T. J. HORAN.

GASOLENE FILTER.

APPLICATION FILED JUNE 2, 1913.

1,169,826. Patented Feb. 1, 1916.

Fig. 1.

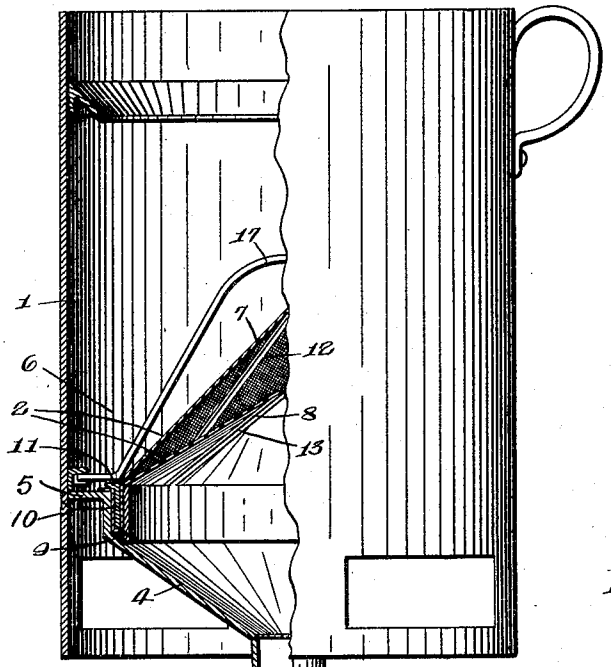


Fig. 3.

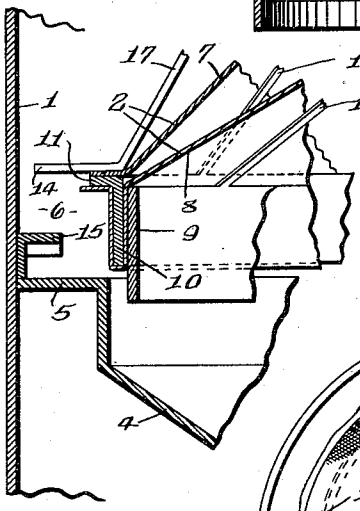


Fig. 4.

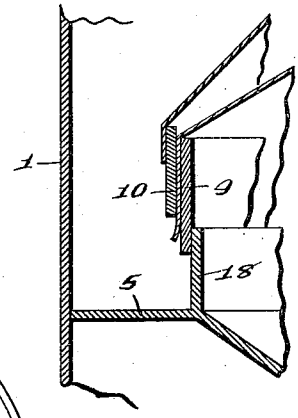
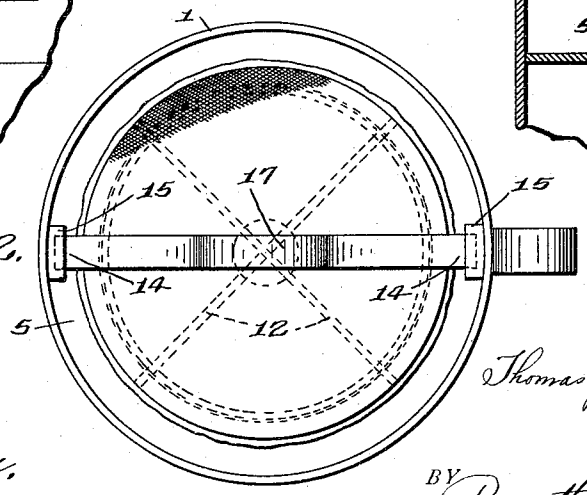


Fig. 2.



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GASOLENE-FILTER.

1,169,826. Specification of Letters Patent. Patented Feb. 1, 1916.

Application filed June 2, 1913. Serial No. 771,168.

To all whom it may concern:

Be it known that I, THOMAS J. HORAN, of Syracuse, in the county of Onondaga and State of New York, have invented a new and useful Gasolene-Filter, of which the following is a specification.

This invention has for its object the production of a gasolene filter, particularly applicable for use in filling the tanks of motor vehicles; and the invention consists in the combinations and constructions hereinafter set forth and claimed.

In describing this invention reference is had to the accompanying drawings in which like characters designate corresponding parts in all the views.

Figure 1 is a longitudinal sectional view, partly in elevation, of this gasolene filter. Fig. 2 is a plan of parts seen in Fig. 1. Fig. 3 is an enlarged fragmentary view of parts seen in Fig. 1. Fig. 4 is a fragmentary view similar to Fig. 3 of a slightly modified form of my filter.

1 is the receptacle having a filter device 2 therein and also having a spout 3 depending from its bottom.

The receptacle 1 may be in any desirable form and construction, and is preferably provided with a depending funnel shaped bottom 4 from the lower point of which the spout 3 depends. The receptacle is also formed with an inwardly extending annular flange 5 from which the bottom depends, the flange forming an annular chamber 6 above the bottom 4.

The filter device 2 includes a mesh screen and a fibrous screen impervious to water, these screens being carried by a frame as a ring which fits the flange 5, the filter device being removable from the flange and receptacle, and the receptacle is provided with means for tightening the fibrous screen as the frame approaches its final position in the receptacle.

7 and 8 are respectively the mesh screen and the fibrous screen, the same being arranged to converge from their centers toward their margins and being here shown as conical in form, and the fibrous screen 8 being arranged below the mesh screen 7.

In the illustrated form of my invention, the frame of the filter includes inner and outer rings 9 and 10, the outer ring having a depending portion for fitting the flange 5 and having its upper margin bent, as at 11, to overhang said flange 5. The outer ring is also formed with transversely-extending and upwardly-converging bars 12 for supporting the mesh screen 7 and holding the same in conical form.

The inner ring 9 is formed with transversely-extending and upwardly-converging supporting bars 13. The margin of the fibrous screen 8 is inserted between the rings 9, 10 and bent upwardly around the lower edge of the outer ring 10 and up under the flange 11 in position to be gripped between the upper edge of the flange 11 and the flange 5.

The means for the limiting movement of the inner ring 9 as the ring 11 approaches its final position in the receptacle as here shown, engages the lower edge of the ring 9. As here shown, the inner ring 9 engages the bottom 4 in advance of the ring 10 and hence is held stationary while the outer ring 10 is being pressed downwardly farther, thus tightening the screen. The filter is locked in the receptacle by partial turn of the filter 2 and is provided with means as outwardly extending shoulders 14 opposite sides thereof which interlock with suitable shoulders 15, carried on the inner face of the receptacle. The shoulders 14 are integral with a hanlle 17 fixed to the outer ring 10.

As seen in Fig. 4, the rings 9, 10 may surround an upward extending flange 18 at the inner edge of the flange 5 and the inner ring 9 engage the flange 5 in advance of the outer ring instead of engaging the bottom 4.

In operation, after the receptacle has been placed in position on the tank and the gasolene poured into the receptacle the gasolene filters through the mesh screen and then through the fibrous screen and any water therein is shed by the fibrous screen into the chamber 6, the coarse grit and other matter being taken out by the mesh screen 8.

What I claim is:—

1. A gasolene filter comprising a receptacle and a filter device in the receptacle above the bottom thereof, said device comprising a mesh screen inclined downwardly toward the sides of the receptacle and a fibrous screen impervious to water located beneath the mesh screen and inclined toward the sides of the receptacle, the impervious screen, being of less incline than the mesh screen and meeting the mesh screen near the lower edge thereof, substantially as and for the purpose specified.

2. A gasolene filter comprising a recepta-

cle and a filter device in the receptacle above the bottom thereof, said device comprising of two screens arranged one above the other and inclined downwardly toward the sides of the receptacle, the screens meeting at their lower margins and the receptacles being formed with a channel at the bases of the screens for receiving the matter shed by both said screens, substantially as and for the purpose specified.

3. A filter comprising a receptacle having an inwardly extending flange, a bottom depending from the flange and having an outlet, and a filter device including a frame arranged to fit said flange above the bottom and being removable therefrom, and a screen carried by the frame and inclined downwardly toward its margin to discharge onto said flange, substantially as and for the purpose set forth.

4. A gasolene filter comprising a receptacle, a filter device arranged in the receptacle and removable therefrom and including a screen, and means for tightening the screen as the filter is moved into its final position in the receptacle, substantially as and for the purpose specified.

5. A gasolene filter comprising a receptacle formed with an internal flange, a filter device arranged to fit in the receptacle and being removable therefrom and including inner and outer rings arranged to fit the flange, and the screen stretching across the inner ring and having its margin held between the rings, substantially as and for the purpose specified.

6. A gasolene filter device comprising a receptacle, and a filter device arranged to fit in the receptacle and being removable therefrom and including inner and outer rings and a screen stretched across the inner ring and having its margins held between the rings, and the receptacle having means tending to hold the inner ring from movement as the outer ring approaches its final position in the receptacle, and hence tightening the screen, substantially as and for the purpose described.

7. A gasolene filter comprising a receptacle, and a filter device including a frame arranged to fit in the receptacle and being removable therefrom, the frame including inner and outer rings, and a screen stretched across the inner ring and having its margins held between the rings, the receptacle having means for engaging the lower edge of the inner ring and limiting the movement of the inner ring as the outer ring approaches its final position in the receptacle, substantially as and for the purpose specified.

8. A gasolene filter comprising a receptacle, having an internal annular flange and a bottom depending from the flange, a filter device including a frame arranged to fit said flange and being removable therefrom, the frame including inner and outer rings, and a screen stretched across the inner ring having its margins held between the rings, the inner ring projecting below the outer ring in position to engage the bottom in advance of the outer ring as the outer ring approaches its final position in the receptacle, substantially as and for the purpose set forth.

9. A gasolene filter comprising a receptacle having inwardly extending flange forming an opening, and a filter device comprising a frame movable in the opening and including inner and outer rings, and a screen stretched across the inner ring and having its margin passing between the rings and looped around the lower edge of the outer ring and upwardly over the upper edge of the flange of the receptacle, substantially as and for the purpose specified.

10. A gasolene filter comprising a receptacle having an inwardly extending flange forming an opening, and a filter device comprising a frame movable in the opening and including inner and outer rings, a screen stretched across the inner ring and having its margin passing between the rings and looped around the lower edge of the outer ring and upwardly from the upper edge of the flange of the receptacle, the receptacle having means for limiting the movement of the inner ring as the outer ring approaches its final position in the receptacle, substantially as and for the purpose set forth.

11. A gasolene filter comprising a receptacle having an inwardly extending flange forming an opening, and a filter device comprising a frame movable in the opening and including inner and outer rings, the inner having a cross bar having means for engaging the center of the screen, a screen stretched across the inner ring and having its margin passing between the rings and looped around the lower edge of the outer ring and upwardly over the edge of the flange of the receptacle, the receptacle having means for limiting the movement of the inner ring as the outer ring approaches its final position in the receptacle, substantially as and for the purpose described.

In testimony whereof, I have hereunto signed my name in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga, in the State of New York, this 24 day of May, 1913.

THOMAS J. HORAN.

Witnesses:
S. DAVIS,
F. B. PICKARD.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."