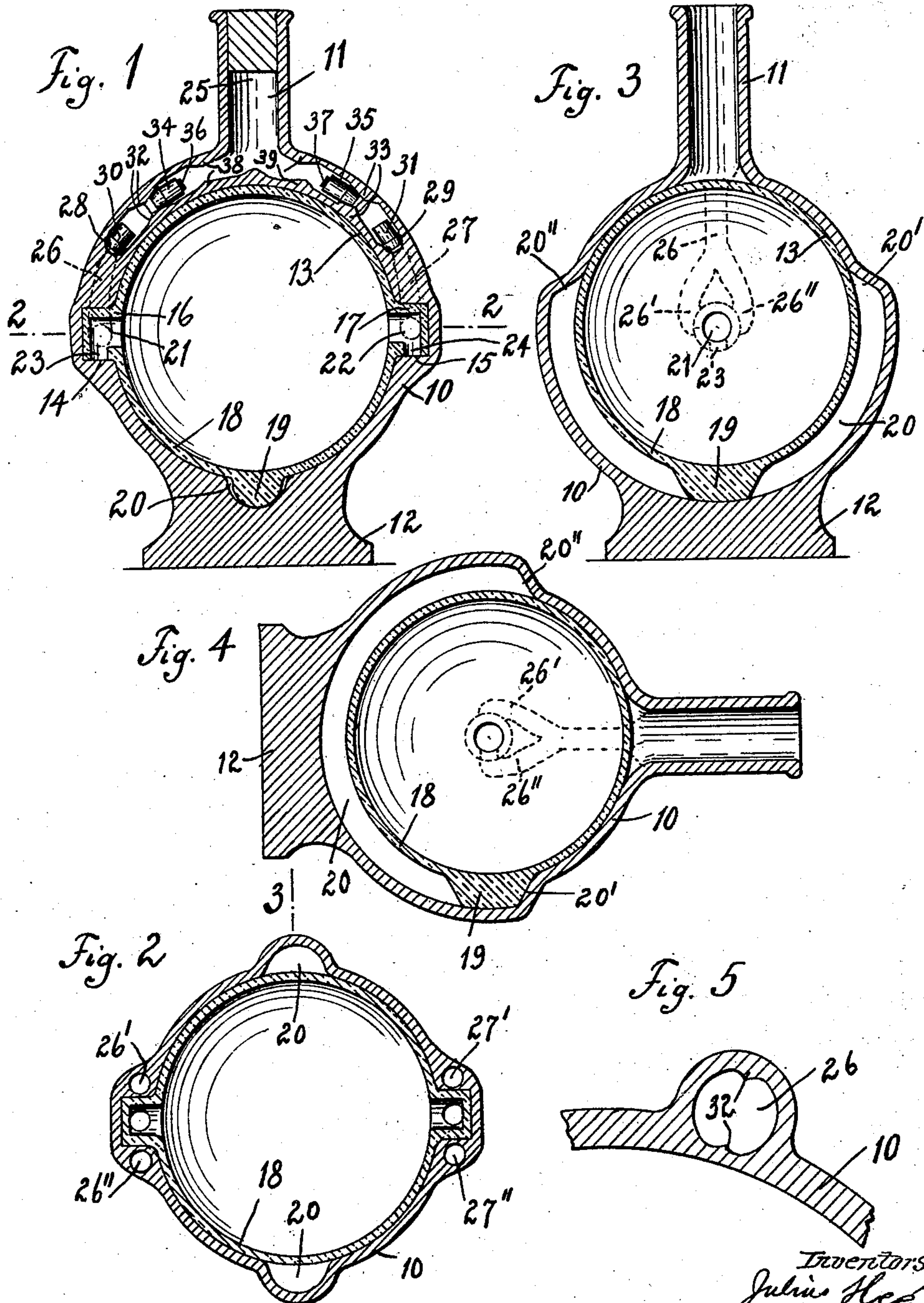


J. & O. HEÉ.
NON-REFILLABLE BOTTLE.
APPLICATION FILED SEPT. 24, 1908.

915,435.

Patented Mar. 16, 1909.



WITNESSES

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JULIUS HEÉ AND OLGA HEÉ, OF GREENPOINT, NEW YORK.

NON-REFILLABLE BOTTLE.

No. 915,435.

Specification of Letters Patent.

Patented March 16, 1909.

Application filed September 24, 1908. Serial No. 454,494.

To all whom it may concern:

Be it known that we, JULIUS HEÉ and OLGA HEÉ, subjects of the King of Hungary, and residents of Greenpoint, in the county of Kings and State of New York, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

This invention relates to bottles and has for its object to prevent the refilling of a bottle and at the same time to permit of the free and unrestricted decanting of the liquid contents of the bottle.

With this and other objects in view the present invention consists in the combination and arrangement of the several parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the annexed claims, it being, of course, understood that changes in the form, proportion, size and minor details may be made within the scope of the claims and without departing from the spirit and scope of the present invention.

Broadly speaking the bottle or receptacle consists of two independent containers, one within the other, and the outer one of which is provided with the usual neck and a plurality of passages, adapted to register with a corresponding plurality of passages in the inner receptacle, when in a predetermined position. In the passages of the outer receptacle are provided a plurality of seals or valves controlling the flow of liquid in the same.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a section of the bottle in a plane passing through the longitudinal axis of the same. Fig. 2 is a horizontal section taken on line 2, 2 of Fig. 1. Fig. 3 is a vertical section taken on line 3, 3 of Fig. 2, or more particularly in a plane at right angles to the plane of the section shown in Fig. 1. Fig. 4 is a section similar to the one shown in Fig. 3, the relative positions of the inner and outer members of the bottle being changed, and Fig. 5 is a detail of construction.

In the drawing, 10 indicates a bottle or receptacle made of any suitable material, such as glass, metal, etc., and being provided with the usual neck 11, and a base 12, upon which the bottle rests in its upright normal position. The inner surface 13 of the hollow body 10 forms the surface of a body of revolution and more particularly, in the case

illustrated in the drawings, of a sphere. It is, of course, obvious that the surface 13 may form the surface of any other body of revolution, such as, for instance, of a cylinder or hyperboloid; it being, however, essential that, for a reason hereinafter to be described, the axis around which the given curve revolves should be arranged horizontally. At the end of a horizontal diameter of the interior of the bottle are formed recesses 14 and 15 in the body 10, which recesses are preferably made cylindrical and form bearings for the journals 16 and 17, respectively, of an inner hollow spherical member 18, fitting closely the spherical surface 13 of the hollow member 10.

Obviously the body 18 is thus mounted rotatably in the bearings, hereinbefore mentioned, whereby the position of the same relative to the body 10 may be varied at will. The body 18 is provided with a weighted portion 19, made integral with or suitably secured to the same, and being slidably arranged in a groove 20, formed in the body 10, and, preferably, in a plane at right angles to the plane in which the recesses 14 and 15 are arranged.

The journals 16 and 17 of the body 18 are provided with cylindrical recesses 21 and 22, respectively, leading from the interior of the body to passages 23 and 24, the outer ends of which are closed by portions of the cylindrical surfaces of the bearings 14 and 15 when the body 18 is in its normal position, shown in Figs. 1 and 3 of the drawings.

The outlet 25 of the neck 11 is connected by means of the passages 26 and 27 with the cylindrical recesses 14 and 15, respectively. Each of the passages 26 and 27 branches out near to its inner end into two passages 26', 26'' and 27' and 27'', respectively. These branches lead to the cylindrical recesses 14 and 15 at a height, whereby the passages 23 and 24 of the journals 16 and 17, respectively, register with one pair of said branches when the weighted portion 19 contacts with the end 20' of the groove 20, as shown in Fig. 4 of the drawings, and with the other pair of branches when the weighted portion contacts with the other end 20'' of the groove 20.

In the passages 26 and 27 are formed valve-seats 28 and 29, upon which may be seated valves 30 and 31, respectively, each of which is provided with a conical portion snugly fitting said valve-seats. The valves 30 and 31 are preferably made of floating ma-

terial, such as cork, for a purpose hereinafter to be explained. Lugs 32 and 33 are furthermore arranged in the passages 26 and 27, respectively, which lugs form valve-seats for the valves 34 and 35, which may be made of some resilient material, as for instance, rubber, provided with rigid disks 36 and 37 at their upper ends. Near to the outer end of the passages 26 and 27 are formed lugs 38 and 39, projecting into the passages so as to prevent the removal of the valves, hereinbefore mentioned.

It is obvious that it will be necessary to make the inner member 18 of the bottle of a suitable material, which is not affected by water, alcohol or any other liquid which it is intended to keep in the bottle. The outer member 10, on the other hand, may be made of metal or any other suitable material and is preferably made of two sections, soldered or in any other suitable way secured together after the inner member 18 has been arranged therein. The valves, hereinbefore described, are placed into the passages after the liquid has been filled into the bottle.

To fill the bottle it is necessary to bring the outer member 10 into the position, shown in Fig. 4, whereby the longitudinal axis of the bottle comes to lie in a substantially horizontal line. The inner member 18, being provided with the weighted portion 19, will be kept in a position, relative to the outer member 10, whereby one pair of the branches of the passages 26 and 27 registers with the passages 23 and 24, leading into the interior of the hollow member 18. The bottle may thus be filled with liquid under slight pressure. The bottle is then brought back to its normal upright position, and then the stoppers 30 and 31 placed into the passages by the aid of a suitable instrument, whereby they will pass the lugs 32 and 33, respectively, after which operation the valves 34 and 35 are inserted in a similar manner. Obviously the lugs 38 and 39 prevent the removal of the stoppers 34 and 35, while the lugs 32 and 33 limit the outward movement of the stoppers 30 and 31.

When the bottle is tilted so that the weighted member 19 of the inner receptacle 18 contacts with one end of the groove 20, the valves will leave their seats and thus permit the contents of the bottle to pass around the valves and out through the neck portion of the bottle. As soon as the bottle is restored to its upright normal position, the passages 23 and 24 of the inner member 18 are covered by the bearings 14 and 15, and on the other hand, the valves are seated upon their respective seats. An attempt to refill the bottle is defeated by reason of the floating valves 30 and 31, which will be seated unto their respective valve-seats when a liquid is caused to flow from outside into passages 25 and 26. It is impossible to pass any

implement downwardly through the neck portion and grasp the valves 34 and 35 for the reason that the upper ends of the same are covered by the rigid plates 36 and 37, respectively.

What we claim is:

1. A non-refillable bottle, comprising a necked receptacle provided with a plurality of passages communicating with the neck portion thereof, and a secondary receptacle oscillatably mounted within said necked receptacle and having means for opening a communication between said secondary receptacle and said passages when said necked receptacle is tilted over.

2. The combination with a necked receptacle provided with a plurality of passages communicating with the neck portion thereof, of a secondary receptacle oscillatably mounted within said necked receptacle and having means for opening a communication between said secondary receptacle and said passages when said necked receptacle is tilted over, and a plurality of valves in said passages.

3. The combination with a necked receptacle provided with a plurality of passages communicating with the neck portion thereof, of a secondary receptacle oscillatably mounted within said necked receptacle and having passages adapted to register with said first passages when said necked receptacle is tilted over, and means for limiting the relative movement of said receptacles to each other.

4. The combination with a necked receptacle provided with a plurality of passages communicating with the neck portion thereof, of a secondary receptacle oscillatably mounted within said necked receptacle and having passages adapted to register with said first passages when said necked receptacle is tilted over, means for limiting the relative movement of said receptacles to each other, and a plurality of valves in the passages of said necked receptacle.

5. The combination with a necked receptacle having recesses therein and passages leading from said recesses to the neck portion of said receptacle, of a secondary receptacle within said necked receptacle, and journals on said secondary receptacle and fitting the recesses of said necked receptacle, said journals being provided with passages for opening a communication between said secondary receptacle and the neck portion of said first receptacle when the latter is tilted over.

6. The combination with a necked receptacle having recesses therein and passages leading from said recesses to the neck portion of said receptacle, of a secondary receptacle within said necked receptacle, journals on said secondary receptacle and fitting the recesses of said necked receptacle, said journals being provided with passages for opening a

communication between said secondary receptacle and the neck portion of said first receptacle when the latter is tilted over, and means for limiting the relative movement of
5 said receptacles to each other.

7. The combination with a necked receptacle having recesses therein and passages leading from said recesses to the neck portion of said receptacle, of a secondary receptacle
10 within said first receptacle, journals on said secondary receptacle and fitting the recesses of said necked receptacle, said journals being provided with passages for opening a communication between said secondary recep-
15 tacle and the neck portion of said first receptacle when the latter is tilted over, and valves in the passages of said necked receptacle.

8. The combination with a necked receptacle having recesses therein and passages
20 leading from said recesses to the neck portion

of said receptacle, of a secondary receptacle within said first receptacle, journals on said secondary receptacle and fitting the recesses of said necked receptacle, said journals being provided with passages for opening a communication between said secondary recep-
25 tacle and the neck portion of said first receptacle when the latter is tilted over, means for limiting the relative movement of said receptacles to each other, and valves in the pas-
30 sages of said necked receptacle.

Signed at New York, in the county of New York and State of New York, this 15th day of September, A. D. 1908.

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Witnesses:

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ESITI HEÉ.