Sept. 23, 1924. 1,509,465

J. L. BAYA

CAP FOR RADIATORS AND THE LIKE

Filed May 13, 1924

Fig. 1.

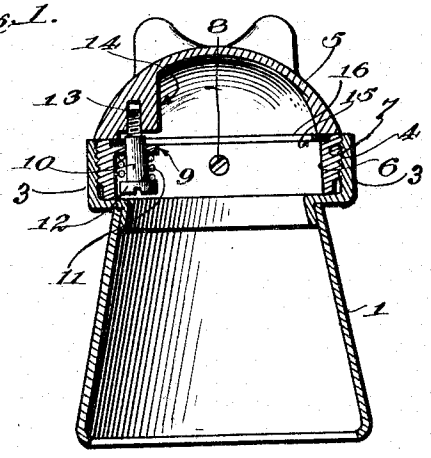


Fig. 2.

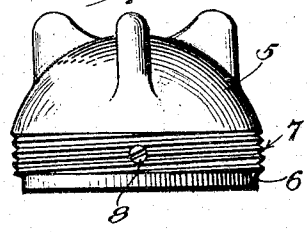


Fig. 3.

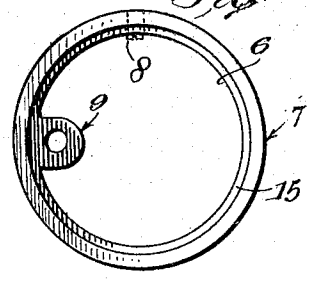


Fig. 4.

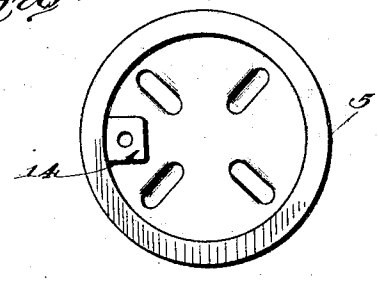


Fig. 5.

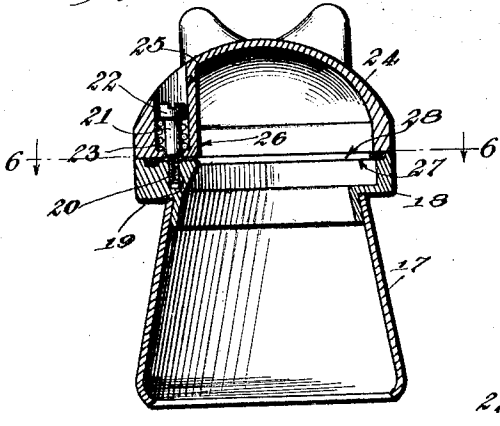
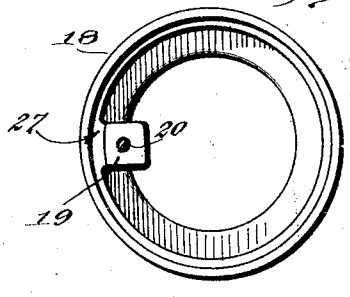


Fig. 6.



WITNESSES

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UNITED STATES PATENT OFFICE.

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CAP FOR RADIATORS AND THE LIKE.

Application filed May 13, 1924. Serial No. 713,011.

To all whom it may concern:

Be it known that I, JOSEPH L. BAYA, a citizen of the United States, and resident of Atlanta, in the county of Fulton and State of Georgia, have invented certain new and useful Improvements in Caps for Radiators and the like, of which the following is a specification.

My invention relates to improvements in radiator caps and consists of the constructions, combinations and arrangements herein described and claimed.

An object of the invention is to provide an improved cap or closure adapted primarily for use in connection with the filling necks of automobile radiators, but also adaptable for use in connection with a wide variety of styles of containers having filling openings.

Another object of the invention is to provide a cap for the filling opening of a container which is operated by being slid to open and closed position, there being means for so mounting the cap for sliding movement that the cap may be particularly used either in connection with an automobile radiator or in connection with containers of different types.

Another object of the invention is to provide an improved sliding cap which is mounted for sliding movement by a very simple arrangement which is capable of inversion to adapt the cap either for use in connection with automobile radiators or with containers of different types.

Other objects and advantages appear in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 is a central longitudinal section of a sliding top cap adapted for use in connection with automobile radiators or a wide variety of other containers having a filling opening.

Figure 2 is a side elevation of the cap alone.

Figure 3 is a plan view of the threaded ring.

Figure 4 is an inverted plan view of the sliding top.

Figure 5 is a longitudinal section illustrating the application of the principles of the invention in combining the slidable cap with a radiator neck.

Figure 6 is a section taken substantially on the line 6—6 of Figure 5.

Attention is first directed to Figure 1 which illustrates the application of the invention to the filling neck 1 of an automobile radiator. In the case of the filling neck 1 there is an upstanding flange 3 which is threaded at 4. In the event that the invention is used in connection with a type of container other than a radiator, the principle of mounting would be the same as in Figure 1. The flange 3 would then be the equivalent of the filling opening of the container.

In order that the slidable top 5 may be applied in either of the foregoing instances, use is made of a ring 6 which is threaded at 7 so that the ring may be screwed upon the threads 4 of the flange 3. Having thus screwed the ring 6 into place so that the upper surface or edge comes flush with the upper edge of the flange 3 use is made of a set screw 8 to fix the ring in position. This set screw is turned from the inside, and is screwed outward until it binds against the flange 3. This arrangement makes it quite impossible for the ring to move in ordinary practice.

Formed inside of the threaded ring 6 adjacent to the upper edge is a lip 9 which provides a bearing for the stud 10 by which the top 5 is pivotally mounted upon the ring. The lip also provides a base against which one end of the spring 11 presses. The other end of the spring presses against the enlarged head 12 of the stud. The opposite end of the stud is threaded at 13, and screws into a lug 14 formed inside of the slidable top 5.

The arrangement is obvious enough. The stud 10 is screwed into the lug 14 from beneath, the spring 11 being interposed between the head 12 and the lip 9. The top and ring are thus pivotally fastened together, care being taken to put the spring under sufficient tension to keep the top in complete but slidable contact with the edge of the ring. A circular groove 15 around the ring 6 receives a gasket 16 so that the joint may be tight.

It is quite obvious from what has been said that the slidable top cap of the foregoing description is applicable not only to radiator filling necks but also to any type of container having a filling opening. Such filling openings usually have threaded portions upon which a closure cap may be screwed. It is the purpose of the invention that the threaded ring 6 shall, in such cases,

take the place of the closure cap, the threads 7 being screwed in place where the cap formerly was, and the top 5 taking the place of the closure cap itself.

In Figures 5 and 6 the arrangement is somewhat different. Figure 5 shows how the slidable top may be combined with a radiator filling neck, to make a more unitary object. The filling neck 17 includes a flange-like structure 18 as before, one side of the flange being provided with a lug 19 into which the threaded end 20 of the stud 21 is screwed. The head 22 of this stud bears upon a spring 23 which keeps the top 24 seated upon the flange 18. The stud 21, head 22 and spring 23 occupy the bore 25 in a lug 26 inside of the top. The flange 18 has a groove 27 in which a gasket 28 is fitted to provide a tight joint.

It is to be observed that the arrangement in Figure 5 is largely a mere inversion of the arrangement illustrated in Figure 1. The mounting for the pivot stud 21 is in the shape of a lug 26 carried by the top 24 in Figure 5 whereas in Figure 1 it is the lip 9 carried by the ring 6 that provides the mounting for the stud 10. Instead of the stud screwing into the slidable top as in Figure 1 it screws into a fixed part of the radiator neck in Figure 5. The mode of operation is the same in both instances, but as has already been pointed out the manner of application or use is different. The arrangement in Figure 5 is adapted particularly for the radiator filling neck of the Ford automobile. The arrangement in Figure 1 can be used with almost any type of container.

With a little modification the type of the invention shown in Fig. 1 can be adapted to radiator filling necks of automobiles other than the Ford. Such modifications would consist of making the parts larger and perhaps placing the threads 7 on the inside of the ring instead of the outside. This particular sliding top cap may be used on oil crank cases of automobiles, trucks, etc.

In operation, it is merely necessary to push either the top 5 or 24 to one side upon its pivot in order to gain access to the filling opening. It is a matter of quite common experience for those driving automobiles to spend no little time in both unscrewing and rescrewing the cap of the radiator when filling the radiator with water. It sometimes happens that the threads will not start right and it invariably happens that the cap is not properly centered upon the filling neck thus presenting an unsightly appearance. By the use of the style of sliding cap herein disclosed these objections are eliminated and in the event that the slidable top is supplemented with an ornamental figure, as is often the custom, there will never be any likelihood of such figure being placed one sided upon the radiator.

While the construction and arrangement of the improved radiator cap as herein described and claimed is that of a generally preferred form, obviously modifications and changes may be made without departing from the spirit of the invention or the scope of the claims.

I claim:—

1. A device of the character described comprising a top having a lug with a threaded opening, a threaded ring arranged to be screwed upon the threaded portion of a radiator filling neck, means including a set screw carried by the ring for fixing the ring in position, a lip carried by the ring, a stud providing the pivotal connection for the top upon the ring so that the top may be swung across the filling neck at right angles to the axis of the opening, said stud having a threaded end to enter said threaded opening and having a head, and means including a spring situated on the stud between the head and said lip to seat the top under tension.

2. A device of the character described comprising a top, a separable ring having an internal lip, a pendant stud immovably fixed upon the top and passing through the lip, and a spring mounted on the stud to exert pressure between the stud and loop to keep the top seated upon the ring.

3. A device of the character described comprising a top having a lug formed thereon, a separable ring insertable in the filling opening of a container, said ring having a circular groove and a lip, a gasket in the groove, a stud fixed in the lug and extending through the lip, and a spring mounted on the stud pressing against the lip to seat the top upon the gasket.

JOSEPH LIVINGSTON BAYA.