W. STAEHLEN.

Lamp.

No. 219,659. Patented Sept. 16, 1879.

Fig. 1.

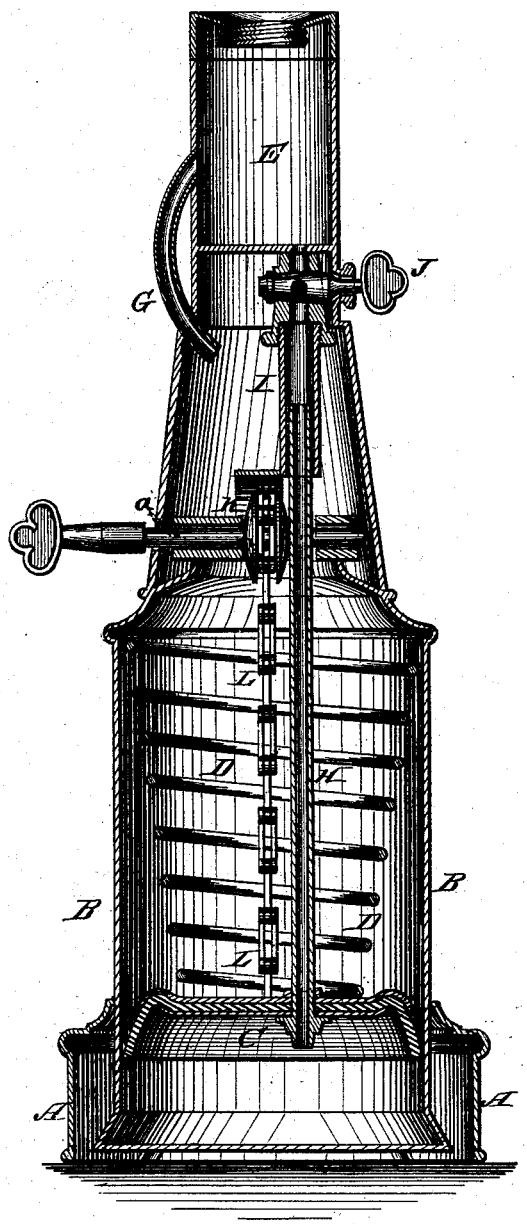
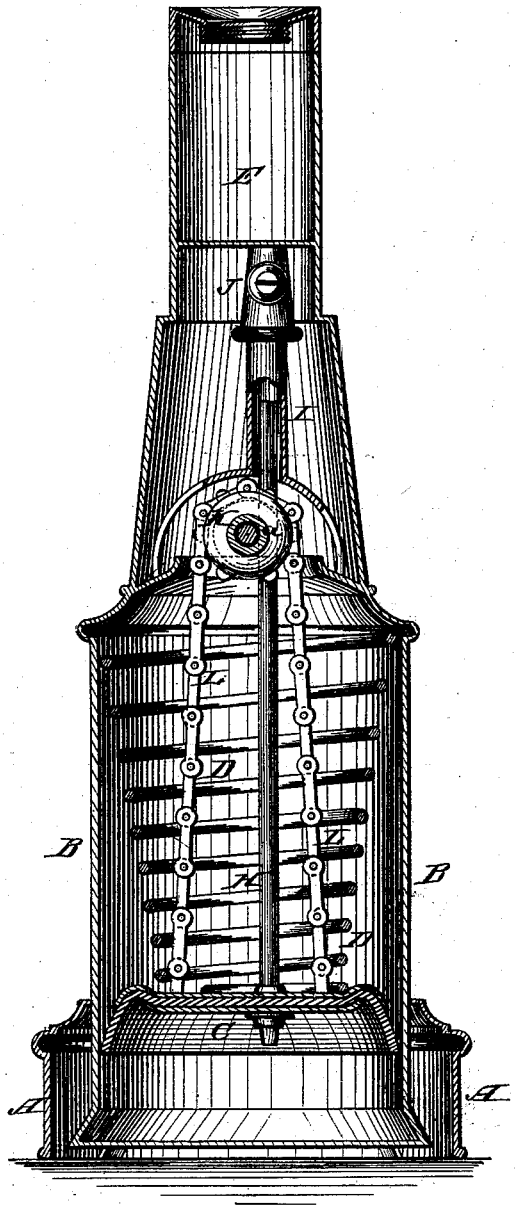


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM STAEHLEN, OF BROOKLYN, NEW YORK, ASSIGNOR TO BENNETT B. SCHNEIDER, OF NEW YORK CITY.

IMPROVEMENT IN LAMPS.

Specification forming part of Letters Patent No. **219,659**, dated September 16, 1879; application filed January 25, 1879.

To all whom it may concern:

Be it known that I, WILLIAM STAEHLEN, 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 drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to that class of lamps in which the oil is forced upward by means of a piston operated by a spring; and the nature of my invention consists in a mechanical lamp having a small reservoir elevated above the storage-reservoir, an overflow-pipe connecting the two reservoirs, a telescopic tube connecting the upper reservoir with the piston, and a peculiar device for raising the piston, and in the combination of parts, as will be hereinafter more fully set forth.

In the annexed drawings, which fully illustrate my invention, Figure 1 is a vertical section of a lamp embodying my invention. Fig. 2 is also a vertical section of the same at right angles with the section shown in Fig. 1.

A represents the base of the lamp, supporting the lower or storage reservoir, B, within which is the piston C, forced downward by means of a spring, D. The upper end of this spring bears against an offset or other device in the reservoir, and the lower end bears on top of the piston.

Elevated above the storage-reservoir B, and separated therefrom, is a small reservoir, E, in the upper end of which the burner is to be secured, or otherwise arranged, so that the wick will hang down into said reservoir. The two reservoirs E and B are connected by means of an overflow-pipe, G, as shown.

In other lamps of this class the oil is forced up and overflows the top of the wick-tube, and the surplus oil drips into the reservoir above the piston.

In my lamp there is the additional small reservoir E, elevated above and separated from the main reservoir, and the overflow-pipe G limits the rise of oil above a certain point, and this without any regard to its capacity, whether large or small. This reservoir E may have a tube passing through it and connecting with the outer air, to permit the passage of air to the inside of the flame.

The overflow G may be located at any point desired in the reservoir, and prevent the rise of oil above its point of location.

To the piston C is permanently attached a vertical tube, H, the lower end of which projects below the piston, and the upper end extends into a vertical tube, I, attached to and depending from the bottom of the elevated reservoir E. These two tubes H and I thus form a telescopic tube for conveying the oil from the lower to the upper reservoir, which telescopic tube extends in the traverse of the piston downward, forming a continuous tube from the lower to the upper reservoir.

In the tube I is a regulating cock or screw, J, by which the inflow of oil into the upper reservoir is regulated to the requirements of combustion. This regulating cock or screw extends through the side of the lamp, where it can be easily reached.

The piston C is elevated by means of a spur-wheel, K, engaging with openings in a flat chain, L, passing over the wheel, and having both its ends fastened to the piston.

Ordinarily, in this class of lamps, the piston is raised by means of a rack and pinion; but this cannot be used in my lamp, as the rack would come in contact with the bottom of the elevated reservoir; hence it necessitates the employment of the chain and spur-wheel.

The shaft *a* of the spur-wheel extends through the side of the lamp, and is on its outer end provided with a suitable knob or key for turning the wheel.

With this construction of the lamp any of the illuminating-oils now in use may be burned with perfect safety, because the large reservoir has no connection, except through pipe H, with the reservoir from which the wick is supplied, and this upper reservoir has but a very small quantity of oil in it, but that quantity is maintained by the constant supply.

The large reservoir may be filled, if desired,

through the small reservoir and overflow, or through a suitable inlet made for that purpose in the upper part of the main reservoir.

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

1. In a lamp having a main reservoir with an interior piston operated by a spring or its equivalent, an auxiliary reservoir, E, elevated above and separated from the main reservoir, and in which a certain quantity of oil is maintained by the action of the piston and the overflow-pipe, substantially as herein set forth.

2. The overflow G, arranged in combination with the elevated auxiliary reservoir E and main reservoir B, substantially as and for the purposes herein set forth.

3. The combination of the two reservoirs B and E, the piston C, and the telescopic tube H I, all constructed substantially as and for the purposes herein set forth.

4. The combination of the two reservoirs B and E and tube H, the piston C, with spring D, and the chain L and spur-wheel K, all constructed substantially as and for the purposes herein set forth.

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

WILLIAM STAEHLEN.

Witnesses:

WILLIAM MILLSPAUGH,

C. H. WATSON.