July 31, 1934. F. E. SCHNEIDER 1,968,506

FUEL TANK LOCK

Filed April 9, 1931

Fig. 1.

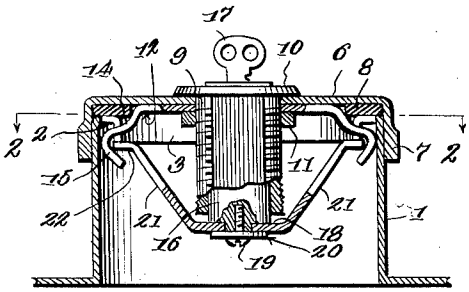


Fig. 2.

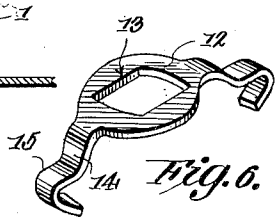
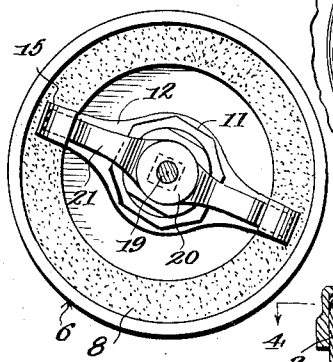
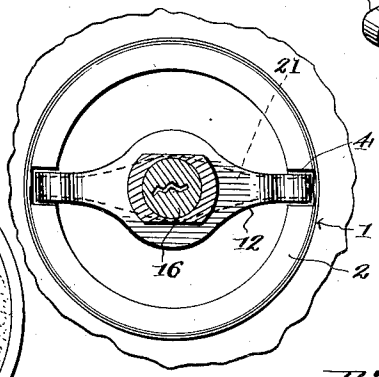


Fig. 6.

Fig. 5.





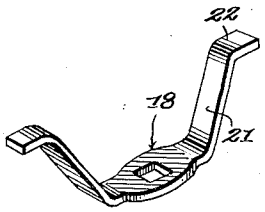


Fig. 7.

Fig. 3.

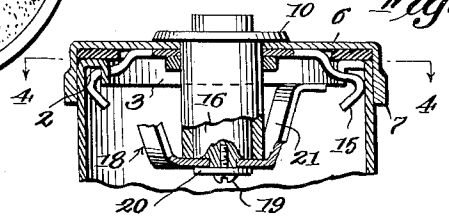
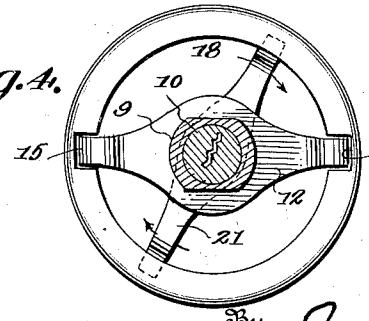


Fig. 4.



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UNITED STATES PATENT OFFICE

1,968,506

FUEL TANK LOCK

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Application April 9, 1931, Serial No. 528,883

4 Claims. (Cl. 70—90)

This invention relates to fuel tank locks, and has for its object the production of a simple and efficient lock for fuel tanks mounted upon automobiles and other vehicles, which lock is so constructed as to prevent the removal of the cap by unauthorized parties, and thereby effectively prevent the siphoning of gasoline from the tank and likewise preventing the likelihood of the vehicle being stolen in view of the impossibility of refilling the tank with gasoline by such unauthorized parties.

Another object of my invention is to provide a novel lock for gasoline tanks of the above character, which will be durable and efficient in use, one that will be very simple and easy to manufacture, and one which can be placed upon the market at a reasonable cost.

With these and other objects in view, the invention consists in the novel construction, arrangement and formation of parts, as will be hereinafter more specifically described, claimed, and illustrated in the accompanying drawing, in which drawing:—

Figure 1 is a vertical section through the neck of the tank showing the cap mounted thereon;

Figure 2 is a section taken on line 2—2 of Figure 1;

Figure 3 is a vertical sectional view through the cap showing the relative position of the primary and auxiliary yokes when the cap is in a locked position;

Figure 4 is a section taken on line 4—4 of Figure 3 showing the yokes in relative locked position;

Figure 5 is a bottom plan view showing the position of the yokes when in an unlocked position;

Figure 6 is a perspective view of the primary yokes, and

Figure 7 is a perspective view of the auxiliary yokes.

By referring to the drawing it will be seen that 1 designates the neck of the fuel tank, which may be of any suitable or desired construction, having a rolled-over inwardly extending flange 2, which is preferably turned downwardly to constitute a flange 3. This inwardly turned flange 2 is provided with a plurality of diametrically opposite slots or notches 4.

A cap 6, having an annular flange 7, is adapted to fit over the neck 1, as clearly shown in Figures 1 and 3 of the drawing, and a sealing washer, gasket or packing washer 8 is mounted upon the inner face of the cap 6 and is adapted to fit snugly upon the rolled-over flange 2 to constitute a seal around the upper edge of the neck 1. A suitable barrel-lock 9 is carried by the cap 6 and preferably sticks through an oval or elongated opening formed in the cap 6 as is usual with such type of lock, in order to prevent the rotation of the barrel-lock 9 independent of the cap 6. The lock 9 is provided with a suitable over-hanging flange 10, which flange 10 overhangs the top of the cap 6, as clearly shown in Figure 1. The barrel of the lock is preferably threaded and upon this threaded barrel is mounted a nut 11, which nut is adapted to firmly secure the primary yoke 12 against the inner face of the cap 6, as shown clearly in Figure 1.

In carrying out this invention, a plurality of yokes are employed as clearly shown in the drawing, one yoke being referred to as the primary yoke 12, which primary yoke 12 is mounted upon the barrel-lock 9 and fixedly secured thereto through the clamping action of the nut 11. This primary yoke 12 is provided with an elongated opening 13 for the purpose of fixing the primary yoke 12 upon the barrel-lock 9 and in this way prevent the independent movement of the primary yoke 12 with respect to the barrel-lock 9. This primary yoke 12 is provided with a pair of oppositely arranged laterally extending downwardly bent arms 14 which terminate in outwardly extending and inwardly bent hooks 15, which hooks 15 are adapted to pass into the notches 4 formed in the flange 2, so that the cap cannot be rotated upon the neck 1, but remains in a stationary position.

It should be understood that the conventional type of cylinder or barrel-lock 9 is employed and no attempt is made to illustrate the particular construction of this lock, the same being the usual type used upon doors and other articles of similar nature where a lock of such structure is desired. For instance the well-known type of pin tumbler lock or others may be used if desired. In this type of lock, a suitable cylinder 16 is employed which is released and locked with respect to the barrel 9 through the medium of an insertable key 17.

An auxiliary yoke 18 is secured to the lower end of the cylinder 16 and is secured thereto by means of a screw 19 and locking washer 20. This auxiliary yoke 18 is provided with a plurality of upwardly extending and outwardly diverged arms 21, having laterally extending tongues 22, which tongues 22 are adapted to fit in the hook portions 15 of the primary yoke 12, as clearly shown in the drawing. After the device has been placed in the position as illustrated in Figure 2, the key 17 is actuated so as to permit the cylinder 16 to rotate within the barrel 9, and the auxiliary yoke

18 may be moved in a clock-wise position as shown clearly in Figure 4. In this way and when the auxiliary yoke is in the position under the downwardly bent flange 3 of the inwardly extending flange 2, as shown in Figure 4, it will be impossible to withdraw the cap from the neck 1. The cap cannot be again removed from the neck 1 until the lock 9 has been actuated through the operation of the key 17 and the rotation of the cylinder 16 to bring the auxiliary yoke in alignment with the primary yoke and cause the projecting tongue 22 to fit in the hooks 15.

From the foregoing description, it will be seen that a very simple and efficient means has been produced for locking the cap of an automobile tank and the like in a firm position upon the neck of the tank in such a manner as to prevent the unauthorized removal of the cap from the tank.

It should be understood that certain detail changes and the mechanical construction may be employed without departing from the spirit of the invention so long as these changes fall within the scope of the appended claims.

What is claimed as new is:

1. In combination with a tank provided with a neck having an inwardly extending annular flange, said flange provided with notches formed therein, a cap adapted to fit over said neck, a yoke carried by said cap and provided with a pair of laterally extending fingers adapted to fit through said notches and engage the sides thereof for anchoring said cap against rotation, a lock carried by said cap, said lock provided with a rotating post adapted to be locked in and out of engagement with said cap, a swinging bolt carried by said post and adapted to be brought into and out of registration with said fingers, and said swinging bolt provided with means adapted to be brought out of registration with said fingers and adapted to extend under said flange for preventing the removal of said cap from said neck by unauthorized parties without the proper manipulation of said lock.

2. In a device as described, a cap for a filler opening for a tank, said cap having a disk-like section over the opening and a flange to engage the neck of the opening, a lock having a lock housing extending through the disk portion, said lock housing being threaded externally, a nut threaded thereon, a pair of fixed fingers secured on the lock housing by the nut, said lock having a rotatable barrel with a bolt actuated thereby.

3. In a device as described, having a tank with an upstanding neck and a filling opening therein, said neck provided with an inwardly extending annular flange having a pair of vertical notches diametrically opposite each other, a cap fitting over said neck and having a pair of depending and laterally extending fingers, said fingers being insertable through said notches and engaging the sides thereof for anchoring the cap against rotation, a locking mechanism extending through the center of said cap, said mechanism having a barrel with a rotatable post therein on which is mounted a swinging bolt, said bolt being adapted to be brought into alignment and registration with said fingers and insertable therewith through said notches in placing the cap on the neck, said bolt also being adapted to be rotated beneath the surface of said flange and to contact and engage the same, in which position the cap is firmly clamped to the neck and cannot be removed until said bolt is brought back into alignment with said fingers.

4. In a device of the class described, in combination with a tank having a filling opening and an upstanding neck provided with an inwardly extending rim formed in two cam-shaped parts separated by a pair of diametrically opposite notches therein, each part of the cam sloping from a high to a low end, a cap for said filling opening and neck, said cap having a mounted gasket to fit on the rim of the neck and a flange to engage the upper outside portion of said neck, a pair of laterally extending fingers carried by said cap, said fingers being insertable through said notches to engage the sides thereof for anchoring the cap against rotation on the neck, a locking mechanism extending through the center of said cap, said mechanism having a barrel with a rotatable post therein on which is mounted a swinging bolt, said bolt when in alignment and registration with said fingers being insertable therewith through said notches, from which position said bolt may be projected beneath the surface of the cams for contacting and engaging the same and preventing the removal of the cap from the neck until said bolt is retracted to align with said fingers.

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