

E. F. ROGERS.
FLUID REGULATOR.

No. 185,134.

Patented Dec. 5, 1876.

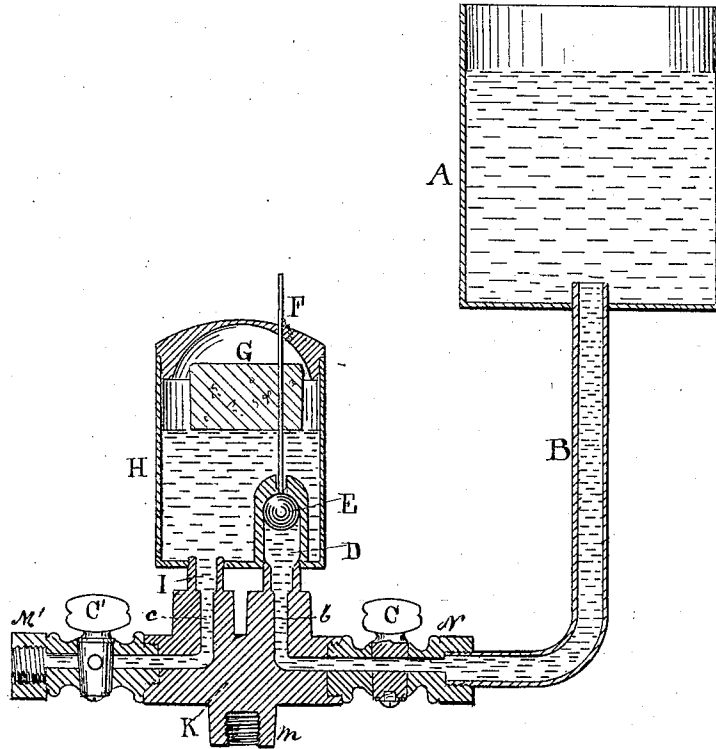


Fig. 1.

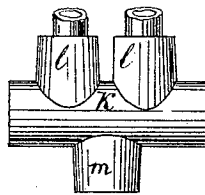


Fig. 2.

WITNESSES

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UNITED STATES PATENT OFFICE

EDWARD F. ROGERS, OF CHELSEA, MASSACHUSETTS.

IMPROVEMENT IN FLUID-REGULATORS.

Specification forming part of Letters Patent No. 185,134, dated December 5, 1876; application filed October 25, 1876.

To all whom it may concern:

Be it known that I, EDWARD F. ROGERS, of Chelsea, in the county of Suffolk and State of Massachusetts, have invented an Improved Device for Regulating and Indicating the Flow of Fluids, of which the following is a specification:

My invention relates to a means for regulating and indicating the flow of fluids through a reservoir. It is designed more particularly to be used in connection with a hydrocarbon or vapor burner; but it may be employed as an independent measurer and indicator for fluids of any description.

The invention consists in the connection, with a reservoir for holding fluids, of a smaller reservoir or chamber, which is kept supplied with fluid to a certain required amount, and when fully supplied the flow of fluid is stopped by means of a valve operated by a float, to close the opening through which the fluid passes.

The fluid in the secondary reservoir or chamber passes to the burner, and, as it is consumed, the supply decreases, and, as the float falls, the valve is caused to open, to admit of a further supply, thus causing a steady and limited though sufficient feed to the burner, and insuring safety and reliability of operation.

The accompanying drawing represents a vertical section of an apparatus embodying my invention, and also a view of the support for the regulating-chamber.

A represents a reservoir, which may be of any desired size or form, and is provided with a delivery-pipe, B, connected at its lower end with a section of pipe, N, provided with a cock, C, for shutting off the flow of oil from the reservoir when necessary. The pipe N is connected to a T-piece or support, K, which is cast in one piece, and is provided with the separate passages *b* and *c*. It has also a screw-threaded hollow projection, *m*, on its under side, for attaching the support to a stand. In the bottom of the reservoir or chamber H is a valve-chamber, D, which connects with the passage *b* in the T-piece K. In the upper end of the valve-chamber D is an opening, through which passes the oil or fluid into the chamber H. E represents a ball-valve, which moves

freely up and down in chamber D, and is connected with a rod, E, that passes through the opening in the upper part of valve-chamber D, and through a float, G, of cork or other suitable material, to which it is attached, so as to move with the same. The rod E extends upward through the cover of chamber E, and serves as an indicator to denote the height of the liquid in chamber H. The chamber H is provided with an outlet, I, connecting with the passage *c* in the T-piece or support K that leads to the burner.

The height of the liquid in chamber H is to be governed by the supply of fluid required for the burner, and when a sufficient quantity has entered chamber H from the reservoir A, the ball-valve E, being raised by the float, closes the opening in the upper part of valve-chamber D, and stops the flow of fluid in the chamber H. As the fluid passes out through the exit-pipe I to supply the burner, the float falls, and, the valve being opened, a further supply is furnished to chamber H.

The burner is thus always kept supplied with the requisite amount of fluid, and no more is allowed to pass than is actually required, and all danger and inconvenience incident to an over-supply are obviated, and the utmost safety and ease of operation are secured.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of the elevated reservoir and a chamber communicating through its lower end with the reservoir and with an outlet, said chamber carrying a float, and having a valve-seat adapted to a valve arranged below the seat, and regulating the inward upward flow of the oil, as specified.

2. In combination with the chamber A, the T-piece or support K, provided with the indirect passages *b* and *c*, as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

E. F. ROGERS.

Witnesses:

J. H. ADAMS,
EDGAR E. MANN.