Aug. 7, 1928.

1,679,604

G. W. COOKE

COMBINATION BUNG AND FAUCET

Filed Oct. 13, 1926

Fig. 1.

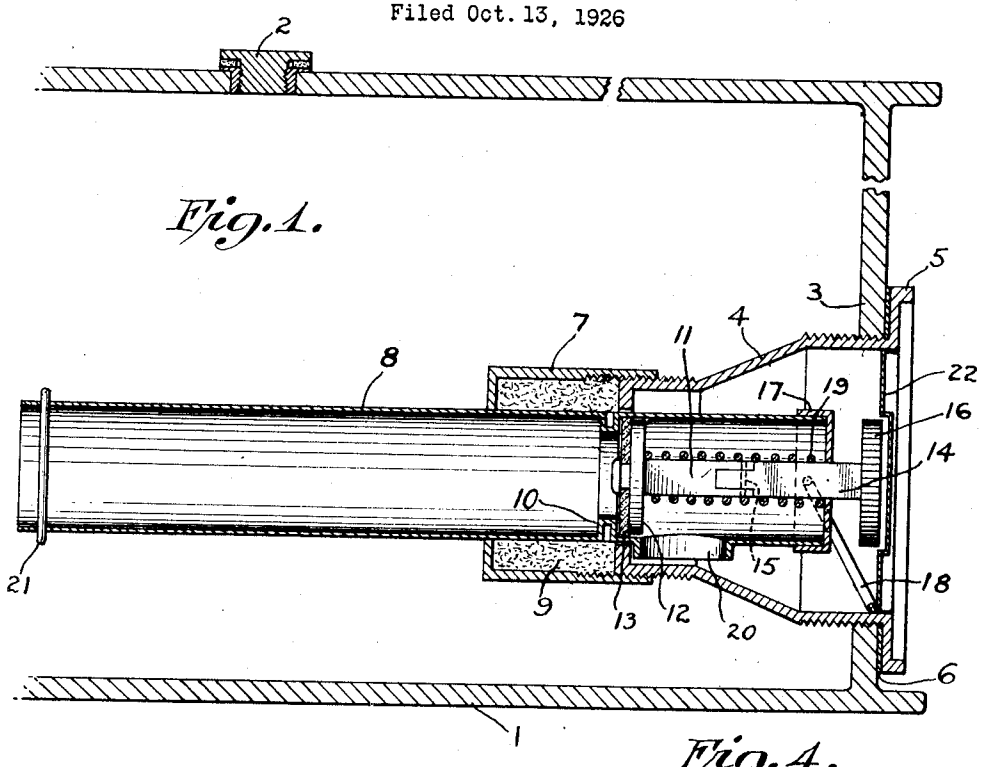


Fig. 4.

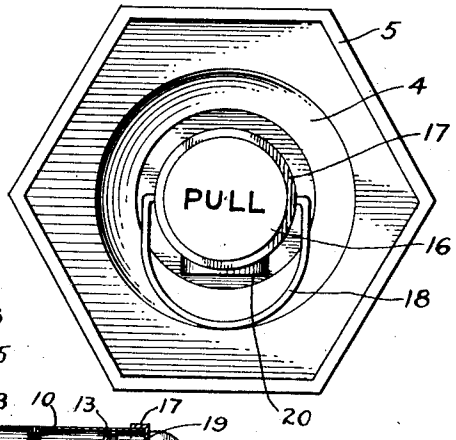


Fig. 3.

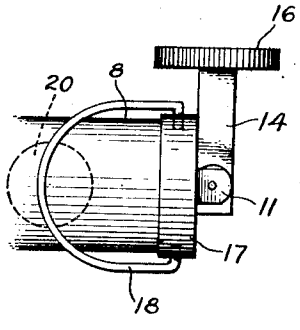


Fig. 2.

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Patented Aug. 7, 1928. 1,679,604

UNITED STATES PATENT OFFICE.

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COMBINATION BUNG AND FAUCET.

Application filed October 13, 1926. Serial No. 141,387.

This invention relates to a combination bung and faucet for containers, such as barrels or drums, in which liquids such as oils, are shipped and supplied to consumers.

It is customary to provide such containers with a hole in the bilge or cylindrical portion, adapted to be closed by a bung, to which a faucet is detachably secured to the under side of the bung and hangs inside the container. One head of the container is provided with a threaded hole of relatively smaller diameter, into which the faucet may be secured after removing the bung from the bilge or cylindrical portion of the container, and detaching the faucet. The bung hole in the bilge or cylindrical section is used for admitting air above the liquid in the container.

With an arrangement of this kind, it is necessary to lay the container on its side while the bung and faucet are being removed and separated, then the bung must be replaced and the container stood on end, while the faucet is being screwed into the head of the container, after which it must be again laid on its side, to allow the liquid to flow from it. The bilge bung is then removed to permit air to enter the container and facilitate the flow of liquid through the faucet. This procedure requires at least two or three tippings of the container, and three manipulations of the bung thus consuming energy and time in placing the container in condition for the removal of its contents.

It is the general object of this invention to provide means to obviate the disadvantages attending the use of faucets in containers as described above by reducing the number of operations required to place the faucet in its final position.

The general object as well as others which will more clearly appear hereinafter is attained by providing a combined bung and faucet adapted to be attached in the head of the container in the position that it finally occupies, in the place of the usual arrangement, thereby avoiding the disadvantages of the removable bung and detachable faucet when the contents of the container are to be withdrawn. The bung is hollow and the faucet is slidably mounted in it and sealed in its retracted position against unauthorized operation. When the seal is removed by punching a hole in it and prying out, the faucet may be withdrawn to its operative position and opened or closed as desired, the discharge orifice being in a position far enough from the head of the container to allow the liquid to flow freely without spattering on the head or chime forming the joint between the head and the bilge of the container.

The particular nature of the invention will appear more clearly from a description of the preferred embodiment as shown in the accompanying drawings in which:

Fig. 1 is a longitudinal sectional view of the device in the position it occupies when the container is being shipped.

Fig. 2 is a similar view on a smaller scale showing the device in the position of use.

Fig. 3 is a view of the outer end of the device as seen from the top of Fig. 2, and

Fig. 4 is an end view of the device with the closure seal removed.

Referring to the drawings, 1 represents the bilge portion of a drum provided with an orifice closed by a bung 2. The head 3 of the drum is provided with a bung hole into which the combination bung and faucet of this invention is adapted to be installed by threading or other suitable means. This device consists of a hollow bung 4 of tapering shape and provided at its front end with a shoulder 5 adapted to engage a gasket 6 and press it against the head of the drum when the device is screwed in place. Screwed upon the smaller inner end of the bung is a bonnet member 7 provided with an aperture within which and also in a corresponding aperture in the end of the bung is slidably mounted a tube 8 constituting the body of the faucet. Suitable packing 9 is placed within the bonnet and pressed against the tube to form a tight joint or packing gland to prevent leakage of liquid from the drum through the hollow bung.

The tube 8 of the faucet is provided with an inwardly extending shoulder 10 formed in any suitable manner and constituting a seat for the movable or valve part of the faucet. The latter consists of a two-part plunger, the inner section 11 of which is

provided at its inner end with a disc 12 against which is fastened a gasket 13 of suitable material, such as fibre, adapted to engage the seat 10 to form a tight joint when the faucet is closed.

The outer section 14 of the plunger of the faucet is connected to the inner section 11 by a pin 15 to permit it to be turned at right angles to section 11 when the faucet is opened, as shown in Figs. 2 and 3, a head 16 being provided on the section 14 to permit the faucet to be manipulated. The plunger passes through a correspondingly shaped aperture in the cap 17 on the end of the tube 8. The sections of the plunger may be of any desired cross-section, but it is preferred to make them non-circular in order that the valve will return to its seat in the same position each time so that any foreign substance which may become imbedded in the gasket will always return to the same point on the seat that it left. The cap is held in place by a bail 18, the ends of which pass through the cap and the tube as shown most clearly in Fig. 3, thus holding the cap upon the tube. A spring 19 surrounding the faucet plunger 11—14 normally presses the gasket 13 against the seat 10.

The tube 8 is provided beyond the seat 10 with an orifice 20 for the flow of liquid from the faucet. Any suitable arrangement may be used at the inner end of tube 8 to prevent it from being entirely pulled out of the bung 4. As shown herein a pin 21 at the rear end of the tube engages the inner end of the bonnet 7 when the faucet is withdrawn, as shown in Fig. 2. To prevent unauthorized manipulation of the faucet and removal of the contents of the barrel, a seal 22 of any suitable material, such as tin, is fitted within the outer end of the bung in such a manner that it can not be removed without being punctured or otherwise mutilated.

During the shipment and transportation of the barrel or drum and its contents the parts occupy the position shown in Fig. 1, the faucet being in its retracted position and concealed by seal 22. When the contents of the barrel are to be withdrawn the seal may be punctured and removed or cut out to permit access to the bail 18 by which the faucet may be withdrawn as shown in Fig. 2 in a position ready for use. Whenever it is desired to draw off the contents of the barrel the faucet is opened by pulling out head 16 and connected plunger 11—14 until the joint in the plunger comes out of cap 17, after which the outer section 14 may be turned at right angles to the inner section 11 as shown in Figs. 2 and 3 to hold the valve open so that the liquid will flow therefrom through the orifice 20.

The tubular section of the faucet is made long enough, when pulled out of the bung, to permit of a free and unobstructed flow from orifice 20 into the receptacles which are to be filled. When the faucet is to be closed section 14 of the plunger is brought into alignment with section 11 and released to permit the spring 19 to seat the gasket 13 against the shoulder 10. The faucet after it has been closed has no liquid in the outer end of the faucet chamber because the gasket 13 fits closely within the tube 8 and pushes all the liquid ahead of it on its return travel, thus preventing any after drip.

From the above description of the device it will be seen that the invention provides a combination bung and faucet which may be permanently attached to the barrel or drum so that the latter may be initially placed in the position it should occupy when its contents are to be withdrawn, thus avoiding the necessity for upending and laying down the barrel or drum two or three times to install a faucet as is necessary with the faucets heretofore used, thereby increasing the convenience of the ultimate user. At the same time the entire unit can be removed for the installation of a pump if required. The simplicity of the device and comparatively few parts make it inexpensive and easy to manufacture as for instance from drawn steel, with the consequent saving in cost of the containers with which it is used not only on account of the reduced cost of the faucet, but the elimination of the extra bung for the orifice in which this device is placed, as is required with prior faucets attached to the bilge bung during shipment.

While a preferred embodiment of the invention has been shown and described it will be understood that various changes in its structural details may be made without departing from the principle of the invention as defined in the appended claims. For instance any other type of faucet may be used with suitable modifications to adapt it to the slidable tube required for the hollow bung.

I claim:—

1. A combination bung and faucet for a container comprising a bung adapted to be attached to the container, a tube slidably mounted in the bung and provided with a discharge orifice and a transverse valve seat, a valve slidably mounted in the tube, means for holding the valve against the seat and means whereby the valve may be withdrawn from the seat to permit the contents of the container to flow from the orifice.

2. A combination bung and faucet for a container comprising a bung adapted to be attached to the container, a tube slidably mounted in the bung and provided with a discharge orifice and a valve seat, a plunger slidably mounted in the tube, a valve attached to the inner end of the plunger, means for holding the valve against the seat and means attached to the outer end of the

plunger whereby the valve may be withdrawn from the seat to permit the contents of the container to flow from the orifice.

3. A combination bung and faucet for a container comprising a bung adapted to be attached to the container, a tube slidably mounted in the bung and provided with a discharge orifice and a valve seat, a two-part plunger slidably mounted in the tube, a valve attached to the inner part of the plunger, means for holding the valve against the seat and means attached to the outer part of the plunger whereby the valve may be withdrawn from the seat and the outer part turned with respect to the inner part to engage the end of the tube to hold the valve open to permit the contents of the container to flow from the orifice.

4. A faucet comprising a tube provided with a discharge orifice and a valve seat, a two-part plunger slidably mounted in the tube, a valve attached to the inner part of the plunger, means for holding the valve against the seat and means attached to the outer part of the plunger whereby the valve may be withdrawn from the seat and the outer part turned with respect to the inner part to engage the end of the tube to hold the valve open to permit discharge of liquid through the orifice.

5. A combination bung and faucet for a container comprising a hollow bung adapted to be attached to the container, a member attached to the bung and forming therewith a chamber adapted to receive packing, a tube slidably mounted in the bung and member and passing through the packing and provided with a discharge orifice and a valve seat, means attached to the tube by which it may be partially withdrawn from the bung, means for limiting the withdrawal of the tube from the bung, a plunger slidably mounted in the tube, a valve attached to the inner end of the plunger, means for holding the valve against the seat and means attached to the outer end of the plunger whereby the valve may be withdrawn from the seat to permit the contents of the container to flow from the orifice.

6. A combination bung and faucet for a container, comprising a bung adapted to be attached to the container and a faucet comprising a tube slidably mounted in the bung, a valve member in the tube and separate means for moving the valve member with respect to the tube.

7. A combination bung and faucet for a container, comprising a bung adapted to be attached to the container and a faucet comprising a tube slidably mounted in the bung and a valve member in the tube provided with an operating member extending beyond the outer end of the tube.

8. A combination bung and faucet for a container, comprising a bung adapted to be attached to the container, a member attached to the bung and forming therewith a chamber adapted to receive packing and a faucet comprising a tube slidably mounted in the bung and member and passing through the packing and valve means housed within the tube for controlling the flow of the contents of the container therethrough.

In testimony whereof I affix my signature.

GEORGE W. COOKE.