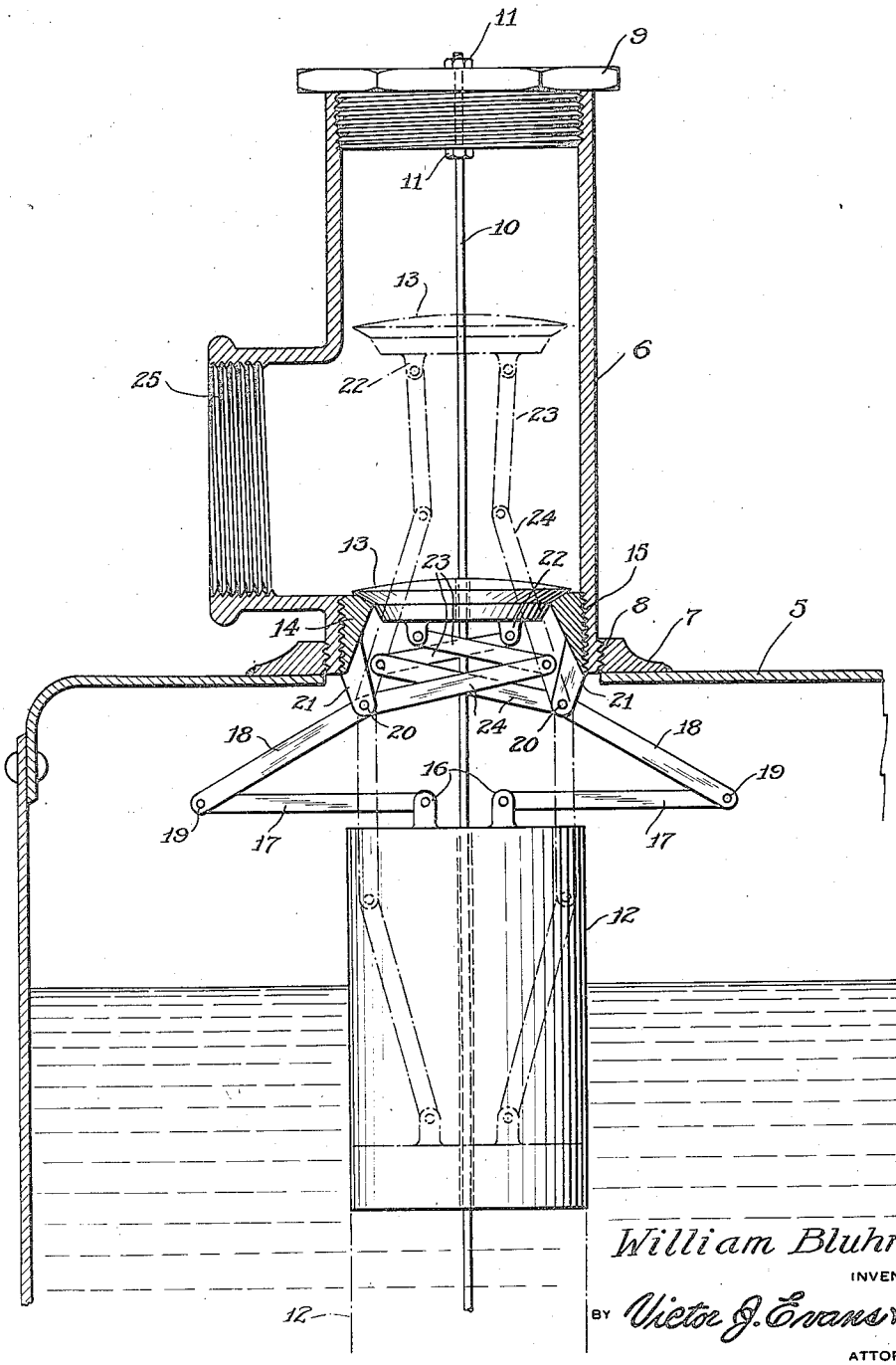
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OVERFLOW PREVENTING DEVICE

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William Bluhm
INVENTOR

BY Victor J. Evans & Co.
ATTORNEYS

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OVERFLOW PREVENTING DEVICE

William Bluhm, New York, N. Y.

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6 Claims. (Cl. 137—104)

The present invention relates to overflow preventing devices for storage tanks and the like.

It is well known that in the replenishing of the supply of fuel within a storage tank, there is a liability of the tank overflowing. This is primarily due to the fact that it is difficult to accurately determine the quantity of fuel in the tank prior to the replenishment, and especial care must be taken in order to prevent the tank overflowing when replenishing the supply.

It is therefore the primary object of the invention to provide a means disposed within the inlet pipe of the tank that will automatically close said inlet when a predetermined quantity of liquid is in the tank.

A further object of the invention is to provide a valve positioned within the inlet of the tank and controlled by lazy tong levers connected to a float, said float being positioned within the tank and movable with the rise and fall of the liquid.

The invention will be fully and comprehensively understood from a consideration of the following detailed description when read in connection with the accompanying drawing which forms part of the application.

In the drawing:

The figure is a vertical sectional view thru a portion of a tank and illustrating a valve disposed in the inlet pipe for preventing overflow of the tank.

Referring to the drawing for a more detailed description thereof, the numeral 5 indicates a liquid fuel storage tank having attached thereto an inlet pipe 6 thru which the supply of fuel is fed. The pipe 6 is connected to the tank 5 thru the flanged collar 7, said collar is welded or otherwise secured to the tank 5 and threaded at 8 for receiving the pipe 6.

The upper end of the pipe 6 is closed by means of the cap 9, said cap being threaded to the pipe 6, as clearly illustrated in the drawing. Extending from the cap 9 thru the pipe 6 and into the tank 5 is a shaft 10, said shaft being bolted or otherwise secured to the cap as indicated at 11. Slidably mounted on the shaft 10 is a float 12, which float normally rests within the tank 5 and is movable as the level of liquid within the tank changes.

A valve 13 is slidably mounted on the shaft 10 and is controlled by the float 12 in a manner to be hereinafter described. The valve 13 closes the inlet to the tank 5 when seated upon its seat 14, which is threaded at 15 to the interior of the pipe 6. As aforeindicated the valve 13 is actuated by means of the float 12 and for accomplishing the same there is provided a lazy tong lever arrangement of the type illustrated in the drawing. The upper end of the float 12 has attached thereto a pair of ears 16 to which are pivotally connected the levers 17. A second pair of levers 18 are pivotally connected at 19 to the levers 17, and are fulcrumed at 20 to the depending arms 21 attached to the valve seat 14. Extending from the lower side of the valve 13 are a pair of ears 22 to which are pivotally attached the levers 23 which levers are connected to the levers 18 thru a second set of levers 24. It will be noted that the levers 24 are also connected to the fulcrum point 20, to which the levers 18 are attached.

In the operation of the device, when the tank 5 is to be replenished the valve 13 and its associated levers will be in the position illustrated in dot and dash lines in the drawing. The float 12 will likewise be extended on the shaft 10 so that the levers 17 and 18 will have assumed a substantially perpendicular position. The hose from the supply source is attached to the inlet pipe 6 by threading into the interiorly threaded part 25 and the fuel will enter the tank in the normal manner. As the level of the fuel rises the float 12 will also rise tending to urge the valve 13 downwardly toward its seat thru the levers 17, 18, 23 and 24 respectively. It is, of course, understood that the float 12 and valve 13 are slidable on the shaft 10 and when the valve 13 has assumed a position substantially midway between the seat 14 and the upper end of the outlet 25, the incoming fuel will flow against the top of said valve and thereby further assist the valve toward its seat 14. As soon as the valve 13 has been seated, the operator will readily be able to determine that the tank 5 has received its capacity and thereby shut off the fuel supply.

From the above description it will be apparent that there is provided a novel means for preventing the overflow of fuel when replenishing the supply of a tank or the like. The actuation of the valve 13 is caused thru the float 12 and its associated levers but an important feature of the mechanism resides in the fact that the weight of the incoming fluid materially assists in the closing of the valve against its seat.

It is to be understood that this improvement is capable of extended application and is not confined to the exact showing of the drawing nor to the precise construction described and, therefore, such changes and modifications may be made therein as do not affect the spirit of the

invention nor exceed the scope thereof as expressed in the appended claims.

What is claimed as new is:

1. In an overflow preventing device, the combination of a body having an inlet pipe therein, a shaft extending through said pipe into said body, a valve slidable on said shaft, and means within said body for actuating said valve on said shaft.

2. In an overflow preventing device, the combination of a body having an inlet pipe therein, a shaft extending through said pipe into said body, a valve slidable on said shaft, means within said body for actuating said valve on said shaft, said means including a float slidable on said shaft.

3. In an overflow preventing device, the combination of a body having an inlet pipe therein, a shaft extending through said pipe into said body, a valve slidable on said shaft, a float slidable on said shaft and movable in said tank, means for connecting said valve to said float whereby said valve is actuated on said shaft by the movement of said float.

4. In an overflow preventing device, the combination of a body having an inlet pipe therein, a shaft extending through said pipe into said body, a valve slidable on said shaft, a float slidable on said shaft and movable in said tank, means for connecting said valve to said float whereby said valve is opened and closed by the movement of said float, said means including a series of levers attached to said valve and float.

5. In an overflow preventing device, the combination of a body having an inlet pipe therein, a shaft extending through said pipe into said body, a valve mounted on said shaft, a float mounted on said shaft, and means coacting with said valve and said float for advancing one towards the other on said shaft.

6. In an overflow preventing device, the combination of a body having an inlet pipe therein, a shaft extending through said pipe into said body, a valve mounted on said shaft, a float mounted on said shaft, and means coacting with said valve and said float for moving one away from the other on said shaft.

WILLIAM BLUHM.