W. H. SMITH.
Lamp.

No. 221,476. Patented Nov. 11, 1879.

Fig. 1.

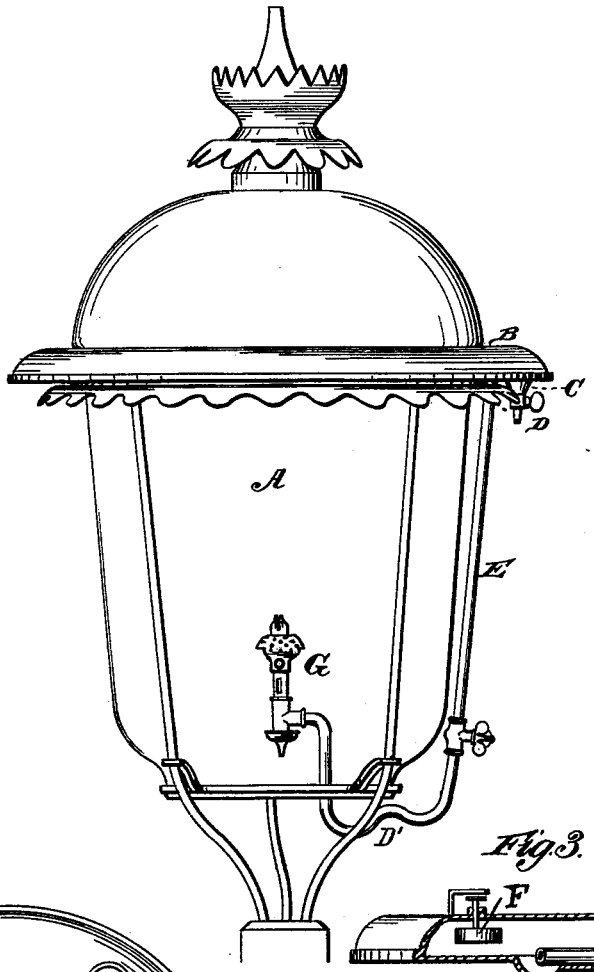


Fig. 2.

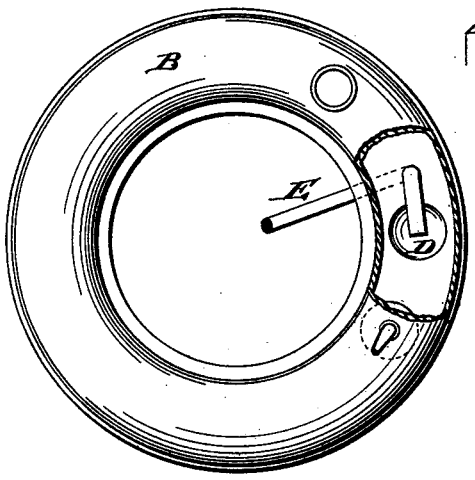
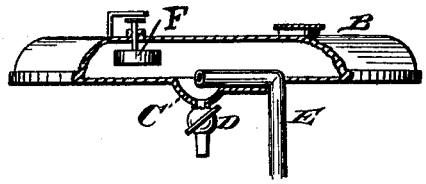


Fig. 3.



Witnesses.
Robt Ewatt.
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Attorney

UNITED STATES PATENT OFFICE.

WILLARD H. SMITH, OF NEW YORK, N. Y.

IMPROVEMENT IN LAMPS.

Specification forming part of Letters Patent No. **221,476**, dated November 11, 1879; application filed June 6, 1879.

To all whom it may concern:

Be it known that I, WILLARD H. SMITH, of New York city, in the county of New York 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 letters of reference marked thereon, which form a part of this specification.

This invention relates to certain improvements in that class of lamps in which gasoline or other light product of petroleum is employed as an illuminating agent, and it is particularly designed for street-lamps, although it is applicable to other kinds of lamps.

The gasoline and other petroleum products are generally contaminated with slight impurities, and often contain water in small quantities, which are apt to settle in the pipe leading from the reservoir to the burner of the lamp, and obstruct said pipe and extinguish the light, besides making it necessary to take the lamp to pieces and remove the obstructions in the tube or burner, which is a troublesome and inconvenient operation.

It is my object to overcome this difficulty, and to this end I provide the reservoir with a sediment well or receptacle formed in and extending below the bottom of the reservoir, a discharge cock or valve being placed at the lower part or end of said receptacle.

The pipe that conducts oil from the reservoir to the burner has its end bent so as to extend over the top of the receptacle, the orifice of said pipe being preferably placed on a level with the bottom of the reservoir, so that it may take as far as possible all the oil from the reservoir.

In the drawings, Figure 1 represents an elevation of a boulevard-lamp, showing my improvement applied thereto. Fig. 2 represents a top view of the reservoir detached, with a portion broken away to show the interior. Fig. 3 represents a side view of the reservoir detached, with a portion broken away.

The letter A represents a street-lamp, which may be of any suitable design, although that pattern known as the "Boulevard lamp" is preferable, and is illustrated in the present instance.

The letter B represents the gasoline-reservoir, and C a sediment receptacle or well formed at the bottom or lower part of the reservoir, and provided with a cock, D, or valve, by means of which any collected sediment or water may be drawn off. Said receptacle or well is located below the opening of the pipe E leading to the burner F, and preferably immediately below the upper end of said pipe, so as to receive and collect the sediment or water immediately below the point of entrance of the gasoline to the pipe E, in order to effectually prevent the entrance of any such sediment or water into the pipe E.

The cock or valve at the lower part of the receptacle or well also serves as a means of drawing off the gasoline from the reservoir, which is desirable where the lamps are only used periodically—as, for instance, in cities where the lamps are not put in use during moonlight nights—in which case there would be a waste of oil by evaporation while the lamps were not in operation.

The pipe E extends downwardly, and is bent and carried to the center of the lamp-glass, and being provided with a burner, G, of any suitable description. In the present instance a burner known as a "vapor-burner" is illustrated, in which the gasoline is vaporized by the heat of the flame and the vapor is burned to furnish the light.

I prefer to form in the lower horizontal portion of the pipe E a bend, D′, which serves to hold the gasoline in a body between the reservoir and burner and prevent any gas or vapor generated in the pipe from finding its way back to the reservoir.

The fount or reservoir is set at a slight inclination, so as to bring that portion from which the tube E extends below the other portions, to insure the entire consumption of the gasoline; and for the same purpose the mouth of the tube is placed as close as practicable to the floor or bottom of the reservoir, as shown in Fig. 3.

The reservoir in Fig. 3 is provided with a float, F, to indicate the level of the liquid therein.

I am aware that draw-off cocks have been applied to the bottoms of lamp-reservoirs, and also that feed-pipes have in some instances been arranged with their mouths elevated above the level of the bottom, with a view to avoid taking the sediment and other matter which may be deposited on the bottom. I claim neither of these features, broadly considered.

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

The combination, with the lamp-reservoir, of a sediment well or receptacle formed in and extending below the bottom of said reservoir, and provided with a draw-off cock or its equivalent, and a feed-pipe with its mouth or orifice placed over said receptacle, substantially as herein shown and described.

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

W. H. SMITH.

Witnesses:
VINTON COOMBS,
W. B. HALE.