Nov. 19, 1929. F. S. HYATT 1,736,598

BOTTLE FILLING DEVICE

Filed Aug. 20, 1927

Fig. 1,

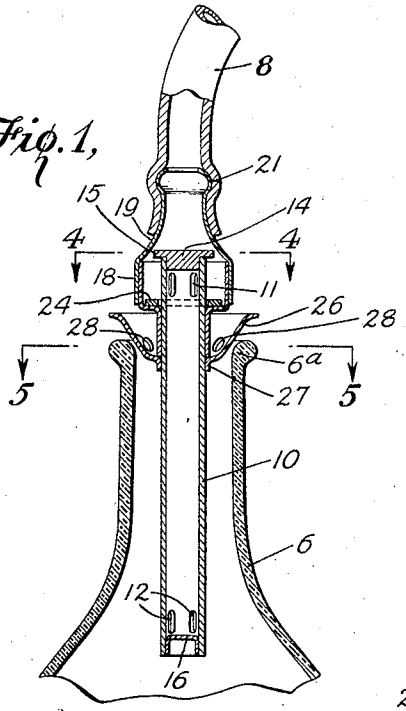


Fig. 2,

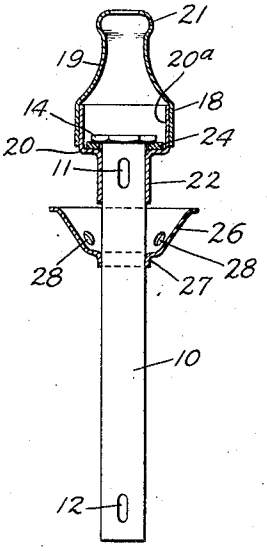


Fig. 3,

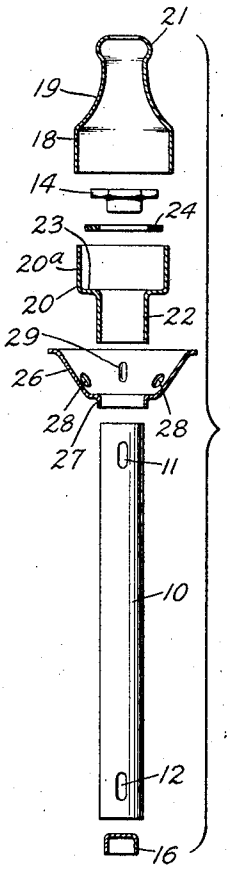


Fig. 4,

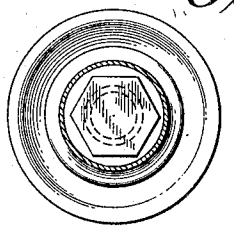
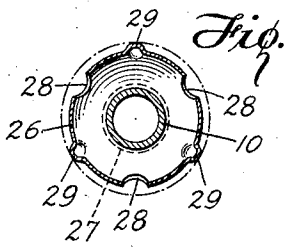


Fig. 5.



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UNITED STATES PATENT OFFICE

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BOTTLE-FILLING DEVICE

Application filed August 20, 1927. Serial No. 214,241.

This invention relates to improvements in bottle filling devices it being one of the primary objects of the invention to provide an apparatus of this type which will permit of the filling of a number of bottles with liquids, for example carbonated beverages, with as little waste of time and material as possible.

It is a further object to provide for the escape of air from a bottle being filled and further to provide means preventing the apparatus from dripping liquid when the filling device is being moved from one bottle to another.

It is a further object to provide an economically constructed apparatus of this type without detracting from its appearance or effectiveness in operation.

These and other objects will appear more fully from the following description when considered in connection with the drawings in which:

Fig. 1 is a vertical sectional view of the bottle filling devices in operative position.

Fig. 2 is a similar view of the apparatus removed from a bottle and showing the same in sealed condition.

Fig. 3 is a vertical view, mainly in section, of the separated elements comprising the apparatus.

Figs. 4 and 5 are horizontal sectional views taken on the lines 4—4 and 5—5 respectively of Fig. 1.

The apparatus herein disclosed is intended for domestic use in the filling of containers such for example as the bottle 6 with a liquid supplied through a flexible connection as indicated at 8. It will be understood that the apparatus may be used with other and different types of containers by adapting the outlet and supporting portions thereof to the mouth of the desired container.

The apparatus comprises a tubular body portion 10 formed with openings 11 and 12 adjacent the upper and lower portions thereof respectively, the upper end being shown as closed by means of the solid plug 14 securely engaged within the upper end of the tubular portion 10 and formed with the non-circular portion 15 projecting outwardly beyond the tubular member 10. The lower end of the member 10 may be closed by means of the inverted cup-shaped plug 16 preferably positioned entirely within the tubular portion 10. It will be observed that the plug 14 and cupped member 16 terminate within the tubular portion 10 at such points as not to obstruct passage through the openings 11 and 12.

The mechanism for introducing liquid into the apparatus from the tube 8 comprises a filler head 18 shown as formed of an outer shell 19 and inner shell 20 telescoped within one another into secure frictional engagement when the apparatus is assembled. The outer shell 19 includes a nipple 21 for receiving the tube 8, the inner shell 20 comprising in addition to the telescoped portion 20^a the cylindrical bearing portion 22 and the contact or sealing portion 23 preferably arranged substantially flat, as shown, for engagement through a suitable gasket with the lower surface of the projecting portion 15 of plug 14. The interior of the head 18 is adapted to be sealed to prevent the egress of any liquid therefrom under certain conditions and to this end a rubber gasket or other sealing washer 24 is introduced between the bearing portion 23 and the projecting portion of the plug 15.

The apparatus is supported on the mouth 6^a of the container 6 by means of the cupped drain receiving member 26 having the attachment portion 27 constructed to securely engage the tubular member 10 and to be immovably supported thereon. The cupped member 26 further includes the outwardly and upwardly flared body portion formed with transverse openings 28 positioned adjacent the lower portion of this member and with the outwardly and downwardly projecting supporting beads 29. By reference to Fig. 1 it will be observed that the beads 29 engage with the mouth of the bottle 6 so as to space the body portion of the cupped member 26 from the mouth of the bottle and that the openings 28 are so positioned that any liquid caught by the cupped member 26 will drain into the bottle 6.

After the parts have been formed as shown in Fig. 3 they are assembled by compressing the cup 16 into the lower end of the tubular

member 10, passing the cupped member 26 either downwardly or upwardly along the member 10 until it is positioned substantially as shown in Figs. 1 and 2, after which the inner shell 20, rubber gasket 24, plug 14, and outer shell 19 are assembled in the sequence given to form the completed device of Figs. 1 and 2.

In operation the apparatus may have a suitable connector, for example the rubber hose 8, attached thereto as shown in Fig. 2 and the apparatus may be lifted by catching hold of the head 18 thus causing the interior of the head 18 to be closed or sealed with respect to the tubular member 10 by means of the plug head 15 and gasket 24. When it is desired to fill the bottle or other receptacle the device is set down upon the bottle mouth as shown in Fig. 1 whereupon the head 18 slides downwardly to uncover the openings 11 thereby removing the plug 15 from the gasket 24. In this condition the liquid passes freely inwardly through the tube 8, head 18, openings 11, tubular part 10 and out through the openings 12. The liquid thus has an open passageway from the tube 8 into the bottle 6 whenever the apparatus is resting in filling position. The air within the bottle passes out freely through the openings 28 or between the cupped member 26 and the mouth 6^a of the bottle due to the spaced relation of these parts. Any liquid escaping from the head 18 other than that passed through the openings 11 is caught within the cupped member 26 such liquid draining through the openings 28 into the bottle 6.

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

1. In a bottle filling apparatus, a tubular body portion formed with an enlargement adjacent the upper end thereof and with an opening beneath the same, a drain cup mounted on said body portion, and a movable head slidable with respect to said body portion and provided with a sealing portion movable past said openings and into sealing relation with said enlargement, said movable head being formed of separate sheet metal shells normally held in secure frictional engagement, one of said shells including a cylindrical supporting portion constructed for slidably supporting said tubular body portion the other of said shells being formed with a hose receiving nipple.

2. In a bottle filling apparatus, a tubular body portion formed with an enlargement adjacent the upper end thereof and with an opening beneath the same, means for supporting said body portion on a bottle and a movable head slidable with respect to said body portion and provided with a sealing portion movable past said openings and into sealing relation with said enlargement, said movable head being formed of separate sheet metal shells normally held in secure frictional engagement, one of said shells including a cylindrical supporting portion constructed for slidably supporting said tubular body portion, the other of said shells being formed with a hose receiving nipple.

Signed at New York, in the county of Kings, and State of New York, this 18th day of August A. D. 1927.

FRANK S. HYATT.