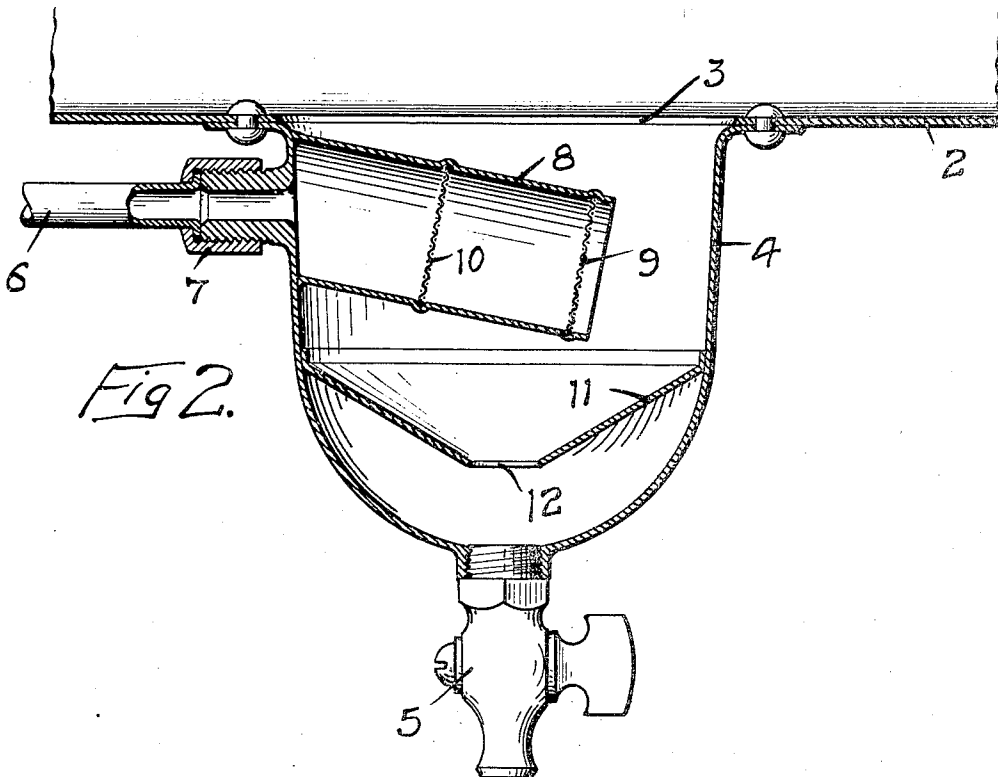
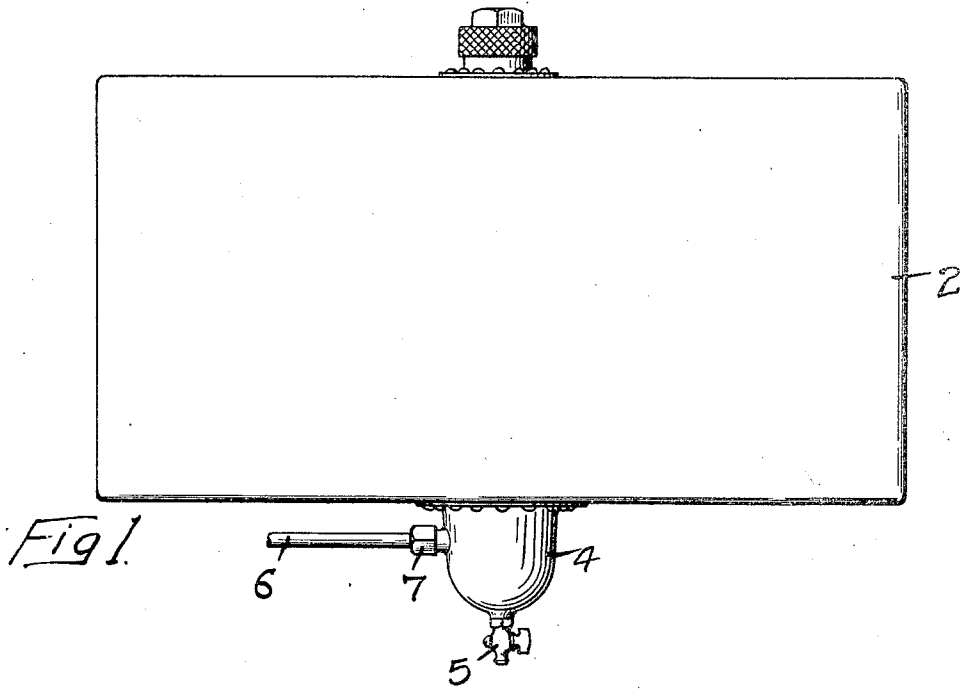


E. E. HANS.
STRAINER FOR GASOLENE TANKS.
APPLICATION FILED APR. 11, 1910.

1,055,744.

Patented Mar. 11, 1913.



WITNESSES
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UNITED STATES PATENT OFFICE.

EDMUND E. HANS, OF MINNEAPOLIS, MINNESOTA.

STRAINER FOR GASOLENE-TANKS.

1,055,744.

Specification of Letters Patent.

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Application filed April 11, 1910. Serial No. 554,891.

To all whom it may concern:

Be it known that I, EDMUND E. HANS, of Minneapolis, Hennepin county, Minnesota, have invented certain new and useful Improvements in Strainers for Gasolene-Tanks, of which the following is a specification.

The object of my invention is to provide a device in connection with a gasolene tank for straining purposes to separate dirt and foreign material therefrom before the oil enters the pipe leading to the engine cylinder. Screens and strainers of various kinds have heretofore been provided for this purpose, but they are all more or less objectionable as the foreign material will collect on and fill the meshes of the screen itself, necessitating frequent attention to prevent serious interruption in the flow of the oil.

My invention has for its primary object, the separation of the dirt and foreign material from the gasolene largely by precipitation without danger of the foreign material collecting and clogging the strainer or screen itself.

My invention consists generally in a shield pipe or guard arranged to inclose the inlet to the suction pipe and having an open end projecting into the cup whereto the suction pipe is attached.

In the accompanying drawings, forming a part of this specification, Figure 1 is a side elevation of a gasolene tank embodying my invention. Fig. 2 is a vertical sectional view of the same.

In the drawing, 2 represents a tank having an opening 3 in its bottom and 4 a cup secured to the bottom of the tank around said opening and having a drain cock 5 through which the accumulation in the bottom of the cup may be drawn off. A suction pipe 6 has a connection 7 with the cup 4 through the upper walls thereof. The inlet to the suction pipe 6 is preferably located near the opening 3 in the bottom of the tank and to shield or guard this inlet opening, and to prevent dirt and foreign material from being drawn into the suction pipe, I provide a pipe 8 having one end inclosing the inlet to the suction pipe and brazed or otherwise secured to the wall of the cup 4 and preferably inclined to the horizontal as indicated in Fig. 2 or arranged at an angle to the axis of the pipe 6, if located as in said figure. The foreign

material in the gasolene therefore settling on the rounded inclined surface of the pipe 8, will tend to slide off and be directed thereby into the bottom of the cup. The pipe 8 has an open end and is preferably of greater diameter than the diameter of the inlet opening to the pipe 6, so that the suction in said pipe 6 will not cause a strong draft at the inlet of the pipe 8 but rather will allow the oil to move so slowly that the force of gravity will overcome the tendency of the particles of dirt to enter the pipe 8 and will cause them to settle to the bottom of the cup 4. Within the pipe 8, I provide screens 9 and 10 through which the gasolene passes. I have shown two of these screens but a greater or less number may be provided as preferred and as the surfaces of the screens are inclined with respect to the axis of the suction pipe, the foreign material coming in contact therewith will have a tendency to slide off and drop to the bottom of the cup. The screens are shown as located, one near the middle of the pipe 8 and the other at its open end, but they may be arranged in any other suitable position in the shield pipe.

Beneath the pipe 8, I prefer to provide a pan 11 secured by any suitable means in the cup and having a hopper bottom with a discharge opening 12 spaced from the bottom of the cup. This pan will prevent the foreign material accumulating in the bottom of the cup from being stirred up or shaken by the motion of the car and drawn up to a point where they might tend to lodge on the outer screen on the shield pipe. This shield pipe may be made of any suitable length, and its diameter with respect to the diameter of the suction pipe may be varied to suit the conditions and to adapt it for the engine with which it is used.

In various ways, the details of construction herein may be modified without departing from the spirit of my invention:

I claim as my invention:

1. The combination, with a gasolene tank, of a cup inclosing an opening in the bottom of said tank and secured thereto and having a drain cock, a suction pipe communicating with said cup through the walls thereof and near the opening in the bottom of said tank, a shield pipe inclosing the inlet opening to said suction pipe and having an open inner end and inclined to the horizontal, and

screens also inclined to the horizontal, arranged in said shield pipe between its open end and said inlet opening.

2. The combination, with a tank having
5 an opening in its lower wall, of a cup surrounding said opening, the sediment held in suspension in said tank gravitating through said opening into said cup and collecting therein, said cup having a discharge
10 opening in its side wall, a guard surrounding said opening and projecting into said cup and having imperforate walls and an open inner end, said open end lying in a plane at an angle to the transverse axis of
15 said cup, said imperforate walls deflecting the ascending and descending particles of sediment, a screen disposed in said opening, said cup having a wall below said guard operating to deflect the sediment toward the
20 center of the cup away from the open end of said guard.

3. The combination, with a tank having an opening in its bottom, of a cup having an open top adapted to register with said opening and secured to said tank, said cup having
25 a suction discharge opening in its side walls, a tube open at each end secured to the inner wall of said cup and encircling said suction opening, said tube being downwardly inclined and projecting across said
30

cup, the open end of said tube extending across the cup to a point near the opposite wall thereof from said suction opening, a screen provided in the open end of said tube, a second screen provided in said tube between said first named screen and said suction opening, the rounded surface of said tube operating to deflect the sediment toward the bottom of said cup and away from the open end of said tube. 35

4. The combination, with a tank having
40 an opening in its lower wall, of a cup surrounding said opening, said cup having a discharge opening in its side walls, a guard surrounding said opening and projecting
45 into said cup and having imperforate walls and an open inner end, said open end lying in a plane at an angle to the transverse axis of said cup, said imperforate walls operating to deflect the ascending and descending
50 particles of sediment, a screen disposed in the open inner end of said guard, and means arranged below said guard for deflecting the sediment toward the center of said cup.

In witness whereof, I have hereunto set
my hand this 2nd day of April 1910. 55

EDMUND E. HANS.

Witnesses:

L. C. CRONEN,
J. U. BYRNES.