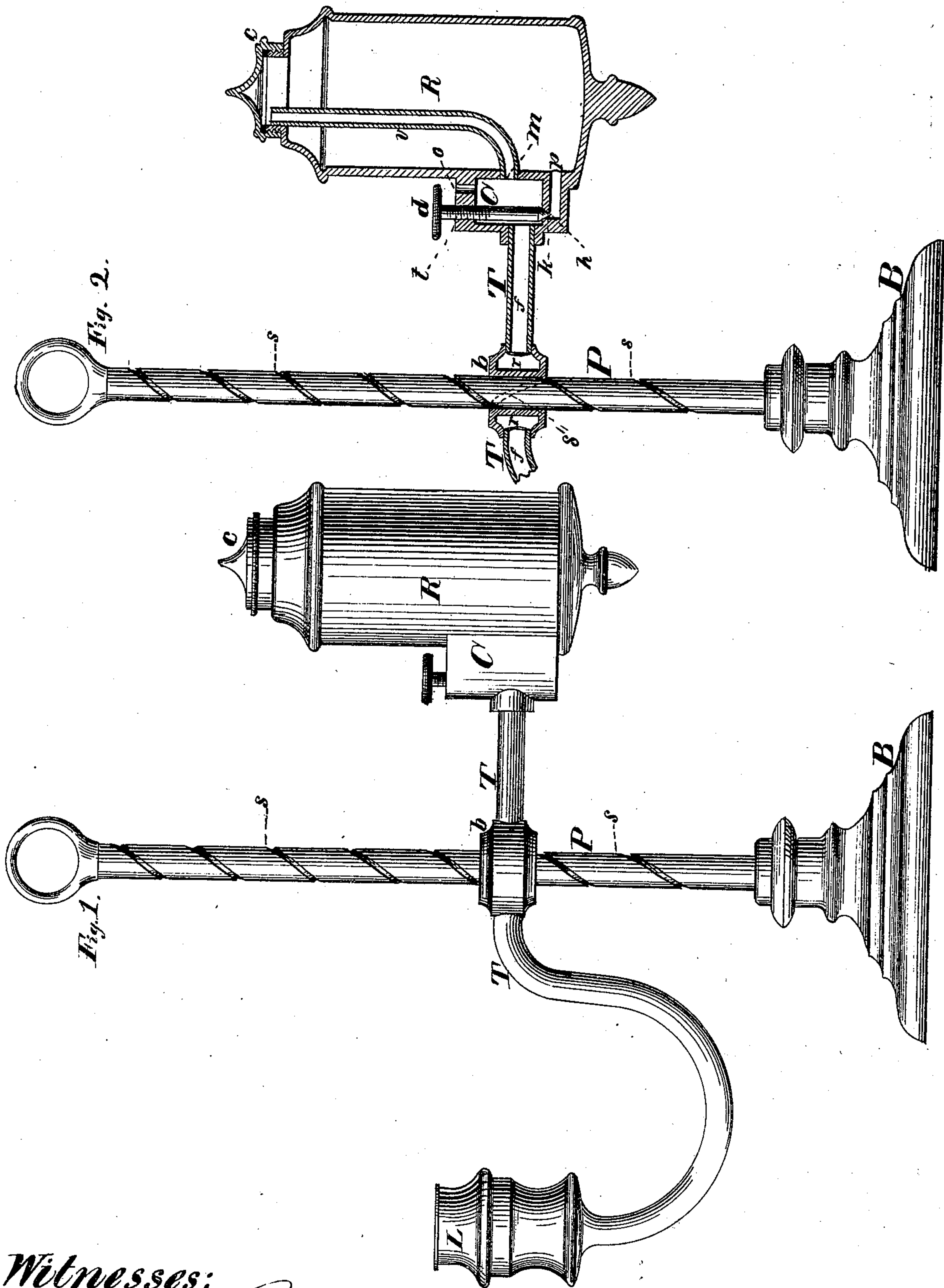


R. H. WEBB.
FOUNTAIN-LAMP.

No. 177,045.

Patented May 2, 1876.



Witnesses:
Michael Ryan
Edward B. Sherry.

Robert H Webb
By his Attys
Brown & Allen

UNITED STATES PATENT OFFICE.

ROBERT H. WEBB, OF BROOKLYN, ASSIGNOR TO HIMSELF AND JOHN R. HILL, OF LONG ISLAND CITY, NEW YORK.

IMPROVEMENT IN FOUNTAIN-LAMPS.

Specification forming part of Letters Patent No. 177,045, dated May 2, 1876; application filed March 3, 1876.

To all whom it may concern:

Be it known that I, ROBERT H. WEBB, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Fountain-Lamps; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, which forms part of this specification.

My invention has for its objects to secure a more uniform feeding of oil from, and the more convenient filling of the reservoir with oil or other hydrocarbon used for illumination in fountain-lamps.

The invention consists, partly, in a chamber into which the oil feeds from the reservoir before flowing through the tube which carries the oil of the burner, said chamber communicating with the reservoir by passages for air and oil, such passages being so arranged that the lower mouth of the air-passage can admit air to the reservoir only when the oil in the chamber is drawn out enough to partly uncover the lower mouth of the air-passage, and also in such a manner that air passing through the air-passage cannot meet the descending oil in any part of its passage, which construction permits the passage of air from the chamber into the reservoir, and oil from the reservoir into the chamber in minute quantities, and in a quiet and uniform manner.

My invention further consists in the novel arrangement of a valve for shutting off the oil-passage from the reservoir when desired, as in filling, cleaning, and transporting the lamp from place to place.

The accompanying drawing illustrates the application of my invention to that form of fountain-lamp known as the "student lamp."

Figure 1 represents a side view of such a lamp; and Fig. 2, a vertical section through the oil-reservoir, vent-chamber, passages for oil and air, tube for conveying oil to the burner, and the boss in said tube.

R is the oil-reservoir, which is filled through an opening in the top, said opening, when the lamp is in use, being closed by the cover *c*, which screws into the top of the reservoir. C is the chamber into which oil first flows from the reservoir R when the lamp is in use, the

oil passing through the passage *p*, while air passes upward through the vent-tube *v*. The interior of the chamber C communicates with external air through one or more openings, *o*, in the top of said chamber. Oil flows from the chamber C to the burner L through the tube T. The screw-valve *h* shuts off the flow of oil from the reservoir R to the chamber C when screwed down into the position shown in Fig. 2, *d* being the milled head, *t* the screw-thread, and *k* the conical valve or point of said screw, which valve fits the valve-seat *k* at the end of the oil-passage *p*. When the passage *p* is thus closed, the reservoir may be filled, as hereinbefore described, without causing the oil to flow into the chamber C, and to overflow the same, as would be the case otherwise; and the lamp may also be more conveniently transported and handled, as the fluctuations of the oil in the chamber C, which partially uncover the lower mouth of the vent-tube *v*, would otherwise allow air to pass upward through said tube into the reservoir R, and the oil would then feed through the passage *p* in excess of the requirements for illumination, and would either overflow from the chamber C or from the wick-tube of the burner L. The upper margin *m* of the lower mouth of the vent-tube *v* is intended to be on a level with the top of the wick-tube in the burner L. The capillary action of the wick constantly draws oil from the wick-tube, lowering the level of the oil therein, and also, in obedience to the laws of hydraulics, lowering the level in the chamber C, which communicates freely with the wick-tube by the pipe T; but the slightest fall in the level of the oil in the chamber C allows a minute bubble of air to enter under the margin *m* of the vent-tube *v*, which bubble rises through said vent-tube to the top of the reservoir R, and permits an equal bulk of oil to pass from said reservoir through the oil-passage *p* into the chamber C, the screw-valve *h* being screwed away from the valve-seat *k* to open the passage *p* when the lamp is in use. This passage of air and oil respectively through their proper passages is repeated at such minute intervals as to become practically equivalent to a constant flow, preventing the disagreeable gurgling and fit-

ful operation of other fountain-lamps. On the inside of the hollow boss *b*, which contains an annular passage, *v*, uniting the parts *f* of the passage in the tube *T*, lying on opposite sides of the pillar *P*, I form an abrupt female screw-thread, *s*, which fits a male screw-thread formed on the pillar *P*, that supports the said tube *T*, burner *L*, chamber *C*, reservoir *R*, and the appurtenances thereof, joined together in the manner shown, said pillar being supported at the bottom by the pedestal *B*. This arrangement permits the easy turning of the burner about the pillar *P*, and the raising and lowering of the same with one hand only, and the burner will remain where

it is adjusted without the use of a set-screw to fasten the boss *b* to the pillar *P*.

I claim—

1. The vent-tube *v*, in combination with the chamber *C*, the passage *p*, and reservoir *R*, substantially as and for the purpose herein described.

2. The valve *h*, in combination with the passage *p*, reservoir *R*, chamber *C*, and vent-tube *v*, substantially as and for the purpose herein described.

ROBERT H. WEBB.

Witnesses:

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