

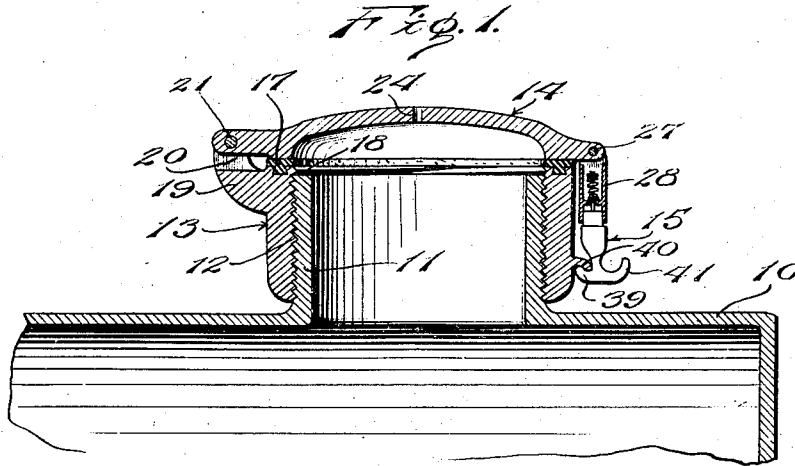
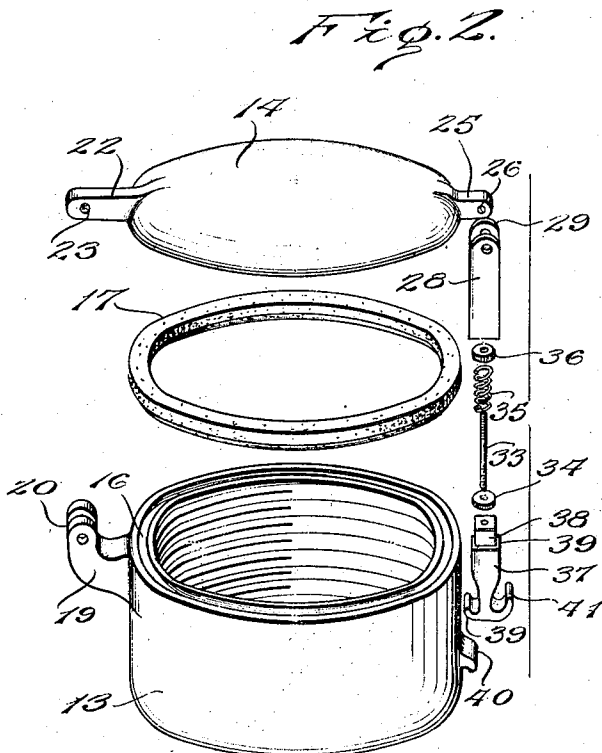
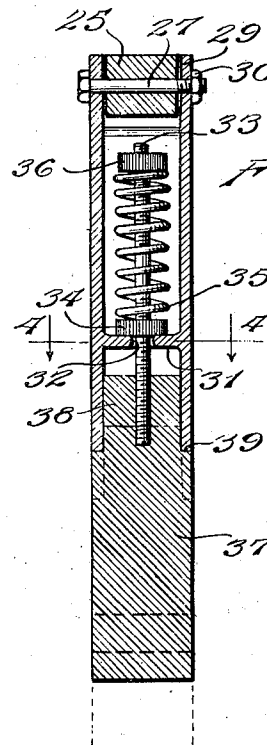
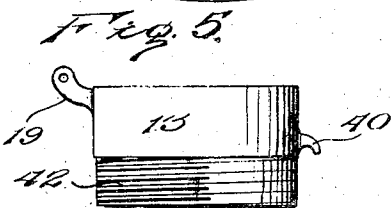
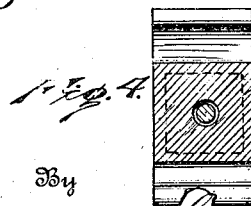
Feb. 19, 1924.

1,483,953

L. B. RAINEY

CAP FOR LIQUID RECEPTACLES

Filed Nov. 1, 1922



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UNITED STATES PATENT OFFICE.

LILIUS B. RAINEY, OF GADSDEN, ALABAMA.

CAP FOR LIQUID RECEPTACLES.

Application filed November 1, 1922. Serial No. 598,377.

To all whom it may concern:

Be it known that I, LILIUS B. RAINEY, a citizen of the United States, residing at Gadsden, in the county of Etowah and State of Alabama, have invented certain new and useful Improvements in Caps for Liquid Receptacles, of which the following is a specification.

The present invention relates to improvements in caps for liquid receptacles such as gasoline tanks and radiators of automobiles.

The main object of this invention is to provide a cap of this class that furnishes a tight closure for the receptacle. Another object of the invention is to construct the cap in such a manner that it may be quickly opened.

In the accompanying drawings the preferred construction of the device is illustrated as applied to the filling neck of a gasoline tank in an automobile, and

Figure 1 shows a fragmentary, vertical section of the related parts of a gasoline tank with the cap in position;

Figure 2 shows a perspective view of the details of the device;

Figure 3 is a vertical section of the latch;

Figure 4 is a transverse section along line 4-4 of Figure 3, and

Figure 5 is a side elevation of a slight modification of the cap.

In the drawing reference numeral 10 represents the top portion of a gas tank provided with a filling neck 11 furnished with external threads 12 in the usual manner.

The device forming the subject matter of the present invention consists of three main parts, namely:

A cylindrical body 13, a lid 14, and a latch or securing hook 15.

The cylindrical body 13 is threaded internally to fit the external thread 12 of the neck 11 and is substantially of the same length as the latter. The cylindrical body 13 has an annular groove 16 around its upper edge in which a gasket 17, of rubber or leather, is inserted. The cylindrical body 13 is assembled on the neck 11 by screwing it down as far as it will go and preferably so that the gasket 17 stands above the upper edge 18 of the neck 11. At one side a lug 19 is provided on the cylindrical body 13, forming a unit therewith and preferably extending upwardly above the top edge of the cylindrical body constituting a portion of a hinge, as at 20.

To this hinge portion 20 is journaled on a pin 21, a lid 14, which for this purpose has a tail piece 22 provided with an aperture 23 engaging around the pin 21. The lid 14 is preferably dome-shaped so as to rise slightly above the upper edge 18 of the neck 11 and its bottom side is ground to engage tightly with the gasket 17 inserted in the cylindrical body 13. At 24 is indicated a small vent hole in the center of the lid 14 to furnish an escape for gases that might have formed in the tank and collected in the dome under the lid 14.

On the opposite side to the tail piece 22 is an ear 25 projecting beyond the periphery of the lid 14 and provided with a small aperture 26, in which a journal pin 27 is lodged.

Upon this journal pin 27 is suspended a sleeve 28 forming part of the latch 15. This sleeve has a pair of eyelets 29 engaged around the journal pin 27, which is held in position by means of a nut 30 threaded thereon. Part way down the hollowed out portion of the sleeve 28 is a transverse bottom 31 provided with a central opening 32, through which extends a spindle 33 running through a washer 34, which rests on the bottom 31 and engages the lower end of a coiled compression spring 35. The upper end of this spring abuts against a nut 36 threaded on the upper end of the spindle 33 and by means of which the compression of the spring may be adjusted.

The lower end of the spindle 33 is firmly secured in the hook 37. This hook has a narrow upper portion 38 engaging the lower end of the sleeve 28 so as to be guided therein in longitudinal direction and kept from turning, as the cross section of the sleeve and the hook 37 are preferably square or rectangular. At 39 are formed shoulders on the hook 37 adapted to abut against the lower end of the sleeve 28 to limit the upward movement of the hook in the sleeve, actuated by the compression spring 35. It will be evident that, before assembling the sleeve 28 on the ear 25, it will be possible, by reaching down through the opening between the eyelets 29, to adjust the compression of the spring 35 by turning the nut 36 on the spindle 33.

The lower end of the hook 37 is finished with an upwardly turned toe 39 adapted to engage beneath a correspondingly shaped nose 40 on the side of the cylindrical body

13. The opposite side of the hook 37 has a grip 41, which is intended to be held by the operator's finger, so that, with an outward jerk on the grip 41, the hook 37 will be released from the nose 40, whereupon the latch may be swung upwards and the lid 14 raised for filling the tank.

It will now be evident that although the latch gives secure closure for the opening in the neck 11 of the tank 10, so that no gasoline can escape therefrom, the latch may be easily released to open the lid 14. This is a considerable advantage over the ordinary screw cap closure, which takes a long time to connect and disconnect from the neck 11, and it is a well known fact that a little grit lodged in the threads might prevent the tight closure of the cap on the neck 11.

In some instances the caps are provided with external threads instead of internal ones, when intended for use on correspondingly threaded necks of gasoline tanks.

This modification is indicated in Figure 5, where the lower portion below the nose 40, is threaded, as at 42.

Having thus described the invention, what is claimed as new is:

A closure for liquid receptacles comprising a body member arranged to fit tightly around the filling opening of a receptacle, a lid hinged to said body member, a lug on said lid, a yieldable latch member pivoted in said lug, means on said body member adapted to firmly engage said latch member, said latch member including a sleeve connected with said lug, a hook slidably engaged in said sleeve, a spindle on said hook, a spring coiled around said spindle, a nut threaded at the free end of the spindle and engaging one end of said spring, and abutments on said sleeve adapted to engage the other end of said spring.

In testimony whereof I affix my signature.

LILIUS B. RAINEY. [L. s.]