May 13, 1924. 1,493,843

R. CONRADER

TANK DISCHARGE DEVICE

Filed March 15, 1920

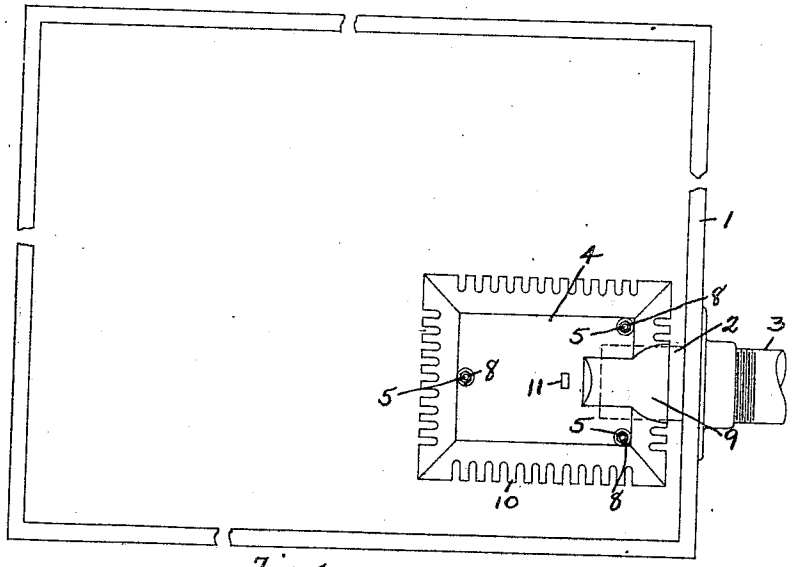


Fig. 1.

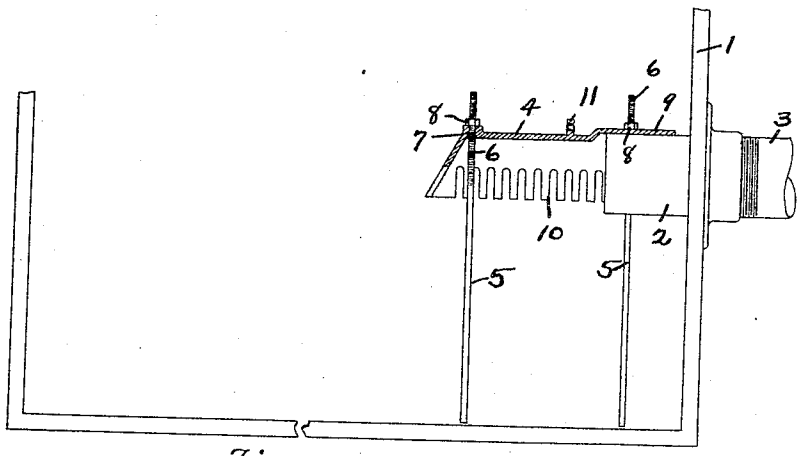


Fig. 2.

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RUDOLPH CONRADER, OF ERIE, PENNSYLVANIA.

TANK-DISCHARGE DEVICE.

Application filed March 15, 1920. Serial No. 365,914.

To all whom it may concern:

Be it known that I, RUDOLPH CONRADER, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented new and useful Improvements in Tank-Discharge Devices, of which the following is a specification.

In discharging tanks, especially large tanks of oil it is very desirable to avoid the discharge of air with the oil as such air in the pipe lines gives a great deal of trouble. Where there is a pronounced suction at the discharge a suction opening is formed in the liquid leading to the discharge through which air follows into the discharge pipe with the liquid. The purpose of my invention is to prevent this inflow of air.

The invention is illustrated in the accompanying drawings as follows:—

Fig. 1 shows a plan view of the tank with my device in place therein.

Fig. 2 a section of the tank showing a side elevation of the discharge.

1 marks the tank, 2 a discharge fitting extending slightly into the tank, and 3 a discharge pipe connected with the fitting 2.

A guard plate 4 is arranged directly over the inlet to the discharge fitting 2. It is supported from the bottom of the tank by rods 5. These rods 5 are screw-threaded at 6 for a sufficient distance to allow the adjustment of the guard so as to bring it to the height of the discharge. The rods 5 extend into the screw-threaded rods 7 and a nut 8 is provided for locking the rods in place.

The guard plate has a pocket 9 on its under side which fits over the discharge fitting 2 and is provided with a screen 10 along its lower edge, this screen being formed by serrations and extending upwardly to about the point where it is desirable to discharge the tank.

In order to locate the guard in the tank I provide an attaching means 11. This means is so positioned with relation to the center of gravity that by attaching a cord to it the guard may be lowered into the tank. This is particularly desirable and necessary in oil tanks.

With this guard stationary as it is and in the direct line of the discharge a suction opening is prevented extending upwardly from the discharge opening to the surface of the oil. Such openings will occur with pronounced suction and with the level of the oil at a considerable distance above the level of the discharge. The screen and guard also prevent the entrance of floating material on the surface of the oil to the discharge in that the screen reaches a level below which such floating material can enter the discharge pipe or fitting.

What I claim as new is:—

1. In a tank discharge device, the combination of a tank having a discharge opening leading from the side thereof; a stationary deflector over the opening preventing a direct discharge from above or the formation of a suction opening in the liquid being discharged; and an adjustable support for the deflector.

2. In a tank discharge device, the combination of a tank having a discharge opening leading from the side thereof; and a stationary deflector over the opening preventing a direct discharge from above or the formation of a suction opening in the liquid being discharged, said deflector having a strainer along its lower edge and said strainer having a level corresponding to the level of the discharge opening.

3. In a tank discharge device, the combination of a tank having a discharge fitting extending inwardly from the side of the tank; and a stationary deflector over the inlet to the fitting preventing a direct discharge from above creating a suction opening in the liquid being discharged.

4. In a tank discharge device, the combination of a tank having a discharge fitting extending inwardly from the side of the tank; and a stationary deflector over the inlet to the fitting preventing a direct discharge from above creating a suction opening in the liquid being discharged, said deflector having a socket on its under side into which the discharge fitting extends.

5. A deflector for tank discharge devices comprising a plate having a strainer along its lower edge; and a socket open at the bottom for receiving a horizontal discharge fitting.

6. A deflector for tank discharge devices comprising a plate having a strainer along its lower edge; a socket open at the bottom for receiving a horizontal discharge fitting; and an adjustable support for the deflector.

In testimony whereof I have hereunto set my hand.

RUDOLPH CONRADER.