B. HEMPSTEAD.

LAMPS.

No. 192,259. Patented June 19, 1877.

Fig 1

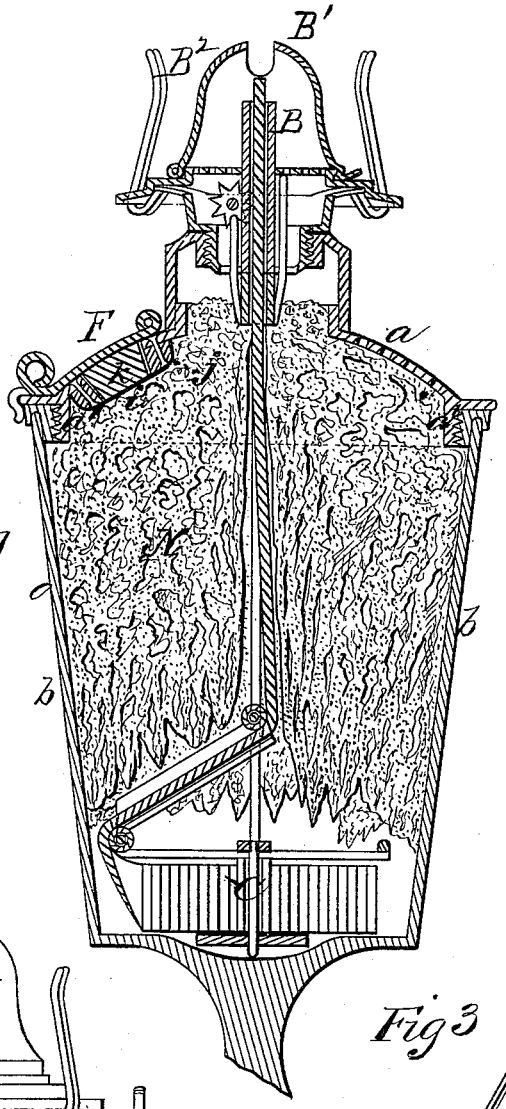


Fig 2

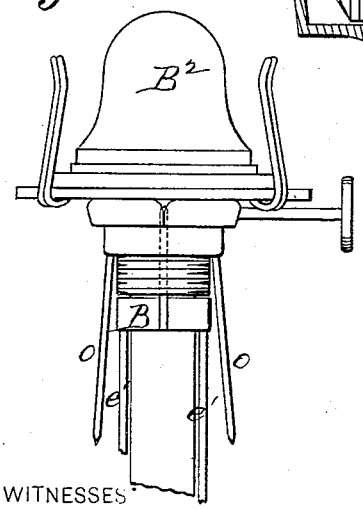
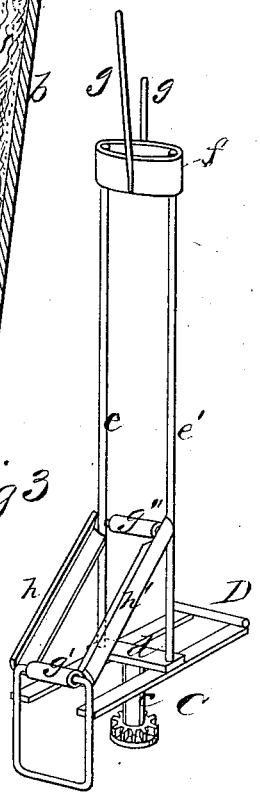


Fig 3



WITNESSES

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IMPROVEMENT IN LAMPS.

Specification forming part of Letters Patent No. **192,259**, dated June 19, 1877; application filed May 12, 1877.

To all whom it may concern:

Be it known that I, BEALL HEMPSTEAD, of Little Rock, in the county of Pulaski and State of Arkansas, have invented a new and valuable Improvement in Lamps; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a vertical central section of my improved lamp, and Figs. 2 and 3 are detail views.

This invention has relation to improvements in lamps for burning coal or other inflammable or explosive oils.

The objects sought to be obtained are, mainly, to obviate the danger of explosion by the use of an absorbent material, which, by filling up the body of the lamp, prevents the accumulation of gases, and, in the event of the upsetting of the lamp or the casual breaking thereof, prevents the spreading of the oil and a dangerous conflagration; secondly, to devise means for storing in the lamp a large supply of wick, so that the necessity of opening the same and applying new wick will be obviated; and, finally, to devise means for commodiously and safely supplying oil to the lamp.

The nature of my invention will be fully understood from the following description.

In the annexed drawings, the letters *a* and *b* designate, respectively, the top and body of my improved lamp A. The top *a* has its upper central part provided with the collar for the attachment of the burner, and with a lower screw-threaded flange, *a'*, by means of which the top is readily and expeditiously secured to the body, so as to form an air-tight joint therewith. The body of the lamp is of sufficient size to form a proper receptacle for a suitable sponge-like absorbent material, N, which, when introduced therein, will take up and hold the oil, and, in the event of the casual breakage of the lamp-body aforesaid, prevent it from being thrown or from flowing in every direction, and causing an extended and destructive fire. It will also prevent the accumulation of explosive or inflammable gases in the said body by filling up the space therein. As a further means of guarding against explosions from the accumulation of gas in the lamp-body, the top of my lamp will be provided with perforations, through which, in the event of the formation of gas, the accumulation would pass off. The perforations are practicable and useful for the reason that the oil is held and prevented from flowing out therefrom, should the lamp be tilted or upset, by the absorbent. The wick passes up through the wick-tube B and tip B^1, in the usual manner, and, as it is consumed, is fed by means of the usual wick-raising wheel and its operating-rod to the burner B^2. It passes thence down into the body of the lamp, and is coiled in any suitable manner, and in quantity proportionate to the size of the said body, around a reel, C, rotating freely in the body of the lamp, at the lower part thereof. This reel is composed of a shaft, surrounded by a rotating thimble or sleeve, *c*, that has its bearings at one end on the bottom of the lamp-body, and at the other is secured to a central cross-bar, *d*, of a metallic frame, D. From this latter two spaced metallic rods, *e e'*, extend to, or nearly to, the under side of the top aforesaid, and at their upper ends these rods are connected by an open loop, *f*. From this loop extend upward two arms, *g*, that engage the under side of the lamp-top, so that, as the latter is turned in the act of being secured to the body, the reel will turn therewith, and prevent the wick from being unwound from the same. There also project downward from the cover into the sponge or absorbent material N spurs or rods *o*, of suitable rigidity, that, during the rotation of the top above described, will also cause the said absorbent to rotate, and thereby prevent the rods *e e'*, and consequently the wick, from being twisted.

The wick, on its way from the reel to the burner, is first passed over an anti-friction roller, *g'*, arranged at one end of the frame D; thence inward, over a roller, *g''*, having its bearings in the spaced rods *e e'* aforesaid; thence upward between the latter, through the open loop *f*, above mentioned; and, finally, into the lower end of the wick-tube aforesaid,

where it is seized by wick-raiser. Between the rollers g' g'' aforesaid are arranged parallel ways or guides h h', that not only serve to direct the wick in its upward movements when the wick-raiser is actuated, but protect it from being twisted between the said rollers and from the friction of the absorbent material, which, by obstructing the movement of the wick, would greatly increase the effort required in raising the same.

In order to fill the lamp without removing the lid, I provide the latter with an aperture, i, provided upon its under side with a (preferably wooden or metallic) boxing, j. The orifice thus made will be larger at top than at bottom, and will be closed by an air-tight stopper, k, that is secured to a hinged vertically-vibrating latch, F, the free edge of which is sprung over the adjacent rim or edge of the top. The stopper will be made of rubber, cork, or other suitable material, or the apertured frame j may have a facing of rubber or other elastic material which will cause the stopper to form an air-tight joint therewith.

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

1. A lamp having a perforated top and its body partly or wholly filled with an absorbent material, and the wick passing through the absorbent material, substantially as specified.

2. The combination, with a lamp filled with absorbent material, of an inside reel, arranged at or near the bottom of the same, and a wick coiled around said reel and extending through the absorbent to the burner, substantially as specified.

3. The combination, with a lamp filled with an absorbent material and a screw cap, of the rods o, projecting downward into the said material, substantially as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

BEALL HEMPSTEAD.

Witnesses:
JNO. C. PENY,
C. T. WALKER.