Nov. 29, 1932. E. C. BLANCHARD 1,889,056

CLOSURE CAP FOR GASOLINE TANKS

Filed Sept. 27, 1930

Fig. 1.

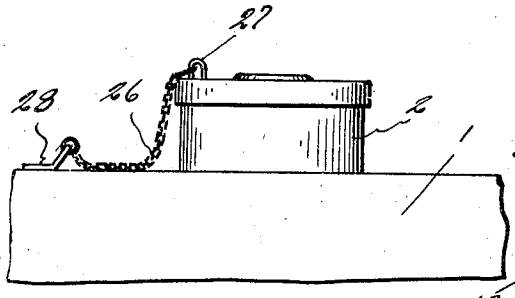


Fig. 3.

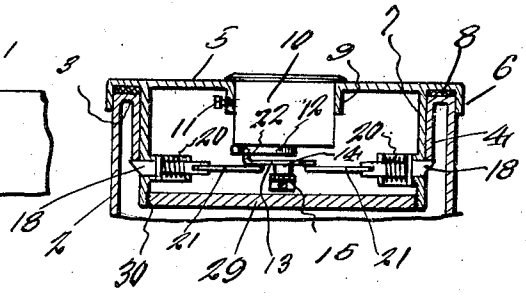


Fig. 2.

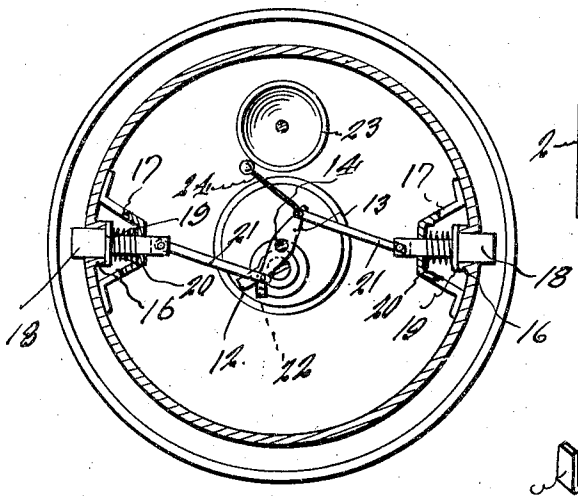


Fig. 4.

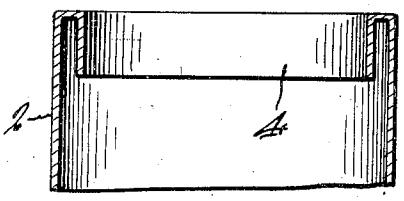


Fig. 5.

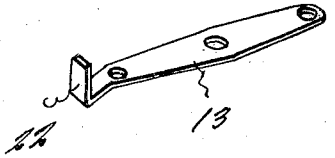
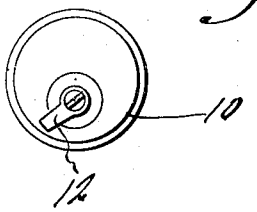


Fig. 6.



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UNITED STATES PATENT OFFICE

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CLOSURE CAP FOR GASOLINE TANKS

Application filed September 27, 1930. Serial No. 484,886.

This invention relates broadly to a gasoline tank having particular reference to that type of gasoline tank that is mounted on self propelled vehicles such as automobiles and the like.

A primary object of this invention is to provide an improved closure or cap for the gasoline tank, the invention comprehending the provision of a cap for the purpose above mentioned equipped with improved means for locking the cap in closed position and against casual and unauthorized removal.

A still further object of the invention is to provide a closure or cap of the above mentioned character equipped with means whereby the operator will be notified when the cap has been properly positioned in closing position and the locking mechanism so operated as to securely retain the closure cap in closing position.

Other objects and advantages of the invention will become apparent as the description proceeds taken in connection with the accompanying drawing wherein:

Figure 1 is a fragmentary elevational view of a gasoline tank equipped with my improved closure,

Figure 2 is a vertical transverse sectional view taken through the filling neck of the tank and having the closure in locked position thereon,

Figure 3 is a view partly in section and partly in elevation showing in plan the locking mechanism and interior of the closure cap,

Figure 4 is a fragmentary detail view of the filling neck the closure cap being removed,

Figure 5 is a perspective view of a rocker arm forming part of the invention,

Figure 6 is a bottom plan view of a lock barrel forming part of the invention.

With reference more in detail to the drawing, it will be seen that I have designated a portion of the gasoline tank, such as is used on automobiles and the like, by the reference character 1, the tank including the tubular filling neck 2.

According to the present invention, the neck 2 adjacent the upper end thereof is flanged as at 3. The flange 3 terminates inwardly in a depending extension providing an inner wall 4 arranged in spaced relation to the peripheral wall of the neck 2.

For closing the neck 2 there is provided a closure or cap 5, equipped with the peripheral flange 6, which is adapted to telescope over the end of the neck. The cap further includes an annulus depending skirt 7 that terminates below the free edge of flange 6, and is adapted to fit snugly within the wall or extension 4 as suggested in Figure 3.

Arranged within the space between flange 6 and skirt 7 is a suitable gasket 8 adapted to rest on the flange 3 when cap 5 is in a closing position. The crown of cap 5 is provided with a centrally located opening, and has a flange 9 extending downwardly therefrom about the opening. Fitting within said opening and within the confines of the flange 9 is a barrel 10 of any conventional type of key controlled lock. A suitable set screw 11 retains the barrel 10 in position against displacement.

The lock includes in addition to the barrel 10 and other conventional parts, the key controlled rotatably mounted dog or eccentric 12. A rocker arm 13 is pivotally supported intermediate its ends as at 14 on a bracket 15 suitably supported and arranged within skirt 7 below the inner end of barrel 10.

The skirt 7 has integral therewith diametrically opposite radial tubular guide sleeves 16. Adjacent each sleeve 16 inwardly of the skirt is a guide bracket 17.

Slidably arranged in each sleeve 16 is a latch bar 18 provided with a beveled end, and inwardly from said end with a stop collar 19. The free end of the latch 18 is slidable through an aperture in an adjacent bracket 17 (see Figure 2) and the latch bar 18 is normally urged radially outwardly of the skirt 7 through the medium of spring 20 convoluted about bar 18 between collar 19 and bracket 17.

Links 21 are pivotally connected to the inner end of the latch bars 18 and to rocker arm 13 adjacent the ends of the latter. Said arm 13 adjacent one end thereof is provided with an angular projection 22 adapted to be

engaged by the eccentric 12 when the latter is rotated for retracting latches 18. For audibly indicating when the latches 18 are in engagement with the lower edge of wall 4, there is provided a gong 23 suitably mounted within the confines of skirt 7 and a striker 24 is operatively connected with that end of the rocker arm 13 remote from projection 22 (see Figure 2).

Manifestly when latches 18 are moved outwardly under influence of springs 20, thus rocking arm 13, striker 24 will forcibly engage the gong 23 whereby the operator will know that the cap has been suitably positioned and latch bars 18 are engaged with the lower edge of wall 4.

In actual practice, the cap 5 is disposed over the open end of the filling neck 2 to attain the position shown in Figure 3, and as is apparent, during the positioning of the cap on the neck the beveled ends of the latch bars are moved inwardly, since they will contact the wall 4. When the guides 16 pass below the lower edge of wall 4, the latches 18 will be free to move radially outwardly under the influence of the spring 20 so that the outer ends of the latches will engage the wall 4, thus retaining the cap in position on the neck 2.

To remove the cap for the purpose of filling the tank 1 or for any other desired purpose, a suitable key (not shown) is inserted in the usual manner to rotate the eccentric 12. The dog or eccentric being thus rotated will move into contact with the extension 22 of arm 13 thus rocking the latter for retracting latches 18 whereupon the cap may be readily withdrawn from neck 2.

In order to prevent displacement of the cap 5 or loss of the cap there may be provided a suitable chain 26 that has one end secured to an eye 27 carried by cap 5 and its other end secured to the suitable anchoring bracket 28 secured to the top of tank 1.

From the foregoing it will be seen that I have devised a novel and efficient cap for the filling neck of a gasoline tank and that the same may be readily and easily positioned on the neck, thus preventing casual or unauthorized removal of the cap, with the result that gasoline from the tank 1 will not be liable to spill or be removed from the tank by an unauthorized person.

As is clearly suggested in Figure 3 the skirt 7 provides a suitable chamber for the movable parts of the cap, and this chamber at the inner end thereof is closed through the medium of a suitable disk 29 threadedly engaging the lower edge of the skirt 7 as at 30.

It is thought that from the foregoing description taken in connection with the accompanying drawing a clear understanding of the operation, construction, utility and advantages of an invention of this character will be had, and further that the invention is susceptible to changes in the modification and spirit of the appended claims.

Having thus described my invention, what I claim as new is:

1. In a device of the character described, a lock, an eccentric member actuated by said lock, a pair of latch members, a rotatably mounted member, links pivotally connecting the latch members to said rotatable member, and said rotatable member provided with an extension adapted to be engaged by said eccentric member whereby movement of the eccentric member is transmitted to the rotatable member.

2. A closure cap of the character described comprising in combination a cylindrical skirt, oppositely disposed guides mounted on the skirt, latch members slidably supported by said guides, and adapted to be projected radially through the skirt, a rotatably mounted member, links pivotally connecting said latch members with said rotatable member, yieldable means engaging the latch member for normally urging the same radially outwardly with respect to the skirt, a rotatable eccentric, said rotatable member having an extension engaged by the eccentric for transmitting movement of the eccentric to said rotatable member, and key controlled means for rotating the eccentric.

3. A closure cap of the character described adapted for insertion in the filling neck of a tank having an internal annular wall in spaced relation to the exterior wall thereof, comprising in combination oppositely disposed latch members carried by the cap for engaging the inner edge of said interior wall for locking the cap in operative position, a rotatably mounted member carried by the cap, links pivotally connecting the rotatable member with the latch members, and a key controlled means for rotating the rotatable member for moving said latch members out of engagement with said interior walls, whereby the said closure caps may be removed from the filling neck.

In testimony whereof I affix my signature.

EDWARD C. BLANCHARD.