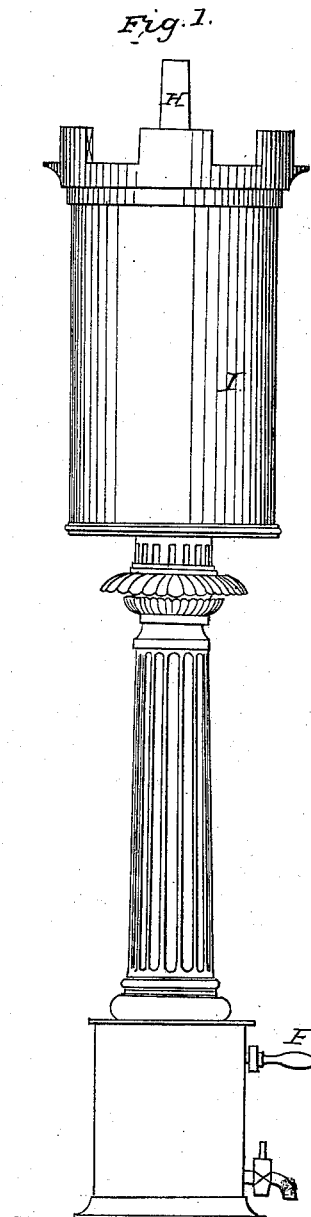
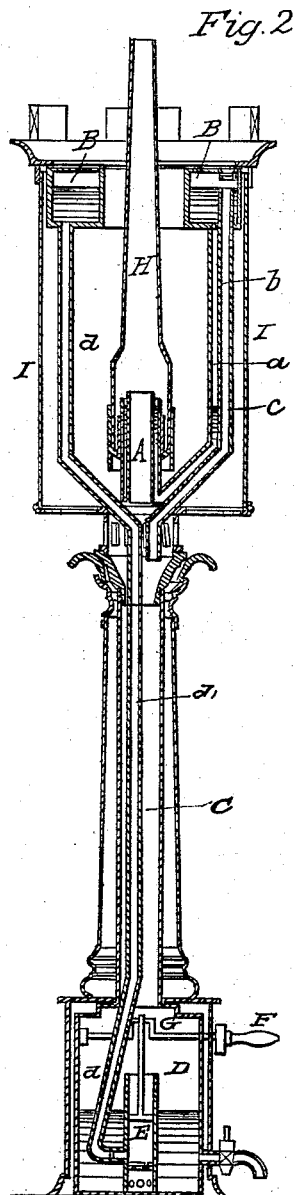


H. B. FERNALD.

Lamp.

No. 3,591.

Patented May 17, 1844.



UNITED STATES PATENT OFFICE.

HENRY B. FERNALD, OF BOSTON, MASSACHUSETTS.

LAMP.

Specification of Letters Patent No. 3,591, dated May 17, 1844.

To all whom it may concern:

Be it known that I, HENRY B. FERNALD, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Lamps, and that the following description and accompanying drawing taken in connection constitute a full and exact specification of the construction and operation of my said invention.

Figure 1 represents an elevation of a lamp constructed on my improved plan, and Fig. 2 is a central and vertical section of the same.

In this lamp, A, Fig. 2, denotes the burner which is constructed, and supplied with a wick, like the burners of ordinary Argand, or Carcel lamps. At an elevation of about five or six inches above the burner, a distributing reservoir or fountain B, is placed, and communicates with the burner by means of a tube A, which proceeds from the bottom of the fountain B, and opens into the wick tube case of the burner. By the side of the tube *a*, another tube *b*, is arranged. Its upper end passes through the bottom of the fountain B, and continues upward, and opens just beneath the top thereof, as seen in the figure. Where the tube *a*, and *b*, are connected with the bottom of the fountain, they are to be soldered, or so fitted thereto that no oil can escape downward around their exterior sides. The tube *b*, opens into the tube *a*, at *c*, or at a level just below the top of the burner A; and the tube *b* continues downwards, and terminates and opens just below the burner as seen in Fig. 2, or in such manner that any oil which may flow downward through it may be discharged into the interior of the column or stand C, of the lamp, and thence into the base or main reservoir D. A forcing pump E, is placed within the reservoir D, and is actuated by a crank shaft G, having a lever or crank E, upon its external end, or that which projects through the base; or it may be operated by any other suitable means. A tube *d*, leads from the force pump E, to the distributing reservoir B.

The opening of the tube *a*, into the reservoir, B, should be very small, or it should be of such size as will permit a quantity of

oil to flow down the tube *a*, equal to the amount consumed by the burner. The excess above what is required by the wick, during the process of combustion, will flow through the orifice *c*, and into the tube *b*, and thence down the column C, and into the base D. Whenever the oil in the fountain B, runs low, or it becomes necessary to increase the supply therein more oil may be forced into the same by means of the forcing pump—and when the oil rises in the fountain B, above the height of the top of the tube *b*, it will escape through the tube *b*, and run back into the base D. Consequently by means of the fountain B, and the tubes *a*, and *b*, the level of the oil in the burner may be constantly maintained.

For convenience of regulating the flowage of oil down the tube *a*, I intend to provide it with a stop cock, or screw valve by which the opening for the passage of the oil from the reservoir B, into the same, may be enlarged or diminished at pleasure.

The chimney of the burner is seen at H, and the glass shade surrounding the same at I.

I claim—

The apparatus added to, and combined with the burner and the reservoir D, for the purpose of maintaining the oil in the wick case at a constant level with respect to the wick; the same consisting of the distributing fountain B, and tubes *a*, and *b*, proceeding therefrom, and opening into, or communicating with each other at *c*, (or at the level or about the level of the top of the burner) and with the column C, or reservoir D, as before set forth, the whole being arranged and operating in connection with the burner and fountain beneath the same, substantially as herein above specified.

In testimony that the foregoing is a true description of my said invention and improvement I have hereto set my signature this eighth day of April in the year A. D. 1844.

HENRY B. FERNALD.

Witnesses:

R. H. EDDY,
JOHN NOBLE.