H. D. WATERHOUSE.

GASOLENE STRAINER.

APPLICATION FILED OCT. 6, 1909.

1,002,099. Patented Aug. 29, 1911.

Fig. 1.

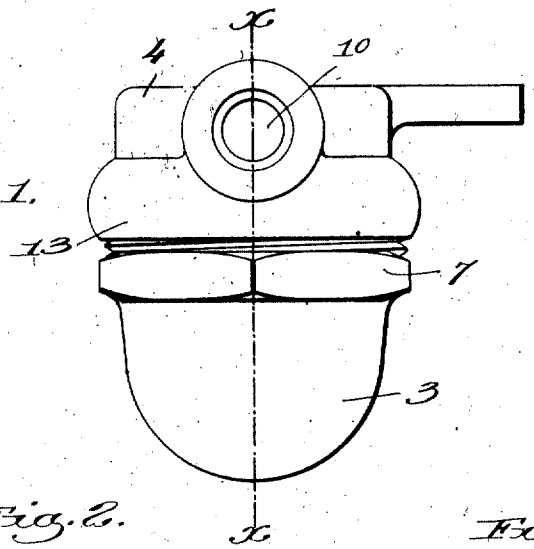


Fig. 2.

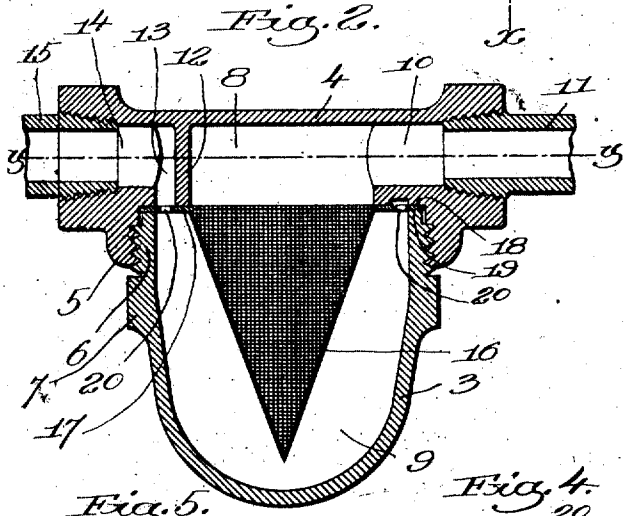


Fig. 3.

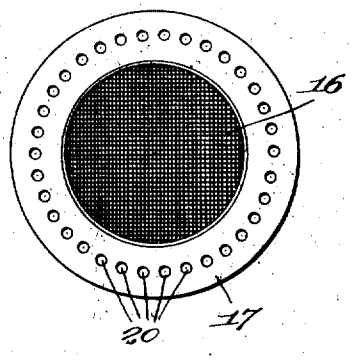


Fig. 5.

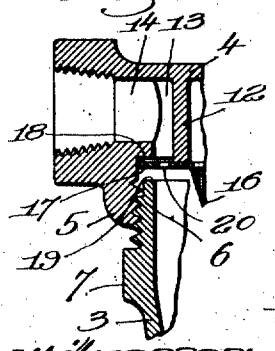
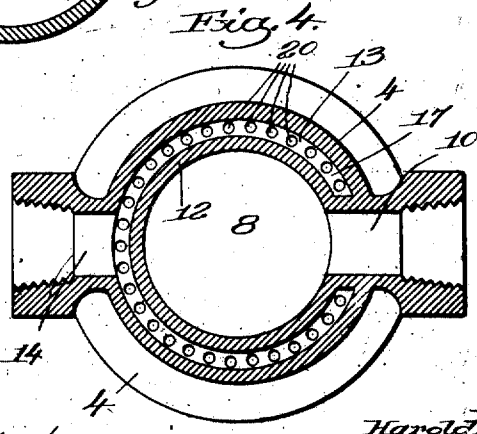


Fig. 4.



Witnesses:
Fred. S. Grinnell Jr.
Joseph M. Ward.

Inventor,
Harold D. Waterhouse,
by Connolly & Hopkins
Attys.

UNITED STATES PATENT OFFICE.

HAROLD D. WATERHOUSE, OF QUINCY, MASSACHUSETTS.

GASOLENE-STRAINER.

1,002,099. Specification of Letters Patent. Patented Aug. 29, 1911.

Application filed October 6, 1909. Serial No. 521,267.

To all whom it may concern:

Be it known that I, HAROLD D. WATERHOUSE, a citizen of the United States, residing at Quincy, county of Norfolk, and State of Massachusetts, have invented an Improvement in Gasolene-Strainers, of which the following description, in connection with the accompanying drawing, is a specification, like characters on the drawing representing like parts.

This invention relates to gasolene-strainers adapted to be inserted in a line of pipe especially adapted to be used in connection with gasolene or other hydrocarbon engines.

The object of the invention is to provide a simple and inexpensive strainer which will not only strain out and prevent the passage to the delivery pipe of any solid foreign matter, but which will also separate from the gasolene any water which may be mixed therewith.

The novel features of the invention will be more fully hereinafter described and then pointed out in the appended claims.

Referring now to the drawings, Figure 1 is a side view of a strainer embodying my invention; Fig. 2 is a section on the line *x*—*x*, Fig. 1; Fig. 3 is a top plan view of the strainer; Fig. 4 is a section on the line *y*—*y*, Fig. 2; Fig. 5 is a detail showing the manner in which the strainer is held in place.

The device as herein shown comprises an open-topped cup-shaped body constituting a settling chamber, a cap fitted to the body and having inlet and outlet ports leading to said chamber, and a strainer situated to intersect the flow from the inlet to the outlet port and to strain the gasolene passing through the device.

The open-topped cup-shaped body is designated 3 and the cap is designated 4. Said cap is provided with the interiorly screw-threaded flange or apron 5 which screws over the upper screw-threaded end 6 of the body 3, the latter preferably having the hexagonal portion 7 thereon to permit a wrench to be applied thereto for screwing it into the cap or unscrewing it therefrom. Said cap is also formed with the central discharge chamber 8 which communicates with the chamber 9 in the body 3 and which also communicates with an outlet port 10 to which a suitable discharge pipe 11 may be secured in any suitable way. The central discharge chamber 8 is surrounded by an annular wall 12 which is situated within and is spaced from the outside or exterior wall of the cap whereby an annular inlet chamber 13 is provided, said chamber also opening into the settling chamber 9 and communicating with an inlet port 14 to which an inlet pipe 15 is connected.

The strainer is shown at 16 and it may be of any suitable material, but preferably is a fine wire gauze. I have shown the strainer as cone-shaped, but this particular shape is not essential to the invention. For securing the strainer in position I have provided it with a holder in the form of a flange 17 which extends outwardly therefrom and to which the strainer is secured. This flange is adapted to rest against the lower edge of the wall 12 and the edge of it is clamped between an annular shoulder 18 with which the cap 4 is provided and the top edge 19 of the body 3, as clearly seen in Fig. 2. Said flange is provided with a plurality of apertures 20 which are in alinement with the inlet chamber 13 and which provide for free communication between said chamber and the settling chamber 9. I will preferably make the lower edge of the wall 12 to extend slightly below the shoulder 18, as best seen in Fig. 5, so that when the parts are assembled and the body 3 is screwed tightly into the cap, the flange 17 will be sprung or bent over the wall 12 and thus a perfectly tight joint will be secured between said flange and the wall.

When my improved strainer is in operation, the gasolene is admitted through the port 14, fills the inlet chamber 13 and then is delivered down through the apertures 20 in an annular sheet which flows down over the inner wall of the body 3. The gasolene passes upwardly through the strainer 16 and out through the central discharge chamber 8, as will be obvious. By having the gasolene admitted through an annular inlet chamber 13 which is adjacent the wall of the settling chamber, the flow of gasolene will be inwardly from all sides of the settling chamber and thus the entire surface of the conical strainer will be effective in straining gasolene.

By using a conical strainer a large straining surface is provided relative to the size of the strainer and by providing for admitting the gasolene to the settling chamber

9 in an annular sheet which surrounds the strainer, the liability that the strainer will become clogged is greatly reduced.

I have shown herein one embodiment of my invention but do not wish to be limited to the constructional details illustrated.

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

1. In a gasolene strainer, the combination with a body constituting a settling chamber, of a cap for the body provided with a central discharge chamber communicating with the settling chamber and also provided with an annular inlet chamber that surrounds the discharge chamber and is separated therefrom by a wall, said inlet chamber communicating with the settling chamber near the periphery thereof, a conical strainer between the inlet chamber and the discharge chamber, and a holder for the strainer clamped between the body and the cap.

2. In a gasolene strainer, the combination with a body constituting a settling chamber, of a cap screwed to the body and provided with a central discharge chamber communicating with the settling chamber and also provided with an annular inlet chamber separated from the discharge chamber by a wall, said inlet chamber communicaing with the settling chamber, said cap also having an annular shoulder exterior to the inlet chamber, and a strainer having a perforated flange resting against the lower edge of said wall and clamped between said shoulder and the top of the body.

3. In a gasolene strainer, the combination with a body constituting a settling chamber, of a cap screwed to the body and provided with a central discharge chamber communicating with the settling chamber and also provided with an annular inlet chamber separated from the discharge chamber by a wall, said inlet chamber communicating with the settling chamber, said cap also having an annular shoulder exterior to the inlet chamber, and a strainer having a perforated flange resting against the lower edge of said wall and clamped between said shoulder and the top of the body, the lower edge of said wall being slightly below the shoulder whereby the flange is sprung over the wall.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

HAROLD D. WATERHOUSE.

Witnesses:
LOUIS C. SMITH,
FREDERICK S. GREENLEAF.