

(No Model.)

M. A. SHEPARD.

Fire Proof Automatic Oil Reservoir.

No. 239,066.

Patented March 22, 1881.

Fig. 1.

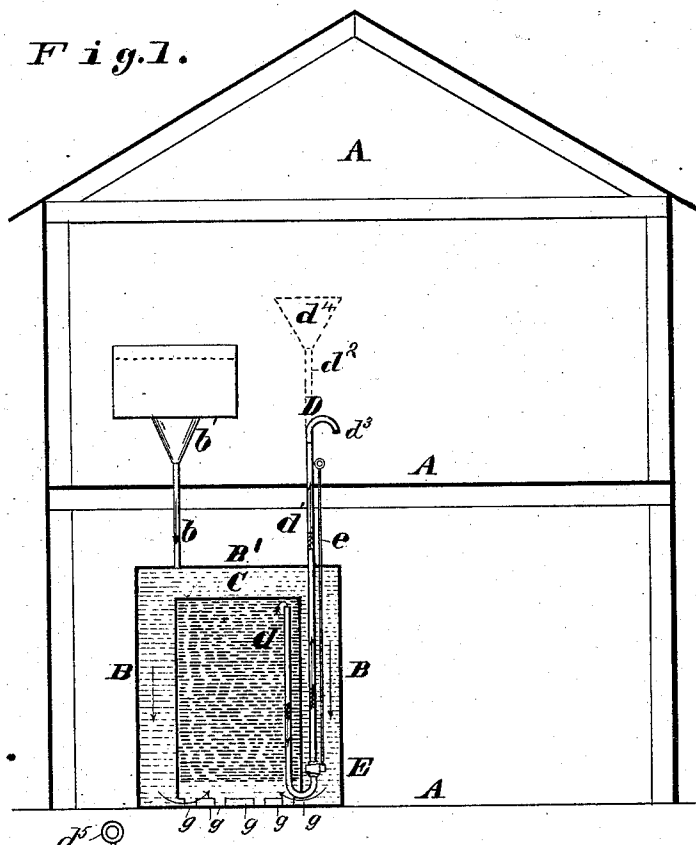
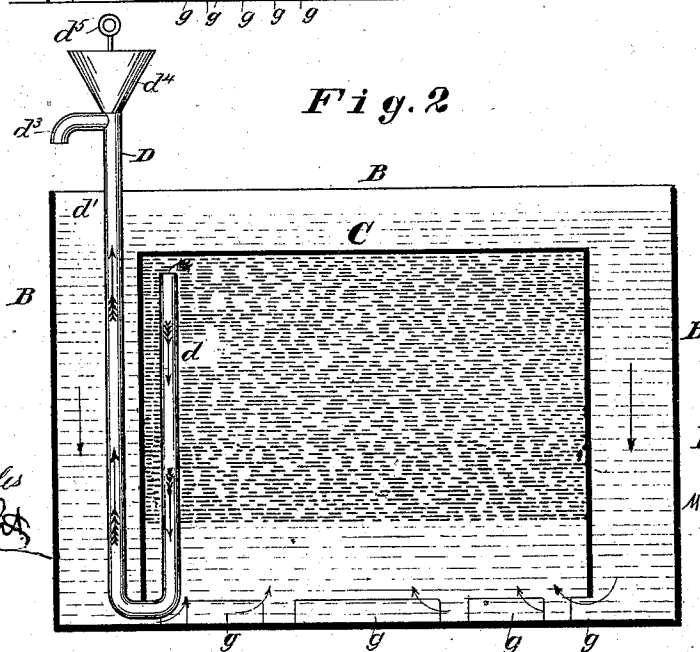


Fig. 2



Attest:

Charles Pickles
Sam'l Wright

Inventor:

Morrill A. Shepard

UNITED STATES PATENT OFFICE.

MORRILL A. SHEPARD, OF LEBANON, ILLINOIS.

FIRE-PROOF AUTOMATIC OIL-RESERVOIR.

SPECIFICATION forming part of Letters Patent No. 239,066, dated March 22, 1881.

Application filed August 14, 1880. (No model.)

To all whom it may concern:

Be it known that I, MORRILL A. SHEPARD, of Lebanon, in the county of St. Clair and State of Illinois, have invented an Improvement in Fire-Proof Oil-Tanks, of which the following is a specification.

My invention relates to a fire-proof oil-tank for storage, and is an improvement in those devices in which the oil-tank is immersed in a tank of water.

My improvement consists, first, in an oil-tank which is inverted so as to bring its open top at bottom, and which is immersed in a tank of water either open or closed at top, a sufficient space being left between the bottom of the inner tank and the outer tank to permit the water to pass from one to the other according to the amount of oil in the oil-tank. One side of the oil-tank is placed between the arms of an inverted siphon, through which the oil is introduced to and withdrawn from the upper portion of the oil-tank.

My improvement further consists in combining with said tank and siphon a pressure-basin for containing water, the weight of said water tending to compel the oil to pass through the siphon by pressing the oil upward in the oil-tank, a suitable faucet regulating the discharge of the oil.

In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1 is a vertical section of a building showing my improved tank, the oil and water tanks being shown in section and the pipes and water-pressure basin being represented in elevation. Fig. 2 represents, in vertical section and elevation, a modification of my device.

The arrows in the figures indicate the direction of the flow of oil and water while drawing off. When filling the oil-tank the currents will be reversed.

A may represent a house or building in which my oil-tank is placed.

B is a water-tank, which may be provided with a top, B', or be open at top, as shown in Fig. 2.

C is an inverted oil-tank, closed tight on all sides except at bottom, and may be placed in such a position as to leave a space at bot-

tom for the entrance of the water in which it is immersed or sunk. In the drawings I represent this tank as resting on the bottom of the outer tank, and provided with openings *g g g g* for the passage of water to and from the outer tank. One side of the oil-tank is received between the arms *d d'* of an inverted siphon, D, having at its outer end a spout, D³, and a filling-pipe, *d*², or funnel *d*⁴.

*d*⁵, Fig. 2, represents the rod of a pump by which the oil can be removed.

Connected with the tank B B' is a pipe, *b*, surmounted by a basin, *b'*, for containing water, the pressure (by weight) of which will force the oil upward in the oil-tank C and through the siphon D when the latter is open.

E is a faucet in the pipe D for regulating the flow through the pipe, being opened or closed by a rod, *e*, extending to the outside of the water-tank. The heavy lines in the tanks represent oil and the light lines water.

The process of filling the tanks is as follows: The outer tank, B, is filled with water until the top of the oil-tank C is covered with water. Then the oil desired to be stored is poured into the funnel *d*⁴ of the pipe D, which extends sufficiently above the level of the water in the tank B that the hydrostatic pressure may be sufficient to force the oil down the tube or pipe *d* and up the tube or pipe *d'*, and force the water in the tank C out at the bottom, thereby causing the water to rise above the oil-tank in the tank B. By this process the oil-tank C is filled within a few inches of its lower edge, and then the tube *d'* is filled with water, which will seal the pipe against contact of fire or air.

When it is desired to remove the oil it is only necessary to open the valve or faucet E, when the pressure of water in the basin *b'* will force the oil out through the spout *d*³, or a few strokes of the pump *d*⁵ will remove the water-seal, and then the pumping continued to remove the oil, the water occupying the space left by the oil.

In Fig. 1 I represent the tanks as located in the basement of a building and the pressure-basin and oil funnel and spout in the second story.

The oil-pipe D may connect directly with suitable wick-fittings to furnish light and heat.

Having thus described my invention, the

following is what I claim as new therein and desire to secure by Letters Patent:

1. The inverted oil-tank C, open at bottom and immersed in the water-tank B, and the inverted siphon D, receiving one side of the oil-tank between its tubes d d' , as shown and described, for the purpose set forth.
2. The pressure-basin b' and pipe b , in combination with the oil-tank C, tank B, and inverted siphon D, as set forth.

3. The combination of tanks B C and inverted siphon D, having funnel d^4 and spout d^5 , as set forth.

4. The faucet E and rod e , in combination with the siphon D and tanks B C, as set forth.

MORRILL A. SHEPARD.

Witnesses:

LOUIS ZERWECK,
J. A. SHEPARD.