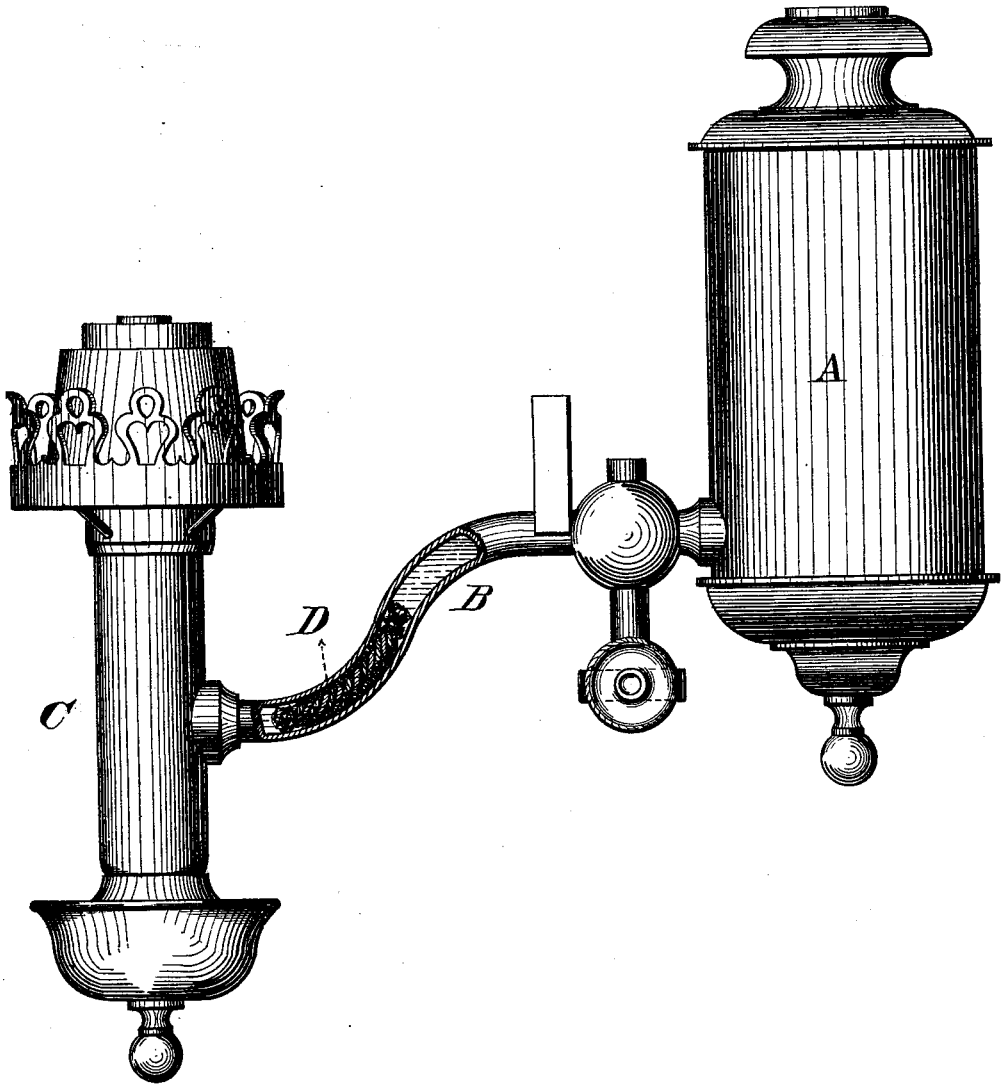
E. S. DRAKE.
Lamp.

No. 220,707. Patented Oct. 21, 1879.



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UNITED STATES PATENT OFFICE.

EDWIN S. DRAKE, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN LAMPS.

Specification forming part of Letters Patent No. **220,707**, dated October 21, 1879; application filed June 26, 1877.

To all whom it may concern:

Be it known that I, EDWIN S. DRAKE, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Lamps; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to student-lamps and chandeliers where the oil is conveyed from a fount, through a tube or arm, to a burner; and it consists in a device constructed and arranged as described, whereby the flow of oil is so retarded through the tube that in case of the lamp or chandelier being tilted out of its proper position the oil will not overflow the top of the wick-tube while the displacement continues, as will be hereinafter more fully set forth.

In the annexed drawing, which fully illustrates my invention, the figure represents a side elevation, partly in section, showing one form of my invention.

A represents a receiver inclosing an oil-reservoir having a valve at its base, through which the oil is discharged into the bottom of the receiver, flowing thence, through the arm B, to the burner-tube C. In this class of lamps, if the lamp should by any accident be tilted out of its proper position, the oil would pass freely from the reservoir, through the conveying-tube, to the wick-tube, and, overflowing the same, cause, if the lamp were lighted, disastrous consequences.

The object of this invention is to make such a disaster practically impossible; and to this end I provide a means or device for retarding the flow of oil through the conveying-tube, so that the oil will not overflow the wick-tube even when tilted. This device only operates when such a tilting of the lamp occurs as would but for its presence produce a disastrous overflow of the oil. At other times it is entirely neutral.

In the drawing I have shown a portion of the conveying-tube B filled with wicking or other capillary material, D, which fully answers the purpose intended.

In the student-lamp the level of the oil is maintained in the wick-tube C at the height of its point of exit from the receiver A by the discharge from the reservoir through the valve at its base as the oil is consumed, and the opening of the valve is uncovered, which permits air to pass in through the valve-opening to take the place of the oil discharged. Thus, while the lamp remains in its proper position, an oil-seal is maintained, preventing the outflow of any oil except that demanded to maintain the flame.

It will be seen that upon the tilting of the lamp this oil-seal would be removed from the valve by the passage of the oil from around it through the arm and over the top of the wick-tube, and air would be admitted through the valve into the reservoir, permitting the discharge of all the oil contained therein.

By the introduction, as before described, of a short section of wicking or other fibrous material into the tube connecting the wick-tube with the oil-receiver, (the passage of oil through which shall be slow,) this overflow is prevented, the oil-seal provided about the valve-opening of the reservoir being maintained even if the lamp is kept for some time out of its proper position.

I am aware that wicks have been used in vapor-burning devices, by which the flow of liquid from an elevated reservoir to the burner has been effected; but the wick used in these devices has been used only as a supplement to and always in combination with a cock regulating the flow.

I am also aware that wire-gauze has been introduced into a somewhat similar position to that of the wick herein described in lamps of this class, and this has also been used in connection with a cock controlling the flow, and is insufficient to produce the result produced by my device.

I am also aware that an automatic valve has been employed in the tube connecting the reservoir and the wick-holder.

My invention differs from these devices in providing, in combination with the automatic

valve of an oil-reservoir, as described, a short wick, affording a series of small tubes of such a length that while they do not impede the regular flow of oil to the burner of the lamp when in its proper position, they do produce such a retardation of the flow of oil as to operate, in combination with the valve having its aperture of exit closed by the oil-seal, against an overdischarge of the oil from the reservoir, as has been before described, when the lamp is accidentally tilted out of position.

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

In a study or other lamp in which the oil flows from the reservoir to the wick-tube through a laterally-extending arm, a check to the flow of the oil, located between the reservoir and the wick-tube, and in combination with the automatically-operating valve thereof, composed of fibrous material, and separated from the burning wick by a body of oil, whereby sufficient oil is permitted to pass to supply the flame, and an overflow of the same is prevented in whatever position the lamp may be placed, as set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

EDWIN S. DRAKE.

Witnesses:
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