H. C. Weitzel.

Automatic Cut-Off For Oil Tanks.

Application Filed Mar. 31, 1908.

903,926.

Patented Nov. 17, 1908.

Fig. 1.

Fig. 2.
To all whom it may concern:

Be it known that I, HENRY C. WEITZEL, a citizen of the United States, residing at Baltimore city, State of Maryland, have invented certain new and useful improvements in Automatic Cut-Offs for Oil-Tanks, of which the following is a specification.

My invention relates to an improvement in cut-offs for gasolene stoves.

Explosions from gasolene stoves are due in a very large measure to carelessness in filling the tanks while the burner is not lighted, thereby rendering the filling of the tank exceedingly dangerous, by reason of the possible ignition and explosion of the gasolene in the tank, especially in case of its overflowing the tank.

The purpose of my present invention is to provide a cut-off which shuts the gasolene off from the burner, the moment the lid of the tank is raised, and which opens it again when the lid is shut down or closed.

In my former invention upon which I made application for Letters Patent Serial Number 297,895, and which I have since abandoned, while I found that the device was effective in opening and closing the supply from the tank, actual use has demonstrated that when the lid was raised and the current was cut off, the gasolene in the pipe between the cut-off valve and the burner was consumed, thus necessitating a loss of time in awaiting the extinguishing of the flame before the tank could be used with safety refilled. In the construction of the present device this objection is overcome by causing the flame to be extinguished the moment the lid of the tank is raised and the supply cut-off.

My invention further consists in certain novel features of construction and combinations of parts which will be hereafter described and pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of the invention as applied to the ordinary gasolene stove, Fig. 2 is a sectional detail of the valve, the dotted lines corresponding with the dotted line position of Fig. 1.

A, represents a gasolene stove and B is the gasolene tank surrounded at the top with a water chamber C, which latter is adapted to be filled or partially filled with water to catch any overflow of gasolene.

D, is the supply pipe, which leads from the tank B to the burner E. This supply pipe is provided with a cut-off valve F at some convenient point. The stem of this valve has an arm G, and a rod H extends therefrom to an arm I on the cover or lid J of the tank, the valve is also provided with a waste pipe K discharging into the waste pan L.

R indicates the usual starting cups.

Referring to Fig. 2, which is a sectional detail view of the valve, M indicates a waste port, and N, the supply port, and P, a waste discharge port to which former port is connected the waste pipe K. As shown in the drawing, the supply port N is in register with the supply pipe D and D’, the port M being in register with the discharge port P only, and closed as to the other ports. When the valve is closed, the port M is brought in register with pipe D’ and port P, and pipe D is closed; by reason of the port M being brought in register with port P and pipe D’, the pipe D being closed, the gasolene in the pipe D’ between the valve F, and the burner E, is discharged through the waste pipe K, into the waste pan L, thereby causing the flame at the burner to become extinguished the moment the valve F cuts off the supply of the fuel through pipe D.

The valve is operated as follows: When the lid or cover J is raised to refill the tank B, the valve F is closed by reason of its connection through the rod H with the lid or cover, so that the supply of gasolene to the burner E is cut off, while the filling of the tank continues, and so long as the lid or cover is raised the supply to the burner continues to be cut-off, and in order to permit the gasolene to flow to the burner, the valve F must be again opened, and to open it the lid or cover must be closed. In this way, all possibility of accidental ignition or explosion is eliminated, for it is impossible to open and refill the tank when the burner is in operation or in other words, the flame is extinguished by cutting off the supply of gasolene the moment the lid or cover is raised, and not until it is closed can the burner be again lighted. The waste gasolene discharged into the waste pan through the waste pipe is such an insignificant quantity that it evaporates almost instantly and disappears. In this way, danger is absolutely avoided, by very simple mechanism.

It is evident that slight changes might be
resorted to in the form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I do not wish to limit myself to the exact construction as herein set forth, but

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

1. The combination with a vapor stove having a burner, a liquid fuel holding tank, and a pipe connecting the bottom of the tank with the burner, of a mechanically operated valve in the pipe located at a point between the tank and the burner, and having a supply and waste port therein, a waste pan, a waste pipe leading from the said waste port and discharging into the said pan, a lid hinged to the said tank at its upper open end and adapted to be swung upward away from the tank for closing and opening the tank, an arm rigidly secured to the lid and projecting horizontally therebeyond, the arm moving up and down with the lid, an arm secured to the mechanically operated valve and adapted to lie normally parallel with the arm on the lid, and a connecting rod extending between and being pivotally connected to the free ends of the two arms, substantially as described.

2. The combination with a vapor stove having a burner, a liquid fuel holding tank, and a pipe connecting the bottom of the tank with the burner, of a mechanically operated valve in the pipe located at a point between the tank and the burner, and having a supply and waste port therein, a waste pan, a waste pipe leading from the said waste port and discharging into the said pan, a lid hinged to the said tank at its upper open end and adapted to be swung upward away from the tank for closing and opening the tank, an arm rigidly secured to the lid and projecting horizontally therebeyond, the arm moving up and down with the lid, an arm secured to the mechanically operated valve and adapted to lie normally parallel with the arm on the lid, and a connecting rod extending between and being pivotally connected to the free ends of the two arms, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY C. WEITZEL.

Witnesses:

E. Walton Brewington,
Mary M. Magraw.