E. J. FARKAS.

RADIATOR FILLER CAP.

APPLICATION FILED DEC. 4, 1920.

1,393,992.

Patented Oct. 18, 1921.

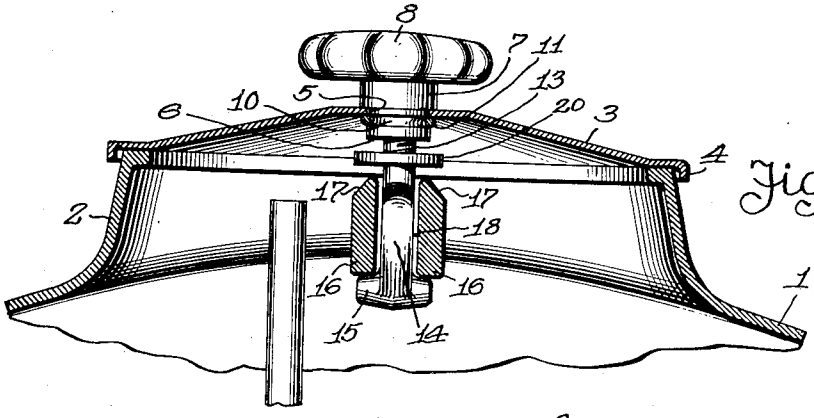



Fig. 1.

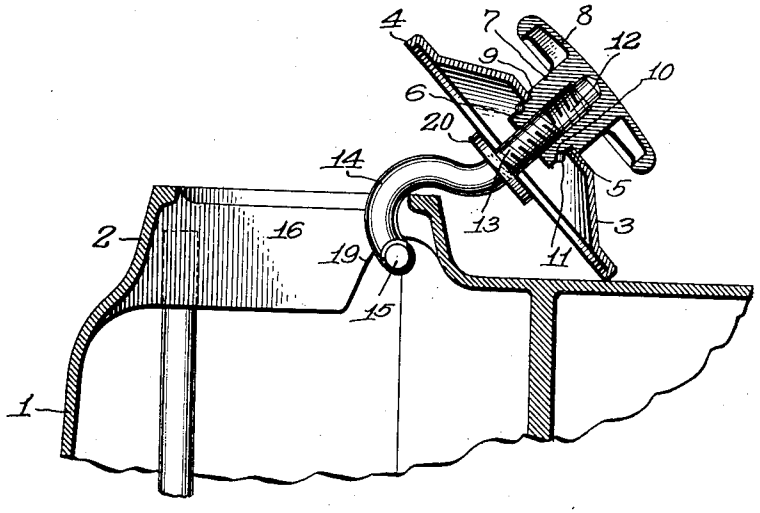



Fig. 2.

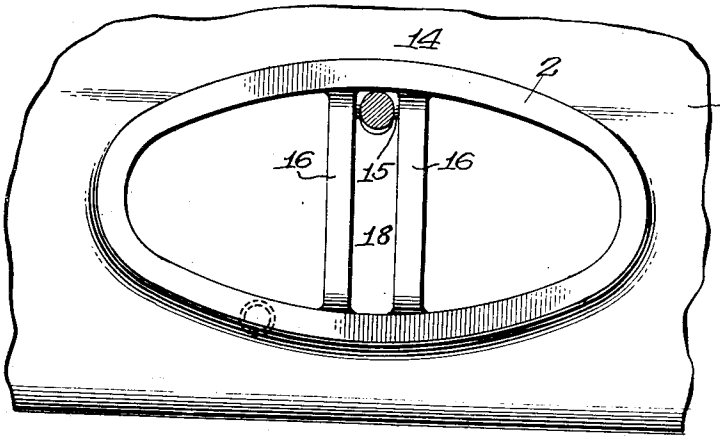



Fig. 3.

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# UNITED STATES PATENT OFFICE.

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## RADIATOR-FILLER CAP.

1,393,992. Specification of Letters Patent. Patented Oct. 18, 1921.

Application filed December 4, 1920. Serial No. 428,229.

*To all whom it may concern:*

Be it known that I, EUGENE J. FARKAS, a citizen of Hungary, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Radiator-Filler Caps, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention aims to provide a radiator filler cap with positive and reliable means, in a manner as hereinafter set forth, for retaining a cap on a radiator filler connection or in proximity thereto, so that the cap cannot become accidentally displaced, but will be at all times on the radiator, either in a closed or opened position. The means which I employ for connecting the cap to the radiator permits of the cap being clamped on the filling connection of the radiator to prevent the contents of the radiator from splashing outside thereof. The same clamping means affords a loose connection, at times, so that the cap may be removed from the filling connection of the radiator and set to one side thereof thus permitting of the radiator being easily filled.

My invention further aims to provide cap connecting means for a radiator or tank which may be easily and quickly manipulated and which will be concealed within the radiator or the filling connection, so that such connecting means will not detract from the general design or appearance of the radiator.

The construction entering into my invention will be hereinafter described and then claimed, and reference will now be had to the drawing, wherein—

Figure 1 is a vertical transverse sectional view of a radiator filling connection closed by a cap provided with a fastener in accordance with my invention;

Fig. 2 is a vertical cross sectional view of the same showing the cap in an open position, and

Fig. 3 is a plan of the radiator filling connection with a part of the cap fastener in a horizontal section;

In the drawing, the reference numeral 1 denotes a portion of a conventional form of radiator or cap forming part of a well known farm tractor or automobile and this type of radiator or tank has an oval or oblong cap support or filling connection 2 which will provide clearance for a poured stream of water or other liquid to be placed in the radiator or tank. The cap support or filling connection 2 is ordinarily closed by a cap 3 having depending flanges 4 so that the cap may be fitted on the support 2 and prevented from laterally shifting thereon. The cap or closure 3 is somewhat crowned or bell shaped, and has a central opening 5.

Rotatable or turnable in the opening 5 of the cap 3 is the reduced inner end or shank 6 of a handle stem 7 provided with a scalloped handle or water shedding hand piece 8 by which the cap 3 may be conveniently handled. The shank 6 of the handle stem 7 affords an annular shoulder 9 by which the handle is rotatably or turnably supported on the cap 3 and this annular shoulder limits the inward movement of the handle when placed in engagement with the cap. To retain the handle in engagement with the cap the shank 6 of the handle stem 7 has an annular groove in which is mounted a ring or retaining member 11 adapted to coöperate with the annular shoulder 9 in preventing longitudinal movement of the handle stem 7 relative to the wall of the cap 3. The retaining member 11 may be in the form of a split ring snapped into the groove 10 or said retaining member may take any form which will serve as an abutment against the inner wall of the cap 3.

The shank 6 and the stem 7 of the handle 8 have a longitudinal bore or recess 12 with the walls thereof screwthreaded to receive the outer screwthreaded end 13 of a hook-shaped connecting member, 14, said connecting member having its inner end provided with a cross head 15.

In the cap support or filling connection 2 is a combined stop and guide member, preferably in the form of parallel partitions disposed in planes at each side of the minor axis of the cap support and filling connection 2, said partitions connecting the front

and rear walls of the filling connection and having upper beveled water shedding edges 17. The juxtaposition of the partitions 16 affords a slot 18 through which the hook shaped connecting member 14 extends, and the inner edges of the partitions 16, at the rear wall of the filling connection 2, are recessed, as at 19 to receive the cross head 15 of the hook shaped connection member, as best shown in Fig. 2. The recessed edges of the partitions 16 afford a stop or abutment, at the rear wall of the filling connection, for the cross head 15 so that the hook shaped connecting member may be shifted to the rear wall of the filling connection and overhang the upper edge of said wall when the cap 3 is in an open position. Otherwise, the cross head 15 engages under the lower straight edges of the partitions 16 and may be clamped against the partition edges by simply rotating the handle 8 to feed the threaded end 13 of the hook shaped connecting member 14 into the stem 7 of said handle. The partitions 16 afford a guide for the hook shaped connecting member 14 so that said connecting member can be easily shifted toward the rear wall of the filling connection and said connecting member will be ordinarily moved in such direction in order that an edge of the cap 3 may rest on top of the radiator or tank 1 when in an open position, as shown in Fig. 2.

On the hook shaped connecting member 14 at its threaded end 13, is a collar 20 which may be conveniently mounted on the connecting member by screwing it on the threaded end 13 thereof to the inner end of the screw thread, and this collar serves as an emergency stop member and also facilitates assembling the cap fastener relative to the radiator or tank 1. While the partitions 16 prevent turning of the hook shaped connecting member 13 during the rotation of the handle 8, the collar 20 prevents the hook shaped connecting member 14 from falling into the radiator or tank 1 should the handle 8 be rotated in the wrong direction to release the hook shaped connecting member 14 relative to the handle. In practice, a partial rotation of the handle 8 to unscrew the hook shaped connecting member 14 sufficiently to release the cross head 15 relative to the partitions 16 permits of the flanged edges 4 of the cap 3 clearing the upper end of the radiator filling connection 2 so that the hook shaped connecting member 14 is shifted rearwardly between the partitions 16 and then outwardly so that the cap or closure 3 may assume an open position supported at an angle to the filling connection 2 by the hook shaped connecting member 14 and the top of the radiator or tank 1.

I attach considerable importance to the simplicity of construction entering into the cap or closure fastener insomuch as the parts thereof can be easily and quickly assembled; to the fact that the cap can be opened without being detached or lost, and with the cap or closure on the filling connection 2 the greater part of the fastener is concealed and protected against the elements.

It is thought that the utility of my invention will be apparent without further description and while in the drawing there is illustrated a preferred embodiment of my invention as now actually used, it is to be understood that the structural elements are susceptible to such variations and modifications as are permissible by the appended claims.

What I claim is:—

1. The combination of a tank having a filling connection, a cap, a connecting member carried by said cap, and having a configuration relative to said tank filling connection to prevent rotation of said connecting member, a hand piece extending through said cap into screwthreaded engagement with said connecting member and adapted to coöperate with said connecting member in clamping said cap on said filling connection, and means at the inner end of said connecting member retaining said member in the filling connection of said tank so that said cap may be tilted to one side of said tank.

2. The combination of a tank having an opening, and a closure for said opening, of a guide member in the tank opening, and a connecting member carried by said cap and slidable in said guide member so that said cap may be raised and tilted at one side of said tank opening.

3. The combination set forth in claim 2 wherein said connecting member is adjustably held by said closure and adapted to be clamped against said guide member.

4. The combination set forth in claim 2, wherein a turnable handle carried by said closure supports said connecting member and when turned adapted to fix said connecting member relative to said guide member.

5. The combination with a tank having an opening, and a closure for said tank opening, of partitions in the opening of said tank, a turnable handle on said closure, and a hook shaped connecting member in screw threaded engagement with said handle and extending between said partitions, the relation of said hook shaped connecting member and said partitions being such that said connecting member permits of said closure being shifted to place said closure at one side of the tank opening.

6. The combination set forth in claim 5, wherein the relation between said hook shaped connecting member and the partitions permits of said connecting member being clamped against said partitions to hold said closure over the opening of said tank.

7. Means for connecting a cap to a radiator comprising, in combination with a radiator cap, a member having its inner end slidable in the radiator and its outer end detachably connected to the cap, and means to prevent said member from falling into the radiator when released by said cap.

In testimony whereof I affix my signature in presence of two witnesses.

EUGENE J. FARKAS.

Witnesses:
J. EMMET HALL,
M. H. HOLMES.