May 25, 1926. 1,586,273

J. H. WALL

GAS TANK AND RADIATOR CAP

Filed May 7, 1924

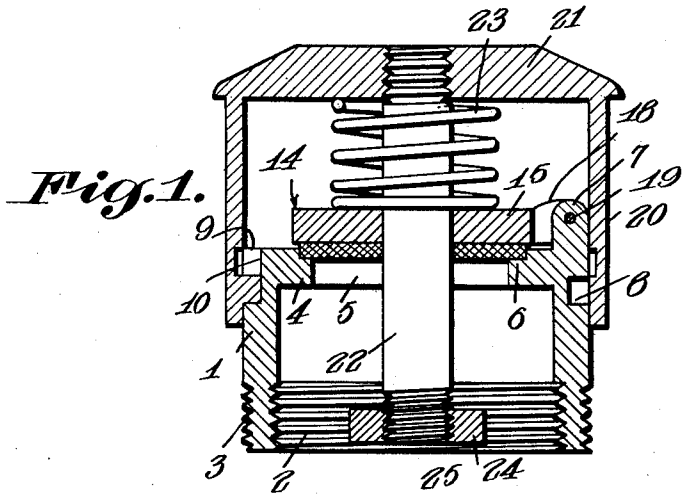


Fig. 1.

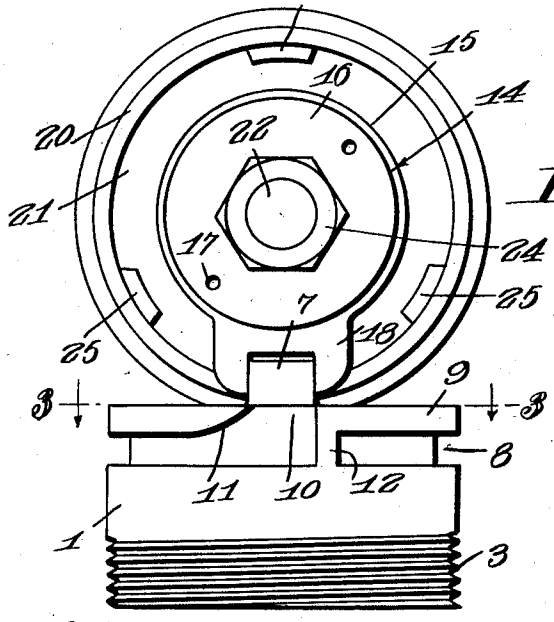


Fig. 2.

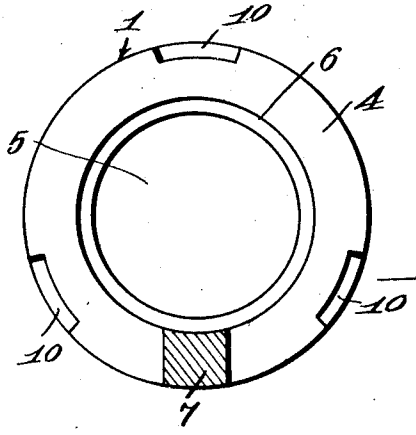


Fig. 3.

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Patented May 25, 1926. 1,586,273

UNITED STATES PATENT OFFICE.

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GAS TANK AND RADIATOR CAP.

Application filed May 7, 1924. Serial No. 711,681.

This invention aims to provide a novel means whereby a cap may be held on the radiator of an automobile, upon the fuel tank of an automobile, or upon any other object which requires a cap.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the invention appertains.

With the above and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that, within the scope of what is claimed, changes in the precise embodiment of the invention shown, can be made, without departing from the spirit of the invention.

In the accompanying drawings:—

Figure 1 shows in longitudinal section, a device constructed in accordance with the invention, parts being in elevation; Figure 2 is a front elevation wherein the lid is opened; Figure 3 is a cross section on the line 3—3 of Figure 2.

The device forming the subject matter of this application comprises a cylindrical base 1 which may be threaded internally as at 2 or externally as at 3 to enable the base to be connected to a tank or the like, although the base may be mounted in any desired way upon the article wherewith it is assembled. The base 1 comprises a top 4 having an opening 5, there being an annular seat 6 in the top 4, about the opening 5. The base 1 is provided at its upper end with an upstanding lug 7. The base 1 has an external circumferential groove 8, forming a flange 9, there being openings 10 in the flange, the openings communicating with the groove 8, as clearly shown in Figure 2. Adjacent to each opening 10, the flange 9 is beveled at its end, as shown at 11. An integral stop rib 12 connects one portion of the flange 9 with the body portion of the base 1 and is located at one end of one of the openings 10, as disclosed in Figure 2.

The numeral 14 denotes a valve comprising a metal body 15 and a gasket 16 secured at 17 to the body, the body 15 being provided with ears 18 straddling the lug 7 on the base 1 and connected to the lug by a pivot element 19. The valve 14, thus, is hinged to the base 1.

The numeral 20 designates a cylindrical cap including a top 21 carrying a depending stem 22 which is slidable in the valve 14. A compression spring 23 surrounds the upper portion of the stem 22, one end of the spring abutting against the top 21 of the cap 20, and the other end of the spring abutting against the body 15 of the valve 14. A stop 24, such as a nut, is mounted on the inner end of the stem 22, below the valve 14. The cap 20 is provided with internal lugs 25.

In practical operation, the cap 20 is moved into alinement with the base 1, the valve 14, swinging on the pivot element 19, and the gasket 16 cooperating with the seat 6 in the top 4 of the base 1. The cap 20 then is pushed downwardly, the stem 22 sliding through the valve 14, and the spring 23 being compressed. The lugs 25 on the cap 20 enter the openings 10, and when the cap 20 is rotated, the lugs will engage beneath the flange 9. If the cap is rotated far enough, one of the lugs 25 on the cap will engage the stop rib 12, and, thus, the lugs will be prevented from being brought again into alinement with the openings 10 of the base 1.

In order to open the device, the operation above described is reversed, and when the lugs 25 on the cap 20 arrive at the openings 10 in the base 1, the cap will move upwardly, responsive to the spring 23, until the stop 24 at the lower end of the stem 22 engages the valve 14.

Having thus described the invention, what is claimed is:

In a device of the class described, a base having an opening, a cap covering the base; a combined means for closing the opening and for connecting the cap movably but securely to the base, said means comprising a stem mounted at one end on the cap and provided with a stop, a valve located between the stop and said end of the stem, the stem being slidable in the valve, and means between the base and the valve which acts at all times to hold the cap, the valve, and the base, in permanently connected and hingedly united relation; a compression spring about the stem and engaging the cap and the valve to hold the valve closed, and means for retaining the cap detachably on the base, against the action of the spring.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature.

JAMES HIRAM WALL.