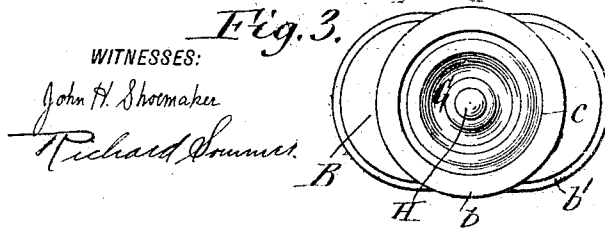
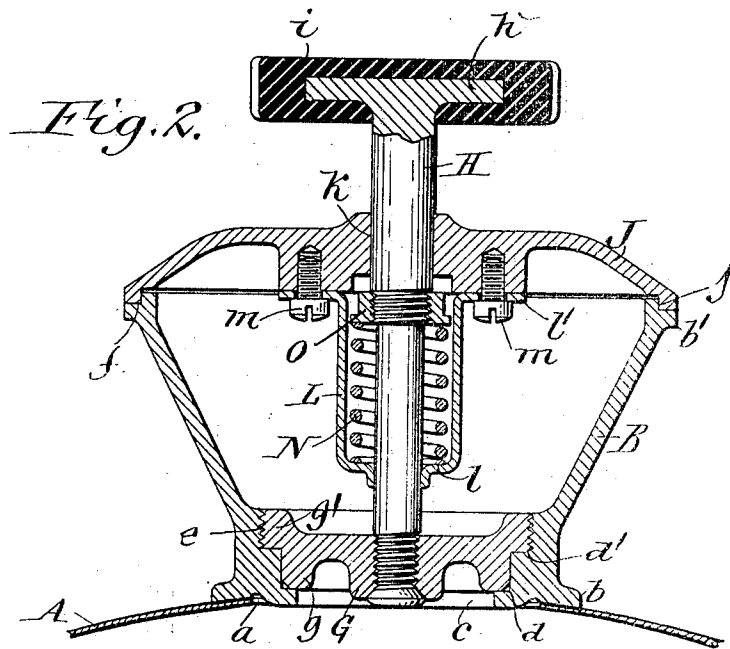
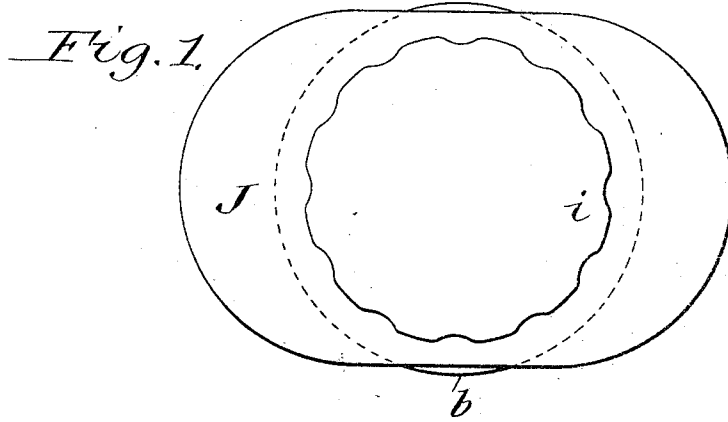


E. L. THOMAS.
FILLER FOR AUTOMOBILE RADIATORS.
APPLICATION FILED MAY 29, 1909.

957,814.

Patented May 10, 1910.



WITNESSES:

John H. Shoemaker
Richard Sommer

INVENTOR
Edwin L. Thomas
BY *Geyer & Poff*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

EDWIN L. THOMAS, OF BUFFALO, NEW YORK, ASSIGNOR TO E. R. THOMAS MOTOR COMPANY, OF BUFFALO, NEW YORK, A CORPORATION OF NEW YORK.

FILLER FOR AUTOMOBILE-RADIATORS.

957,814.

Specification of Letters Patent.

Patented May 10, 1910.

Application filed May 29, 1909. Serial No. 499,221.

To all whom it may concern:

Be it known that I, EDWIN L. THOMAS, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented a new and useful Improvement in Fillers for Automobile-Radiators, of which the following is a specification.

This invention relates to fillers which are arranged at the top of automobile radiators or coolers and through which the latter are filled with water. Heretofore these fillers have generally been of circular form which rendered it difficult, if not practically impossible, to fill the radiator through the same without spilling considerable water. To obviate this it has been proposed to construct the body or funnel of the filler of oval form so as to adapt the same for receiving a wider stream of water from the pail whereby the water is being poured into the radiator but such a funnel is difficult to maintain water tight and neat in appearance.

The object of this invention is to provide a filler for automobile radiators which has a body or funnel of oval form and which has simple, efficient, and neat means for securely closing the same to prevent the escape of the water and also to prevent the entrance of foreign matter into the funnel from the exterior after the radiator has been filled.

In the accompanying drawings: Figure 1 is a top plan view of my improved automobile radiator filler. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a bottom plan view of the filler, on a reduced scale.

Similar letters of reference indicate corresponding parts throughout the several views.

A represents the top or roof of the water chamber or space of an automobile radiator which has an inlet opening *a*. B the upwardly flaring body or funnel of the filler the lower or small end *b* of which is of circular form while its upper or large end *b'* is of oblong or elongated form, as shown in Fig. 3. The lower end of the funnel or body is secured to the top of the radiator in any suitable manner so that the outlet *c* in the bottom of the funnel is in line or registers with the inlet opening *a* of the water chamber of the radiator. Within the bore of its outlet the funnel is provided with a lower circular rabbet forming an upwardly facing lower shoulder *d* and a cylindrical wall *d'*

and above this lower rabbet the bore of the outlet is provided with an upper circular rabbet of larger diameter than the lower rabbet and forming an upwardly facing upper shoulder—and a cylindrical wall—the latter having an internal screw thread *e'*. At its upper edge the funnel is provided with an external rabbet or shoulder *f*.

G represents a circular stopper or plug whereby the outlet of the funnel is closed and which has a lower contracted or narrow part *g* adapted to engage the lower rabbet in said outlet and an upper enlarged part *g'* which engages the upper rabbet in said outlet and is provided with an external screw thread which engages with the internal screw thread of said upper rabbet. This stopper or plug is turned for securing the same in the outlet of the funnel and removing the same therefrom by means of an upright stem H projecting upwardly from the stopper and provided at its upper end with a handle *h* for manipulating the same, the latter being preferably inclosed by a shell *i* of heat insulating material such as fiber or rubber so that the hand will not be burned by the heat of the water in the radiator when opening the filler preparatory to replenishing the same with water. The stem may be secured to the stopper in any suitable manner but preferably by screwing the stem into an opening in the stopper and riveting the lower end of the stem against the underside of the stopper, so that the latter and the stem are compelled to turn together.

J represents a cover which closes the upper end of the funnel after the radiator has been filled with water and whereby any foreign matter at this time is prevented from getting into the funnel and subsequently enter the radiator and interfere with its operation. This cover also produces a neat and finished appearance of the top of the funnel. The cover is of the same oblong or elongated form as the upper end of the funnel and is provided with a depending marginal flange *j* which fits the marginal rabbet at the upper end of the funnel. The central part of the stem passes slidingly through a central opening *k* in the cover whereby the latter is confined on the stem between the handle and stopper and these parts are permanently connected, so that they are simultaneously applied to and removed from the funnel. In order to prevent the cover from rattling

while in use the same is yieldingly pressed against the funnel by a tension device which is interposed between the stem and the cover and which preferably consists of a tubular casing or sleeve L surrounding the stem between the stopper and cover and provided at its lower end with a lower internal flange l which engages slidingly with the stem while its upper end is provided with an upper external flange l' which is secured to the underside of the cover by screws m, as shown in Fig. 2, a spring N surrounding the stem and engaging at its lower end with the lower flange l of the sleeve, and a shoulder o having the form of a screw nut bearing against the upper end of the spring and engaging with a screw thread on the stem immediately below the cover.

When the stopper and cover are removed from the funnel with the stem and handle the spring N expands until the screw nut o bears against the cover. When thus removed from the funnel the distance from the marginal bearing face of the cover and the bearing face of the stopper is less than the distance between the stopper and cover seats on the funnel. It follows from this that in applying the cover and stopper to the funnel, the cover engages with its seat on the upper end of the funnel before the stopper is seated on the lower end of the funnel, whereby upon screwing the stopper fully into engagement with its seat by the stem the shoulder or screw nut o will be carried downwardly away from the underside of the cover and increase the tension on the spring N, thereby causing the cover to be held yieldingly in engagement with the funnel and preventing the same from rattling.

I claim as my invention:

1. A filler for automobile radiators comprising a funnel having a small lower end provided with a seat and a large upper end provided with a seat, a stopper engaging the lower seat, an oblong cover engaging the upper seat, and a spring connection between said stopper and cover.

2. A filler for automobile radiators comprising a funnel having a small lower end provided with a seat and a large upper end provided with a seat, a stopper engaging the lower seat, a cover engaging the upper seat, and a spring connection between said stopper and cover comprising an upright stem secured at its lower end to said stopper and passing with its central part through an

opening in the cover and a spring operating to press said cover downwardly.

3. A filler for automobile radiators comprising a funnel having a small lower end provided with a seat and a large upper end provided with a seat, a stopper engaging the lower seat, a cover engaging the upper seat, and a spring connection between said stopper and cover, comprising an upright stem secured at its lower end to said stopper and passing with its central part through an opening in the cover and provided above the cover with a handle and a spring operating to press said cover downwardly.

4. A filler for automobile radiators comprising a funnel having a small lower end provided with a seat and a large upper end provided with a seat, a stopper engaging the lower seat, a cover engaging with the upper seat and a yielding connection between said stopper and cover.

5. A filler for automobile radiators comprising a funnel having a small lower end provided with a seat and a large upper end provided with a seat, a stopper engaging the lower seat, a cover engaging with the upper seat and a yielding connection between said stopper and cover, comprising a stem secured to the stopper, a casing secured to the cover, and a spring interposed between a shoulder on said casing and a shoulder on said stem.

6. A filler for automobile radiators comprising a funnel having a small lower end provided with a circular internally screw threaded seat and a large upper oblong end provided with a seat, an externally screw threaded circular stopper or plug adapted to engage with said internally threaded lower seat, an oblong cover adapted to engage at its margin with said upper seat and having a central opening, an upright stem secured at its lower end to the stopper and arranged with its central part in said opening and having a handle above said cover, a casing or sleeve surrounding the stem and secured at its upper end to said cover and a spring arranged below the cover and interposed between shoulders on the casing and the stem.

Witness my hand this 27th day of May, 1909.

EDWIN L. THOMAS.

Witnesses:

W. H. VAN DEUSEN,
EDWARD WELLS.