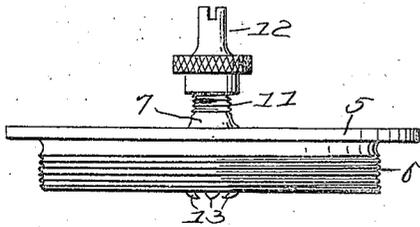


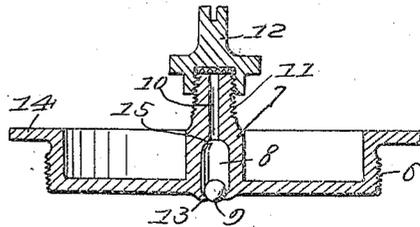
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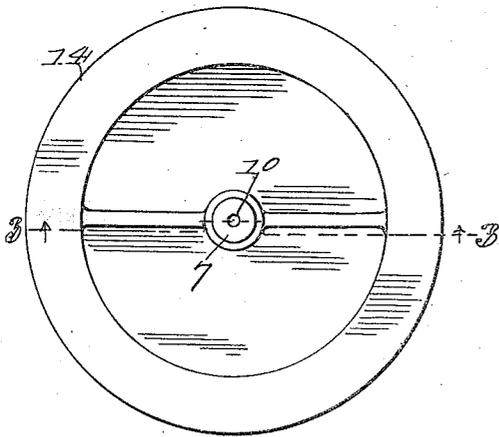
A. G. WICHNER,  
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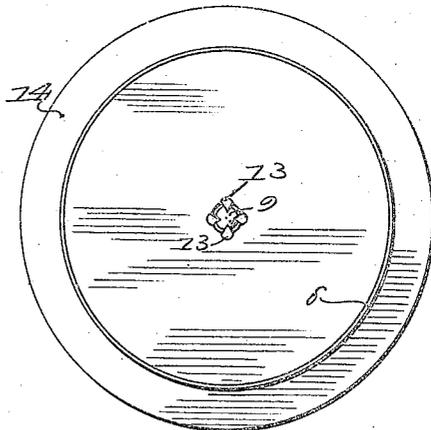
*Fig. 1.*



*Fig. 3.*



*Fig. 2.*



*Fig. 4.*

Inventor  
Alfred G. Wichner,  
By *Steinmann*  
Attorney

# UNITED STATES PATENT OFFICE.

ALFRED G. WICHNER, OF WINNER, OF SOUTH DAKOTA.

CAP FOR FUEL TANKS OF AUTOMOBILES.

Application filed July 19, 1921. Serial No. 485,921.

*To all whom it may concern:*

Be it known that I, ALFRED G. WICHNER, a citizen of the United States of America, and resident of Winner, in the county of Tripp and State of South Dakota, have invented certain new and useful Improvements in Caps for Fuel Tanks of Automobiles, of which the following is a specification.

This invention relates to caps for closures for tanks and particularly for tanks employed as containers for gasoline in automobiles, the said cap having novel means whereby a valve is held in coactive relation to a valve seat in an air nipple communicating with the interior of the tank and the air externally thereof.

An object of this invention is to produce a cap having an apertured nipple with a valve seat therein, the said nipple being externally threaded at its outer end to form a connection with an air pump, whereby air may be forced to the interior of the tank for exerting pressure on the contents of the tank in effecting a feeding action, the said nipple being also provided with a cover effective to guard the air passage to prevent the entrance of foreign substances and integral lugs forming a valve cage to prevent the valve from becoming disassociated from the seat with which it is to coact.

It is a further object of this invention to produce a cap or cover of the character indicated which can be produced inexpensively since the material is struck up or distorted to form the retaining elements by which the valve is confined.

It is well known that in certain types of automobiles depending upon gravity feed, the feeding action is retarded or wholly interrupted if the automobile is ascending a steep grade, and in such instances, it is desirable to force the fuel to a carbureter. By the use of a device embodying the invention an air pump may be connected to the nipple and air can be forced into the tank to such an extent as to develop pressure to accomplish the result and upon the removal of the pipe connection, the air within the tank will serve to force the valve to its seat and retain the pressure within the tank.

With the foregoing and other objects in view, the invention consists in the details of construction, and in the arrangement and

combination of parts to be hereinafter more fully set forth and claimed.

In describing the invention in detail, reference will be had to the accompanying drawings forming part of this specification, wherein like characters denote corresponding parts in the several views, and in which—

Figure 1 illustrates a view in elevation of a threaded cap embodying the invention;

Figure 2 illustrates a top plan view;

Figure 3 illustrates a sectional view; and

Figure 4 illustrates an underneath plan view.

In these drawings 5 denotes a cap which is externally threaded as shown at 6 to fit a threaded aperture of a tank.

A nipple 7 formed integral with or attached to the cap has a hollow portion 8 forming a valve cage in which a valve 9 operates. The nipple has a passage 10 leading to its outer end, and the said nipple is externally threaded as shown at 11 to form a connection for a coupling of an air pump, in order that the hose or connection may be attached to the nipple when air is to be delivered to a tank. A cover 12 is threaded on the outer end of the nipple when the pump connection is removed and this serves to prevent the entrance of foreign substances.

In the construction of the cap or cover, the valve 9 is placed in the cage and thereafter the under surface of the cap or the inner end of the nipple is distorted to form the lugs 13 which are caused to project under the valve and so restrict the opening as to prevent the dislodgment of the valve from the cage.

In the construction of the lugs, I have found that the lugs or retaining points for the valve may be formed with a four cornered tool driven against the outer surface of the cap or nipple near the wall of the valve cage, an action which results in distorting the metal to a degree which will result in the production of the valve securing means.

The body may be provided with a flange 14, although the construction of this part of the cap is an immaterial detail.

The valve 9 coacts with a valve seat 15 formed in the said nipple.

## I claim:

In a cap for fuel tanks of automobiles, a body having a threaded external surface adapted to be threaded within an opening of a tank, a nipple extending outwardly 5 from the body, said nipple having an aperture therethrough, and a valve cage at the inner end, a valve in said valve cage, a valve seat at the junction of the cage and the opening through the nipple, and dis- 10 torted integral elements extending into the area of the valve cage and operative to retain the valve therein.

ALFRED G. WICHNER.