Dec. 13, 1927. 1,652,696

W. E. BEARD ET AL

QUICK SERVICE OIL BOTTLE

Filed March 8, 1926

Fig. 1.

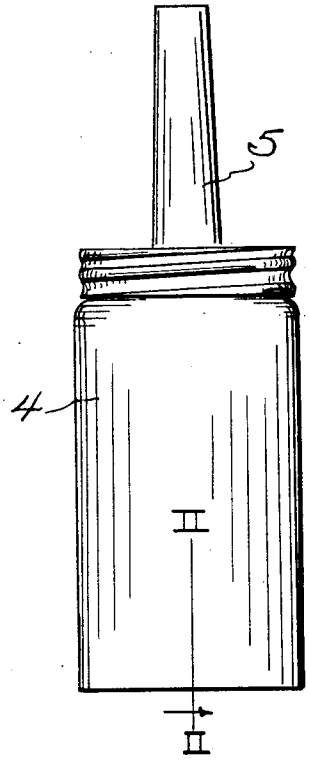


Fig. 2.

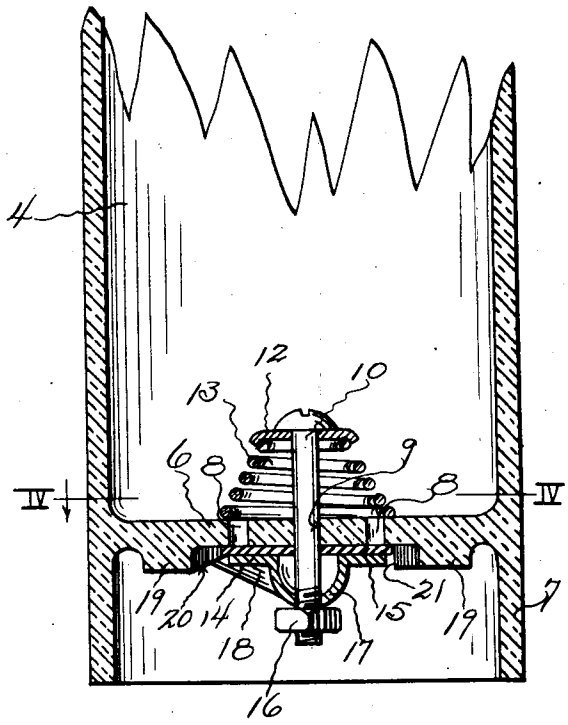


Fig. 3.

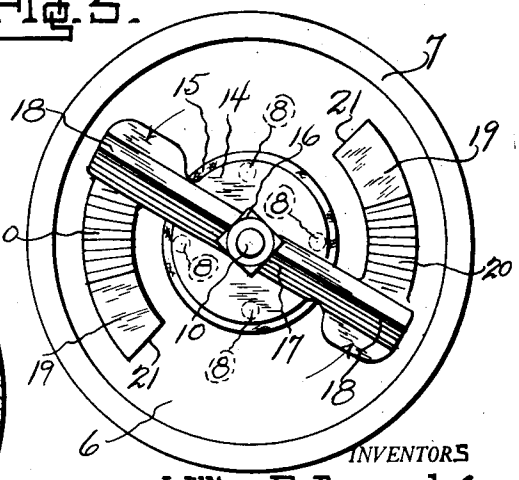
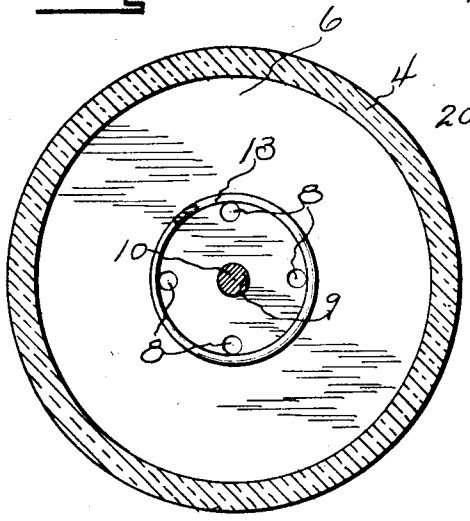


Fig. 4.



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UNITED STATES PATENT OFFICE.

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QUICK-SERVICE OIL BOTTLE.

Application filed March 8, 1926. Serial No. 92,986.

This invention relates to an oil dispensing bottle, and has for its primary object the provision of a quick service oil bottle capable of being emptied in the shortest possible time after it has been tipped to the emptying position.

The primary object of our invention is the contemplation of an oil service bottle especially adapted for use in filling stations or the like where lubricating oil is kept in quart bottles ready to be emptied into the automobile crank case.

It has been known for a long period of time that proper vents for permitting the entrance of air, as liquid is being poured from a bottle, have not been effectively incorporated in the bottom of the container where their restricting valve may be conveniently opened.

An object of this invention, therefore, is to provide a plurality of vent holes in the bottom of a bottle which are opened and closed by rotating the restricting plate over a cam surface formed by lugs integral with the bottle bottom which is spaced inwardly from the lowermost edges of the bottle side.

The important objects of structural details will appear throughout the specification referring to the accompanying drawing wherein:

Figure 1 is a side elevation of an oil dispensing bottle embodying our invention.

Fig. 2 is an enlarged vertical central section of the lower portion of the same taken on line II—II of Fig. 1.

Fig. 3 is a bottom view of the bottle, and,

Fig. 4 is a horizontal section taken on line IV—IV of Fig. 2.

Similar reference characters refer to like parts throughout the several views, and the numeral 4 designates the chambered body of an oil dispensing bottle which is provided with the well-known screwthreaded mouth, to which is attached a pouring spout 5. The side walls of body 4 extend below the bottom 6 of the bottle as at 7 to form a housing-cavity for the hereinafter-set-forth valve and operating parts. This extended wall 7 permits of standing the bottle without interference from those parts associated with the bottom 6 as shown in Figs. 2 and 3.

In its preferred form, the invention may be constructed as illustrated. Bottom 6 has a plurality of vent holes 8 therethrough, the number of which may be varied to suit the requirements. These vent holes should be grouped around a central opening 9 adapted to accommodate pintle 10 which passes therethrough as shown in Fig. 2. The inner end of pintle 10 carries a plate 12, and a coil spring 13 is interposed between this plate 12 and the inner surface of bottom 6.

The outer end of pintle 10 pivotally supports a vent-hole restricting plate 14 which should carry a packing disk or pad 15 which effectively closes all holes 8 and keeps oil or the like from escaping around pintle 10. A shoulder (in this instance shown to be a nut 16) formed on the outer end of pintle 10 bears against a raised portion 17 of plate 14 and inward pressure exerted by spring 13 is imparted directly to plate 14 and pad 15 which maintains the valve assembly in a closed position when the bottle is not in use.

When the bottle is tipped and being emptied, it is desirable to open vent-holes 8 with the least amount of trouble.

To accomplish this, plate 14 carries a pair of diametrically opposite, radially extending arms 18 which are ridged to provide a grasping surface, and which, while being rotated around pintle 10, ride up and over a pair of cam lugs 19 formed by the outer face of bottom 6. The inclined portions 20 of each of these cam lugs 19 are diametrically opposite as shown in Fig. 3, and act upon arms 18 to lift them both at once as they are being turned in the direction of the arrows of Fig. 3.

This lift exerted on arms 18 pulls pintle 10 outwardly against the pressure of spring 13 and draws pad 15 away from vent-holes 8. A quick turn of arms 18 accomplishes this instantly, and arms 18 are permitted to rest upon the highest part of cam lugs 19 until the oil has run out of the bottle.

A continuation of the turning of arms 18 in the same direction will carry them to the abrupt end 21 of cam lugs 19 where they will immediately be released with a quick action which snaps all vent holes closed by allowing the spring 13 to again pull disk 15 and plate 14 against the outer face of bottom 6.

While one form of construction has been illustrated and described, it is desired to be limited in the invention only by the scope of the appended claim.

What we claim and desire to secure by Letters Patent is:

A bottle of the kind described comprising a chambered body having side walls ex-

tending beyond the bottom of said body to form a valve housing-cavity, a plurality of vent-holes through said bottom and a valve for said holes comprising a restricting plate supported by a pintle passing through an opening in said bottom, a coil spring within said chamber adapted to exert yielding inward pressure against the head of said pintle to maintain said restricting plate in the closed position and means for compressing said spring and raising said restricting plate to open said vent-holes as it is being rotated including a pair of diametrically opposite arms integral with said restricting plate and a pair of arcuate cam lugs formed on the outer face of said bottom, said cam lugs each terminating abruptly at diametrically opposite points whereby said arms are simultaneously released from the lifting effect of said lugs and said restricting plate is snapped to the vent-hole closing position by said coil spring.

In testimony whereof we hereunto affix our signatures.

WILLIAM E. BEARD.
WILLIAM E. HOSTETTER.