May 19, 1925. 1,538,295

J. C. LYMAN ET AL

SELF OPENING CAP

Filed Dec. 11, 1922

FIG. 1

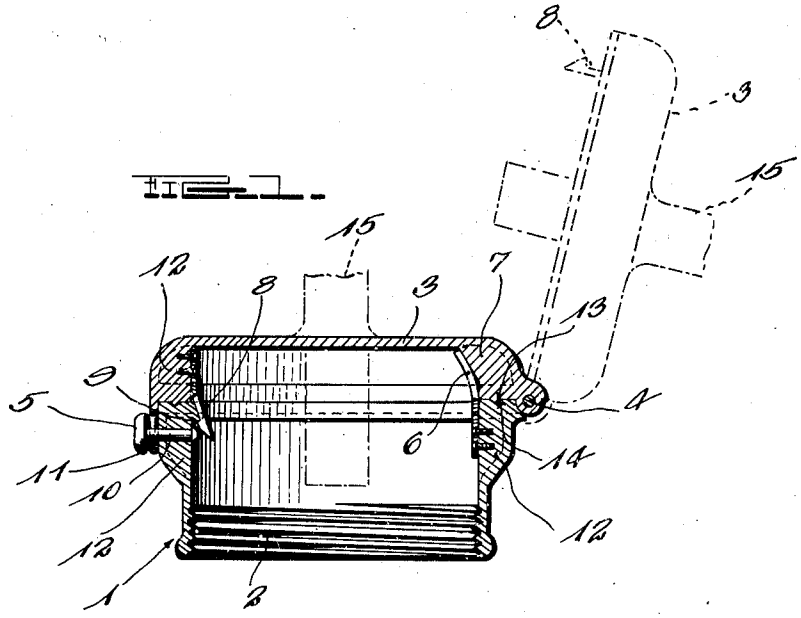
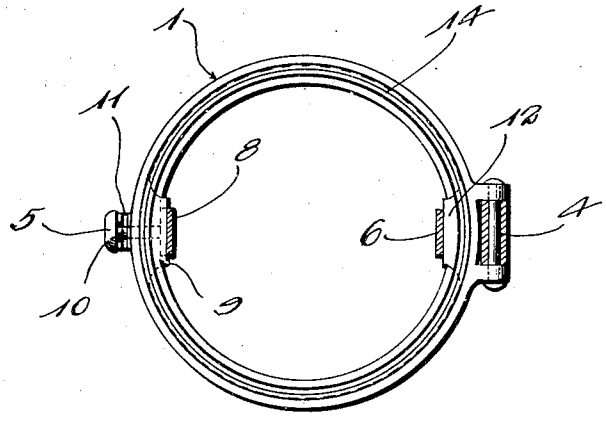


FIG. 2



Witness

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UNITED STATES PATENT OFFICE.

JOHN C. LYMAN AND JOHN W. JONES, OF SALT LAKE CITY, UTAH.

SELF-OPENING CAP.

Application filed December 11, 1922. Serial No. 606,211.

To all whom it may concern:

Be it known that we, JOHN C. LYMAN and JOHN W. JONES, citizens of the United States, residing at Salt Lake City, in the county of Salt Lake and State of Utah, have invented certain new and useful Improvements in Self-Opening Caps; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention has for its object to provide a simple and inexpensive self-opening cap controlled by a push button, the cap being intended for use upon automobile radiators, gasoline tanks, and the like, so that a great saving in time and inconvenience may be effected when filling.

With the foregoing in view, the invention resides in the novel subject matter hereinafter described and claimed, the description being supplemented by the accompanying drawing.

Figure 1 is a vertical sectional view of a cap constructed in accordance with our invention.

Figure 2 is a horizontal sectional view showing the lower section in elevation.

In carrying out our invention, we employ an open-ended body member 1 provided with means for attachment to the filling neck of an automobile radiator or gasoline tank, or the like. This means is illustrated in the drawing as consisting of interior screw threads 2, located upon the lower end portion of the member. A lid member 3 is pivoted at 4 to the body member 1 and we provide means controlled by a push button 5, for opening the lid member 3 when said push button is operated. While this means may assume different forms, we have given but one illustration, which is described below.

A spring arm 6 is secured to the inner side of the body member 1 and bears at its upper end against the inclined inner side of a lug 7 which is formed in the lid member 3, said spring arm normally pressing outwardly upon said lug to exert an opening tendency upon the lid member 3. At a point opposite the spring arm 6, we have shown a resilient latch arm 8 secured to the lid member 3 and engaging a shoulder 9 on the body member 1, the lower end of this latch arm 8 being in the inward path of a pin 10 which extends inwardly from the push button 5, a suitable spring 11 being employed for normally moving said pin and push button outwardly to the position shown in Fig. 1. It will be seen that pushing the button 5 inwardly will release the latch 8 from the nose 9 thus permitting the spring 6 to come into play for opening the lid member 3, permitting filling of the radiator or gasoline tank without the necessity of unthreading any part of the cap from the filling neck.

In the construction shown, the portions of the member 1 to which the spring arm 6 is secured and the portion of said member through which the pin 10 slides, as well as the part of the lid member 3 to which the latch arm 8 is secured, are all provided with internal bosses 12 increasing their thickness.

By employing the construction shown or a substantial equivalent thereof, a device is provided which will be highly advantageous, both to the automobile owner and to the attendants of service stations and garages, as a great deal of trouble and time will be saved.

It is of course to be understood that any desired provision may be made to prevent leakage between the two members of the cap. In the present showing, we have illustrated a rib 13 on one member fitting snugly within a groove 14 on the other member. It is to be understood however that a suitable gasket could be employed if desired. Also, it will be clear that a radiator thermometer or an ornament could be mounted on the device when it is to be used upon an automobile radiator, as indicated by the dot and dash lines 15.

We claim:

A device of the class described comprising an open ended body member, the lower end of which is internally threaded, a lid member hinged at one edge to the upper end of said body member, a spring secured at one end to the inside of the upper end portion of said body member and having its other end bearing against the inside of said lid member to urge said lid member to open position, a spring latch secured at its upper end to the inside of said lid member at a point diametrically opposite from said spring and having its lower end projecting below the lower side of said lid member, a lug formed upon the inside of the upper

end portion of said body member and positioned for engagement by the lower end of said latch to hold said lid member closed, a push button slidably mounted transversely through the wall of said lid member and having its inner end positioned to engage and move the lower end of said latch out of engagement with said lug, a head upon the outer end of said push button, said head being disposed upon the outside of said body member so as to be readily depressed, and a spring confined between said head and the outside of said body member.

In testimony whereof we have hereunto affixed our signatures.

JOHN C. LYMAN.
JOHN W. JONES.