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W. B. JARVIS

RADIATOR CAP

Filed July 12, 1923

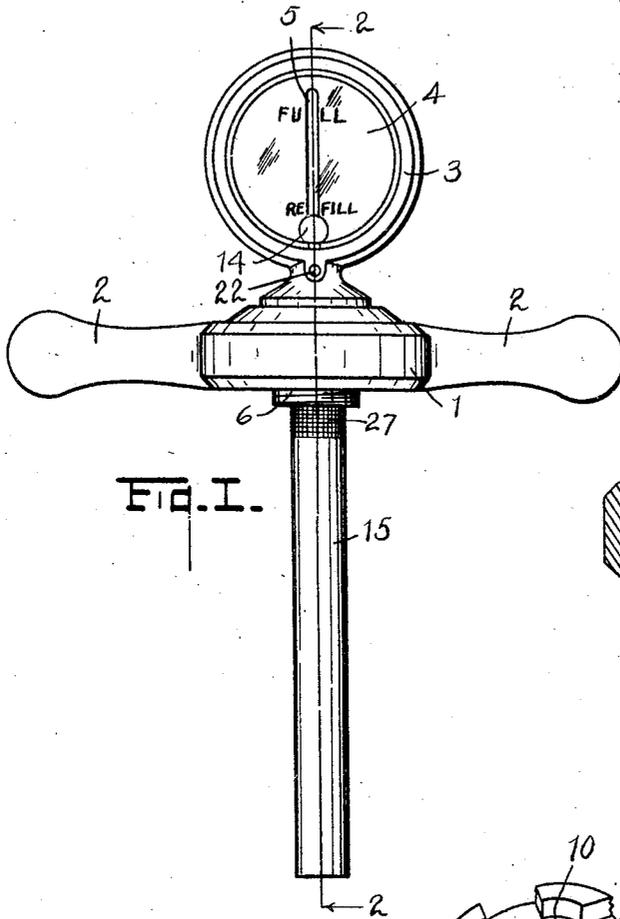


FIG. I.

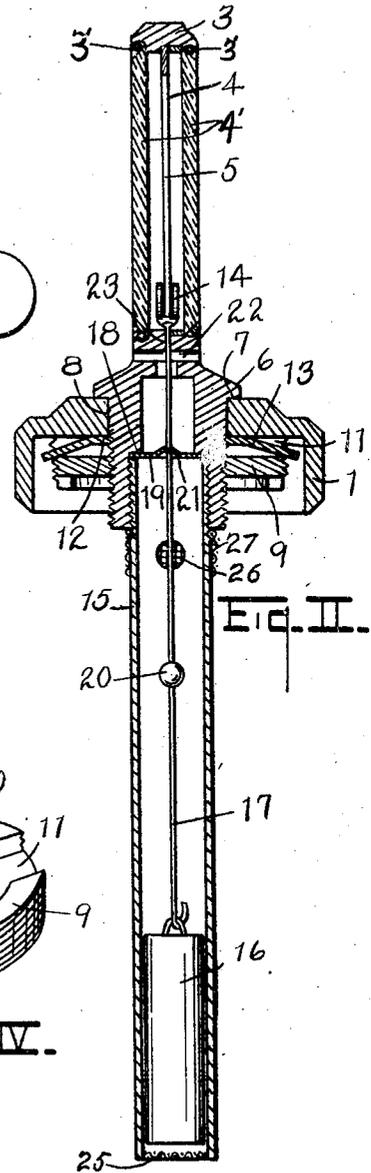


FIG. II.

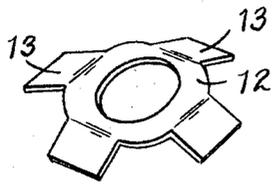


FIG. III.

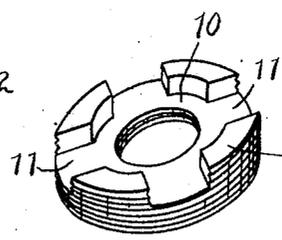


FIG. IV.

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# UNITED STATES PATENT OFFICE.

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## RADIATOR CAP.

Application filed July 12, 1923. Serial No. 651,123.

The main object of this invention is to provide an improved cap for automobile radiators and the like having means permitting its being adjusted to fix or position projecting parts carried by the cap in the proper or desired relation or angle.

Objects relating to structural details will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specifications. The invention is clearly defined and pointed out in the claims.

A structure which is a preferred embodiment of my invention is clearly illustrated in the accompanying drawing, forming a part of this application, in which:

Fig. I is a side elevation of a gauge embodying the features of my invention.

Fig. II is a vertical section on a line corresponding to line 2—2 of Fig. I looking in the direction of the arrows.

Fig. III is a perspective view of the friction holding member.

Fig. IV is a top perspective view of the radiator neck engaging nut or member.

In the drawing similar reference characters refer to similar parts in all of the views.

Referring to the drawing, 1 represents the radiator cap provided with arms 2. It will be understood, however, that these arms are an optional feature and may be shaped as desired, or omitted.

The dial case 3 is, in the structure illustrated, provided with front and rear windows 4', the dial case comprising a frame into which the windows are set as by the split rings 3'. Within the case is a dial plate 4 having a vertical slot 5 therein.

The dial case has an integral shank 6 shouldered at 7 to rest on the top of the cap and the cap is arranged through the hole 8 in the shank. The shank is internally shouldered at 18 to receive the valve disk or plate 19 which is clamped against the shoulder by the tubular float housing 15 threaded into the shank.

The shank 6 is externally threaded to receive the nut 9 so that the cap is clamped between the shoulder 7 and the nut 9. The nut has a recess 10 in its upper side provided with radial slots 11 adapted to provide a seat for the spring washer 12 which has arms 13 disposed in the slots 11 of the recess. The arms 13 extend outwardly and downwardly projecting beyond the periphery of the nut to

engage the top or edge of the neck of a radiator when the cap is threaded thereon, thus frictionally holding the cap in its adjusted positions and permitting it to be adjusted so that the dial case faces properly on the radiator.

The indicator 14 is guided in the slot 5 in the dial plate and is carried by the rod 17 arranged through the valve plate 19. The ball valve 20 on the rod coacts with this plate, which has a curved seat 21, when the float 16 is in its elevated position. The shank 6 has transverse ventilating ports 22 opening into the longitudinal bore 23 which communicates with the dial case and through which the rod 17 is arranged. This prevents the passage of liquid to the dial and also the escape of steam or water when the radiator is in such condition as to be likely to eject steam or water or permit its escape. The float housing 15 is open at its lower end and is provided with a screen 25. It also has openings 26 at its upper end, in the structure illustrated, provided with a screen 27, the screen being for convenience wrapped around the housing.

I have illustrated and described my improvements in an embodiment which I have found very desirable. I have not attempted to illustrate or describe certain embodiments or adaptations which I contemplate as I believe the disclosure made will enable those skilled in the art to embody or adapt the same as may be desired.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. The combination with a radiator cap having an opening therein, of a head member provided with a shouldered shank disposed through said opening in said cap and externally threaded, a nut threaded upon said shank, said nut being also externally threaded to engage the threads in the neck of a radiator and having a central recess with radial slots in its upper side, and a spring washer with outwardly and downwardly projecting arms disposed in said recess and slots and adapted to be clamped between said nut and cap with the arms projecting beyond the periphery of the nut to engage the top of a radiator neck.

2. The combination of a radiator cap, having an opening therein, a head member provided with a shank disposed through said opening in the top of said cap, a nut threaded upon said shank to clamp the same to said

- cap, said nut having a seat in its upper face, and a spring washer disposed in said seat and provided with outwardly and downwardly projecting arms projecting beyond the periphery of the nut to engage the top of a radiator neck upon which the cap is threaded.
- 5 3. The combination with a radiator cap having an opening therein, of a head member provided with a shank disposed through said opening in said cap, a nut on said shank within said cap securing the shank and cap together, said nut being externally threaded to engage internal threads in the neck of a radiator, and a spring member disposed within the cap above the nut to project beyond the periphery of the nut to engage the top of a radiator neck upon which the nut is threaded.
- 10 4. The combination with a head member, of a cap constituting a supporting base for said head member and adapted for rotative engagement with the neck of a radiator, and a spring member secured within said cap to frictionally engage the neck of a radiator for holding the cap in its adjusted positions thereon to properly present the head.
- 15 5. The combination with a radiator cap having an opening therein, a head member provided with a shank disposed through said opening in said cap, a member disposed on said shank within said cap to adjustably engage the neck of a radiator, and a spring member mounted within said cap to frictionally engage a radiator neck for holding the cap in adjusted positions thereon.
- 20 6. The combination of a radiator cap provided with projecting parts and adapted for rotative engagement with the neck of a radiator, and a spring member secured within said cap to frictionally engage the neck of a radiator for holding the cap in its adjusted position thereon to properly present the projecting parts of the cap.
- 25 In witness whereof, I have hereunto set my hand.
- 30 35 40 45

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