

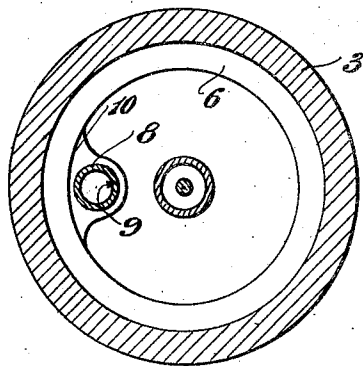
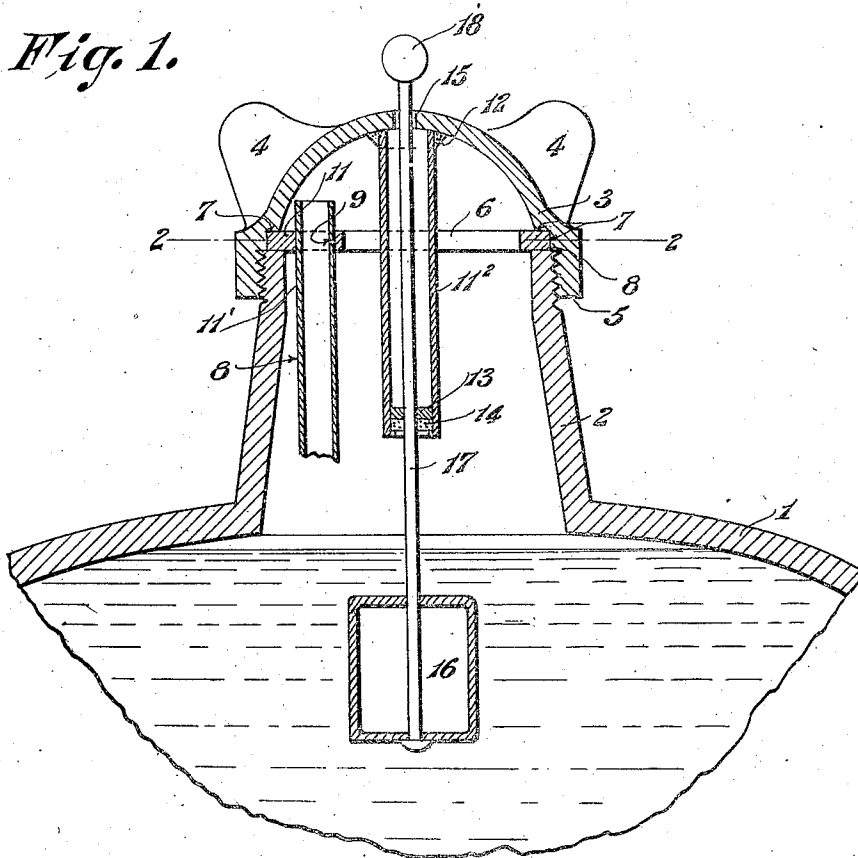
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C. JOHNSON

RADIATOR CAP AND OVERFLOW PIPE

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# UNITED STATES PATENT OFFICE.

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## RADIATOR CAP AND OVERFLOW PIPE.

Application filed August 2, 1924. Serial No. 729,819.

*To all whom it may concern:*

Be it known that I, CLAES JOHNSON, a subject of the King of Sweden, residing at Springfield, in the county of Hampden and Commonwealth of Massachusetts, have invented new and useful Improvements in Radiator Caps and Overflow Pipes, of which the following is the specification.

This invention relates to improvements in radiator caps and overflow pipes for motor vehicles.

An object of the present invention is to so combine a closure cap and overflow pipe in order that this pipe will not work loose or become detached when in use. At the present time difficulties have often been experienced by having the overflow in some types of motor vehicles working loose or becoming completely detached from the radiator.

Broadly considered, my improvement consists in securing a metallic ring between the inner surface of the cap and the radiator filling tube, which ring serves as a packing ring, and, to this ring is permanently secured the overflow pipe which consists of a piece of tubing of suitable size, as generally employed for this purpose.

Referring to the drawings:

Fig. 1 is a view showing my improvement in place on the upper end of the filling tube of the radiator, also illustrating the float construction;

Fig. 2 is a detail horizontal sectional view on the line 2—2 of Fig. 1.

Referring to the drawings in detail: 1 designates the upper portion of the radiator, 2 the filling tube for introducing the cooling water into the radiator, 3 the closure cap for the tube having the usual integral wing portions 4 for threading the cap onto the tube. Formed on the lower inner surface of the cap are the internal threads 5 which mesh with the external threads on the upper end of the filling tube. 6 is a metallic ring which is loosely placed in the annular groove 7. It serves as a packing ring between the upper end of the filling pipe 2 and the cap. 8 designates the upper

portion of the overflow pipe. This pipe is secured to the ring 6 by inserting the same through an opening 9 which is formed in the enlarged or extension portion 11 of the metallic ring 6. The overflow tube 8 is permanently secured in this opening by soldering as indicated at 11', or otherwise so that when the cap 3 is threaded onto or away from the filling tube 2 it will serve to firmly clamp the ring in place, and at the same time retain the pipe 8 against displacement.

The device is used as follows: When the cap 3 is removed for filling the ring 6 is slipped over the pipe 8 and soldered there-to, then when the cap is threaded onto the tube 2 the ring 6 and overflow pipe 8 will be firmly secured in place.

Attached to the inner upper surface of the cap 3 is a depending tubular member 11<sup>2</sup> which is secured by means of solder, indicated at 12. The lower end of this member is closed with the washer 13 and packing 14. The upper end of the cap is formed with an opening 15. 16 designates a metallic float to which is attached the rod 17. The upper end of the rod is provided with an indicating ball 18, whereby the level of the water in the radiator may be readily determined as the float 16 rises and falls, as readily understood.

What I claim is:

A device for the purpose described comprising in combination, a metallic ring member which is formed with substantially all of its center portion removed and an inwardly extending part which projects into the open center portion and having an opening through the said inwardly extending part, the opening in the metallic ring being designed to receive the upper end of the overflow pipe of an automobile radiator and the ring serving as a gasket or packing between the closure cap and the upper end of the radiator filling tube, said overflow pipe being permanently secured in the opening of the inwardly extending part of the ring.

CLAES JOHNSON.