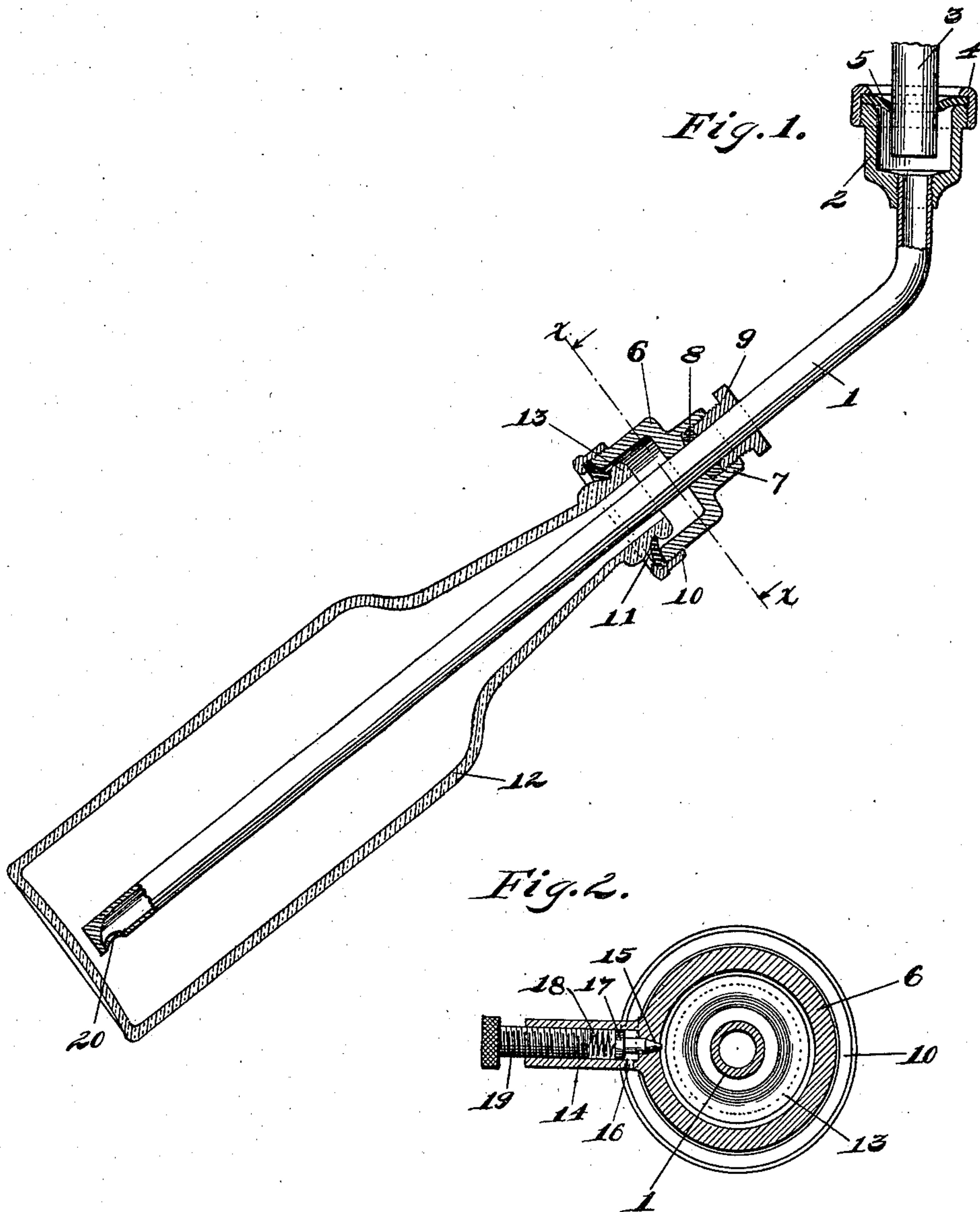


F. A. THELEN.
BOTTLE FILLING DEVICE.
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Witnesses:
C. E. Wessels.
A. A. Olson

Inventor:
Frank A. Thelen,
By Joshua R. H. Torrey
his Attorney.

UNITED STATES PATENT OFFICE.

FRANK A. THELEN, OF KEWANEE, ILLINOIS, ASSIGNOR TO ADOLPH MOHLER, OF KEWANEE, ILLINOIS.

BOTTLE-FILLING DEVICE.

995,927.

Specification of Letters Patent. Patented June 20, 1911.

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To all whom it may concern:

Be it known that I, FRANK A. THELEN, a citizen of the United States, and a resident of the city of Kewanee, county of Henry, and State of Illinois, have invented certain new and useful Improvements in Bottle-Filling Devices, of which the following is a specification.

My invention relates to improvements in bottle filling devices and more specifically to that class thereof which are designed for attachment to bar spigots.

The object of my invention is the provision of a bottle filling device of the character mentioned which will be of improved construction and efficient in operation.

Other objects will appear hereinafter.

With these objects in view my invention consists in a bottle filling device characterized as above mentioned and in certain details of construction and arrangements of parts all as will be hereinafter more fully described and particularly pointed out in the appended claims.

My invention will be more readily understood by reference to the accompanying drawing forming a part of this specification, and in which—

Figure 1 is a longitudinal section of a bottle filling device embodying the preferred form of my invention, the same being shown connected to an ordinary spigot and a bottle in section being shown arranged for filling, and Fig. 2 is an enlarged transverse section taken on line $x-x$ of Fig. 1.

The preferred form of my invention as illustrated in the drawing comprises a discharge tube 1 which is of angular form as indicated for a purpose which will be hereinafter set forth. Threaded or otherwise suitably fixed to the upper extremity of the tube 1 is a cup 2 of an interior diameter such as to adapt the same to loosely receive the lower end portion of an ordinary bar spigot or cock 3. Threaded upon the upper or mouth edge of the cup 2 is a retaining flange 4 which serves to retain the rubber ring 5 in position upon said edge of said cup. The opening in said ring 5 is of a diameter less than that of the interior of the cup 2 so that, upon the insertion of the spigot 3 into said cup, the inner edge of said ring 5 will snugly engage around said spigot to form an air tight connection therewith. Further, the arrangement is such that when the cup

2 is forced or pressed upon the lower end portion of a spigot the inner edge portion of the ring 5 will be flexed downwardly in conical form, as clearly shown. This being so, it will be seen that pressure of the liquid within the cup 2 will act upon said edge portion of said ring to effect a closer engagement thereof with the outer surface of the spigot. With this arrangement then, the greater the pressure upon the liquid drawn from the spigot the more effectual will be the engagement of the ring 5 with said spigot.

Arranged upon the tube 1, the same embracing the latter, is a cup 6 provided at its upper end with a nipple or annular flange 7 encircling said tube. Arranged within the nipple 7 is a gasket 8, the screw 9 threaded into said nipple being adapted to compress said gasket in order to force the same into snug engagement with the adjacent surface of the tube 1. Thus the cup 6 is longitudinally adjustable upon the tube 1, the same being adapted to be locked in any position of adjustment thereon by simply rotating the screw 9. Said gasket 8 in addition to serving as a means of locking the cup 6 upon the tube 1, serves also as a means of effecting an air tight connection of said cup with said tube. The lower end of the cup 6 is of an interior diameter such as to adapt the same to loosely receive the mouth end portion of the neck of a bottle. Upon the lower or outer edge portion of said cup is threaded a retaining flange 10 which serves to secure a rubber ring 11 in position upon the outer edge of said cup. The opening in said ring 11 is of a diameter less than that of the interior of said cup 6, the same being adapted, upon the insertion of the mouth end of a bottle 12 into said cup, to engage snugly about said end portion thereof to form an air tight connection as shown; the arrangement being such that upon the insertion of a bottle as shown, the inner edge portion of said ring will be flexed inwardly. This being so, pressure within the bottle 12 will act upon said edge portion of said ring to force the same into snug engagement with the bottle in a manner similar to the action of the internal pressure of the device with respect to the ring 5 as above described. The ring 11 in addition to serving as a means of effecting an air tight connection with the neck of the bottle will engage behind the

bead 13 provided at the mouth edge of the bottle, thereby serving as a means of releasably retaining said bottle in position, the arrangement being such that in operation the bottle will be held in position by said ring without the necessity of supporting by the hand.

Formed upon the cup 6 adjacent the upper end thereof is a laterally projecting tubular portion 14 at the base of which is formed a central opening or vent 15 which communicates with the interior of said cup, air discharging from said cup passing through said opening 15 into the tubular portion 14 and thence through an opening 16 in said tube to the outside atmosphere. The opening 16 is controlled by a valve 17 which is slidably mounted in said tubular portion 14, said valve being adapted when seated into said opening 15 to completely close the same. Said valve is normally held in seated position by means of a compression spring 18 which is interposed between the outer end thereof and the inner end of a screw 19 threaded into the portion 14. With this arrangement, it will be seen that said valve will be yieldingly held in closing position, permitting of the escapement of air from the cup 6, that is from the bottle only when the pressure in the latter exceeds the tension of the spring 18. By means of the screw 19 it will be seen that the tension of the spring 18 may be adjusted so that the same will exert any force desired upon the valve. With this arrangement, in the course of filling of a bottle, the valve 17 will automatically open when the pressure in the bottle has reached a certain point to permit of the exhaust of air therefrom. By reason of the adjustment of the tension of the spring 18 afforded by the screw 19 it will be seen that the device may be so adjusted that the valve will open only when a pre-determined pressure has been reached within the bottle, provision being thus made whereby the air within the bottle may be exhausted and at the same time liquid forced thereinto under and maintained at a certain pressure.

The tube 1, when a bottle is arranged thereon for filling, extends into close proximity with the lower extremity thereof, said end being provided with a lateral discharge opening 20. This provision prevents undue foaming of the liquid upon being forced into the bottle. By reason of the mounting of the cup 6 upon the tube 1 as above described, the same may be readily adjusted upon said tube in order to accommodate bottles of various sizes. The tube 1 is preferably of an angular form as shown, so that when the device is arranged upon the spigot the lower end of said tube will project outwardly therefrom and from the drip pan ordinarily arranged below the same for ready arrangement of bottles upon said tube.

A device as set forth is of simple and economical construction hence may be manufactured at a low cost. The various parts of the device are so assembled as to be adapted to be readily disconnected if desired for cleaning, so that the device may be readily maintained in a sanitary condition, and further the device is so designed that bottling may be effected with ease and expedition.

While I have shown what I deem to be the preferred form of my bottling device I do not wish to be limited thereto as there might be various changes made in the details of construction and the arrangements of parts described without departing from the spirit of the invention as comprehended within the scope of the appended claims.

Having described my invention what I claim as new and desire to secure by Letters Patent is:

1. A bottling device comprising a discharge pipe having a discharge opening at its lower end; means at the other end of said pipe for detachably connecting the same with a spigot or other similar construction and means embracing and longitudinally adjustable upon said pipe for releasably engaging the mouth end of a bottle; and a valved air vent provided in said means, substantially as described.

2. A bottling device comprising an angular discharge pipe having a lateral discharge opening at its lower end; means at the other end of said tube for detachably connecting the same with a spigot or other similar construction; and means embracing and longitudinally adjustable upon said tube for releasably engaging the mouth end of a bottle arranged upon the lower end of said tube to effect the air tight closing of said end of said bottle; and a valved air vent provided in said means, substantially as described.

3. A bottling device comprising an angular discharge tube having a horizontal discharge opening at its lower end; means at the other end of said tube for detachably connecting the same with a spigot or other similar construction; means embracing and longitudinally adjustable upon said tube for releasably engaging the mouth end of a bottle arranged upon the lower end of said tube to effect the air tight closing of such end of said bottle; a packing interposed between said means and said tube; and a valved air vent provided in said means, substantially as described.

4. A bottling device comprising a discharge tube; means at one end of said tube for connecting the same with a spigot or other similar construction; means upon said tube for effecting the air tight closing of the mouth of a bottle arranged upon the opposite end of said tube, said means comprising a cup embracing said tube and longitudinally

nally adjustable thereon, said cup being adapted to loosely receive the mouth end portion of a bottle arranged upon said tube; manually operable means for locking said cup upon said tube; a rubber ring arranged upon the mouth edge of said cup; a threaded flange for retaining said ring in position upon said edge of said cup, the opening in said ring being of a diameter less than that of the interior of said cup, so that upon in-

sertion of the mouth end of a bottle into said cup said ring will snugly embrace the same, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANK A. THELEN.

Witnesses:

M. J. HEWLETT, Jr.,
ROBERT MOORE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
