

(No Model.)

M. J. NOLAN.
BOTTLE.

No. 570,607.

Patented Nov. 3, 1896.

FIG. 1.

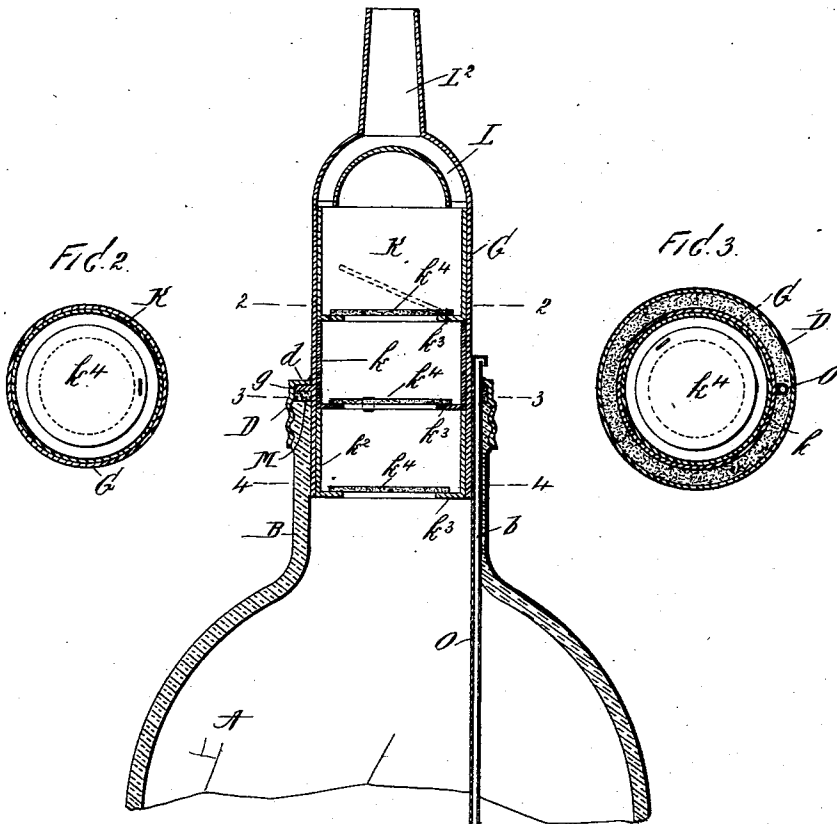


FIG. 2.

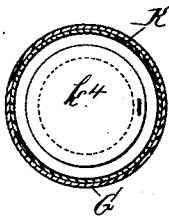


FIG. 3.

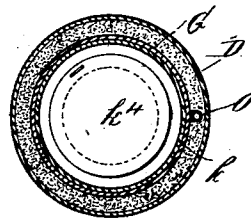


FIG. 4.

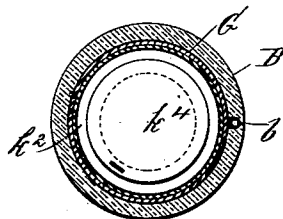
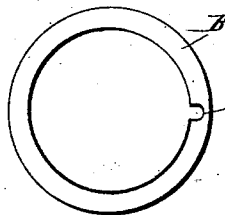


FIG. 5.



WITNESSES:

John Buckler,
C. G. Gresham

INVENTOR

Michael J. Nolan
BY
Edgar Tate
ATTORNEYS

UNITED STATES PATENT OFFICE.

MICHAEL JOHN NOLAN, OF NEW YORK, N. Y.

BOTTLE.

SPECIFICATION forming part of Letters Patent No. 570,607, dated November 3, 1896.

Application filed March 16, 1896. Serial No. 583,388. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL JOHN NOLAN, 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 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 in which are placed a plurality of valves, said neck attachment and valves being 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, 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 improvement; Fig. 2, a transverse central section on the line 2 2; Fig. 3, a similar section on the line 3 3; Fig. 4, a similar section on the line 4 4, and Fig. 5 a top plain view of the neck of the vessel.

In the practice of my invention I provide a bottle or other vessel A, having a neck B, within one side of which, in the inner walls thereof, is formed a vertical groove *b*, and the upper end of the neck is screw-threaded and provided with an annular cap D, having at its upper end an inwardly-directed annular flange *d*. I also provide a neck attachment comprising a tube G, which is provided at a predetermined distance above the lower end thereof with an outwardly-directed annular flange *g*, and within the tubular attachment G is placed three short tubes K, *k*, and *k*², each of which is provided with an inwardly-directed annular flange *k*³ at its bottom, and placed above each of said flanges is a valve *k*⁴, each of which is hinged to its respective annular flange, and said valves are hinged at opposite sides or in such manner that the difference between each hinge with reference to the transverse diameter of the tube is about one hundred and twenty degrees.

The upper portion of the tubular attach-

ment G is contracted or conical in form and provided with an annular chamber L, which communicates with the interior of the upper short tube K, and above said conical portion is a short tubular extension L², which serves as a nozzle for the bottle, and which in practice may be closed by an ordinary cork or stopper if desired.

In practice this class of vessels must first be filled with the desired contents before the neck attachment is applied, and the bottle A having been filled the neck attachment, consisting of the tube G, is inserted into the neck until the annular flange *g* rests thereon or upon a ring M of packing material, and the annular cap D is then secured into position, so that the annular inwardly-directed flange *d* thereof will rest on the annular flange *g*, after which a small vent-tube O is passed downwardly between the tubular attachment and the neck and through the vertical groove *b*, and said vent-tube is then secured to the tubular attachment, being soldered thereto or secured thereto in any desired manner, and when this is done it will be impossible to remove the tubular attachment, the vent-tube O, which is secured thereto and which rests in the groove *b*, serving to prevent the turning of the tubular attachment and also the turning of the annular cap, said annular cap being also provided, or the inwardly-directed annular flange formed thereon, with a passage or opening through which the vent-tube O passes, and which registers with the vertical groove *b* in the neck B.

When it is desired to empty the bottle or discharge a portion of its contents, the cork or stopper is removed from the nozzle L², and the bottle inverted or tilted in the usual manner, when the valves *k*⁴ will open and admit of the discharge of the contents of the bottle, and this operation may be continued or repeated until the bottle is entirely empty.

If an attempt be made to refill the bottle or vessel by pouring liquids thereinto, the valves, or one of them, will close, and thus prevent any liquids from entering the bottle, and this operation of the valves will be the same in any position in which the bottle can be held in an attempt to pour liquids thereinto, and said valves will operate to produce this result in an attempt to force liquids into the bottle;

and this operation of said valves is made possible by the manner in which they are hinged in position, each valve, as hereinbefore stated, being hinged at a different point with reference to the diameter of the tubular attachment, the spaces between the points at which said valves are hinged being about equal.

The annular chamber L, in the conical upper portion of the tube G, or the inner wall thereof, prevents the insertion of an instrument or tool in an attempt to interfere with the operation of the valves, and if the upper valve should by any means be thus interfered with, the lower ones will still operate.

My invention is not limited to the number of the valves, or to the employment of the tubes K, k, and k², and it is evident that changes in and modifications of the other features of the construction may be made without departing from the spirit of my invention or sacrificing its advantages, and I reserve the right to make all such alterations therein and modifications thereof as fairly come within the scope of the invention.

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

1. A bottle or other vessel provided with a neck, in which is placed a neck attachment, comprising a tube, which is provided with a plurality of inwardly-directed annular flanges, each of which is provided with a hinged valve, said attachment being also provided with a conical upper end, within which is placed, a conical partition, by means of which an annular chamber is formed, said attachment being also provided at one side with a vent-tube, which is secured thereto, and to

the neck, and which projects downwardly into the bottle between the lower end of said attachment, and the neck, and said attachment being also provided with an annular flange which is adapted to bear upon the end of the neck or a packing-ring placed thereon, and an annular screw-threaded cap which is provided with an annular inwardly-directed flange, and which is adapted to be secured to the neck by a screw-thread, substantially as shown and described.

2. The combination with a bottle, the neck of which is provided with exterior screw-threads, of an antifilling attachment adapted to be secured in the upper part thereof, of an annular cap D adapted to be secured upon the neck of the bottle and engage the screw-threads upon the same, a tube G secured within the bottle-neck and extending upwardly therefrom, the upper portion of which is restricted and provided with a tubular extension, an interior tube provided with annular inwardly-directed flanges adapted to be closed by disk-valves, the upper portion of which is closed with a dome-shaped formation around the base of which are formed radial slots, and a capillary tube extending from the neck of the bottle in the interior thereof, all constructed, combined and arranged as herein set forth and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 14th day of March, 1896.

MICHAEL JOHN NOLAN.

Witnesses:

C. GERST,

C. G. MILLIN.