

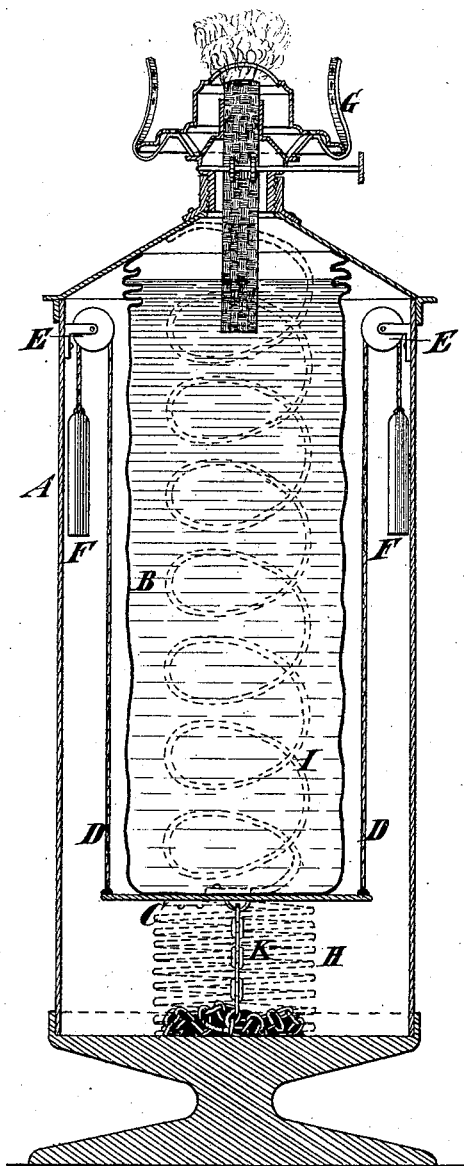
(No Model.)

F. SAUNDERS.

LAMP.

No. 306,962.

Patented Oct. 21, 1884.



Witnesses:

James Bowen.
A. L. Brown.

Inventor:

Frank Saunders,
by his attorney,
Edwin H. Brown

UNITED STATES PATENT OFFICE.

FRANK SAUNDERS, OF BROOKLYN, NEW YORK.

LAMP.

SPECIFICATION forming part of Letters Patent No. 306,962, dated October 21, 1884.

Application filed May 26, 1883. (No model.)

To all whom it may concern:

Be it known that I, FRANK SAUNDERS, of Brooklyn, in Kings county, and State of New York, have invented a certain new and useful Improvement in Lamps, of which the following is a specification.

I will describe a lamp embodying my improvement, and then point out the improvement in claims.

10 The accompanying drawing is a central vertical section of a lamp embodying my improvement.

A designates the case of the lamp. It may be of any appropriate material and of any desirable form.

15 B designates the fluid-reservoir, which, as here shown, consists of a cylindrical bag of flexible material—such, for instance, as a woven fabric coated with any material or compound which will resist the passage of oil. I shall preferably make this bag of a woven fabric of light texture, and apply to it a thin layer or film of a composition of glue and glycerine or molasses, or of glue, glycerine, 25 and molasses. This composition will preferably be applied to the interior of the bag, as the oil in the bag will then prevent adjacent portions of the bag from adhering together. This bag may be attached to the top of the case A and supported thereby. On the bottom of this reservoir is a plate or bar, C, preferably made of metal, and having arms which extend beyond the walls of the reservoir. To these arms are attached cords D, 35 which pass over pulleys E, situated in the upper part of the case A, and are attached to weights F, which are arranged between the reservoir and the case. The top of the case may be removable, and then the cords D may be detachably connected to the arms of the plate or bar C, so as to permit of the removal of the reservoir. Hooks on the ends of the cords and holes in the arms will constitute a simple convenient means for detachably connecting the cords with the arms. 45 The weights F exercise a constant force, tending to elevate or upwardly contract the reservoir, and if employed without some counteracting agent would, as soon as they become able to overbalance the fluid in the reservoir, cause it to overflow. To avoid this I attach a chain, K, preferably made of metal, to the bottom of the reservoir, or to the plate

or bar C. As the fluid is consumed and the bottom of the reservoir is raised by the weights, 55 more and more of the chain is picked up, and hence the force of the weight is met by a gradually-increasing counteracting force in the chain. The weight of the chain will be so proportioned to the size of the reservoir, 60 the weight of the fluid to be used in the latter, and the heft of the weights that the weights will maintain the fluid at the proper level without causing it to overflow. Any other weight or series of weights which may be 65 gradually taken up can be used instead of a chain, or several chains can be used instead of a single chain. A burner, G, of any suitable kind, is fitted in the top of the case, and is preferably removable, as usual. The reservoir may be filled through the opening in 70 which the burner is fitted.

In lieu of weights for contracting the reservoir or raising its bottom, I may employ a spring, H, (shown in dotted lines,) arranged 75 under the reservoir, and acting to push it upward, or a spring, I, (shown in dotted outline,) connected to the top of the case and bottom of the reservoir, and acting so that it will pull the latter upward. 80

It is obvious that by my improvement the level of the fluid in the reservoir would be automatically maintained at the proper point.

What I claim as my invention, and desire to secure by Letters Patent, is— 85

1. In a lamp, the combination of a reservoir capable of being contracted upward, or of having its bottom raised to elevate the fluid within it, weights and pulleys for upwardly contracting said reservoir, and a chain depending from the bottom of said reservoir and exerting a constantly-increasing counteracting force, substantially as specified. 90

2. In a lamp, the combination of a reservoir capable of being contracted upwardly, or of having its bottom raised to elevate the fluid within it, means for contracting it upwardly, or of raising its bottom gradually as the fluid is consumed, and a chain depending from the bottom of said reservoir and exerting a constantly-increasing counteracting force, substantially as specified. 100

FRANK SAUNDERS.

Witnesses:

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