bottle or vessel is entirely empty.

If an attempt be made to refill the vessel by pouring liquids therein, the valve 15 will at once be reseated, and no liquids can enter

the vessel, and this operation of the valve will be the same in any position in which the vessel can be held in an attempt to pour liquids thereinto, and the valve 15 may also be
 5 so constructed as to serve as a float-valve, in which event liquids cannot be forced into the bottle, the valve 15, serving as a float-valve, rising to its seat, and thus closing the passage through the annular flange or rim 11.

10 The form and construction of the partition-plate 12 are such that while the liquids within the vessel can flow out around the same a tool or instrument cannot be inserted so as to interfere with the operation of the valve, the
 15 insertion of a tool or instrument for this purpose being prevented by the annular inwardly-directed shoulder or projection 20 below the partition-plate and by the form of the lower end of the upper part of the attachment 10, as shown at 21, an annular shoulder
 20 or projection being formed at this point.

This device is well adapted to accomplish the result for which it is intended and does not add materially to the cost of the bottle or
 25 vessel, and the object of forming the lower portion 9 of the attachment in two parts, or dividing the same longitudinally, is to provide means for inserting the valve 15.

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

1. A bottle or other vessel provided with a neck, at the lower end of which is formed an inwardly-directed annular shoulder or pro-
 35 jection, and a neck attachment consisting of two tubular parts, the lower part being adapted to rest upon said shoulder or projection, and being provided at its lower end with an annular inwardly-directed flange or rim, and
 40 near its upper end with a partition-plate having ports or passages at its sides, and said par-

tion-plate and said flange or rim, being connected by suitable rods, between which is placed a valve, and means for securing the
 45 upper part of the attachment in position, said lower part of the attachment being provided with an inwardly-directed annular shoulder below said partition-plate, and the central
 50 bore of the upper part of the attachment being bell-shaped at its lower end, substantially as shown and described.

2. A bottle or other vessel provided with a neck, at the lower end of which is formed an inwardly-directed annular shoulder or pro-
 55 jection, and a neck attachment consisting of two tubular parts, the lower part being adapted to rest upon said shoulder or projection, and being provided at its lower end with an annular inwardly-directed flange or rim, and
 60 near its upper end with a partition-plate having ports or passages at its sides, and said partition-plate and said flange or rim, being connected by suitable rods, between which is
 65 placed a valve, and means for securing the upper part of the attachment in position, said lower part of the attachment being provided with an inwardly-directed annular shoulder below said partition-plate, and the central
 70 bore of the upper part of the attachment being bell-shaped at its lower end, and said lower part of the attachment being formed in two parts or divided longitudinally, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 26th
 75 day of June, 1896.

RICHARD E. MANDLEY.

Witnesses:

W. W. HILL,
 CHARLES S. ROGERS.