J. S. BUTLER.

Lamp.

No. 204,193. Patented May 28, 1878.

Fig. 1.

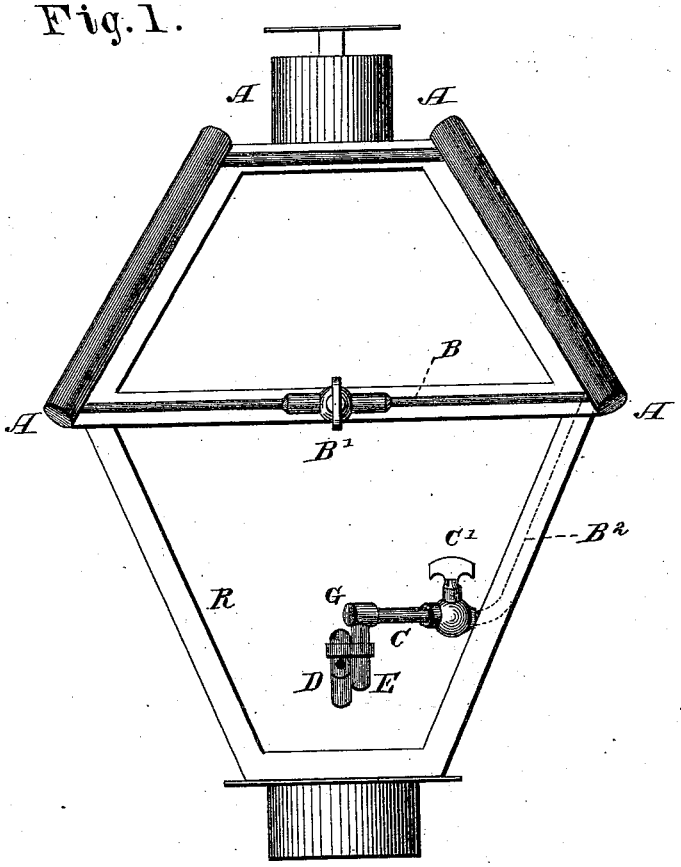
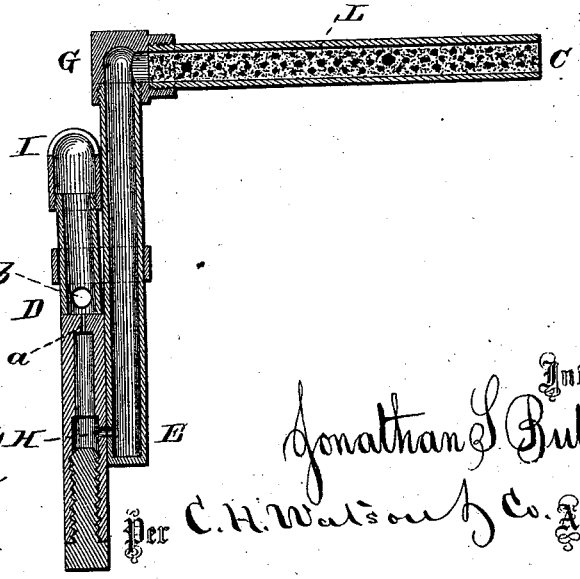


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

JONATHAN S. BUTLER, OF ROCK ISLAND, ILLINOIS.

IMPROVEMENT IN LAMPS.

Specification forming part of Letters Patent No. **204,193**, dated May 28, 1878; application filed December 10, 1877.

To all whom it may concern:

Be it known that I, JONATHAN S. BUTLER, of Rock Island, in the county of Rock Island and State of Illinois, have invented certain new and useful Improvements in Street-Lamps; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

My invention relates to street-lamps in which gasoline or other light hydrocarbon oils are used to produce the light; and the nature of my invention consists in the construction and arrangement of the burner and the combination of parts, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, which forms a part of this specification, and in which—

Figure 1 is a side elevation of a street-lamp embodying my invention. Fig. 2 is an enlarged vertical section of the burner.

R represents the lantern of a street-lamp made in any of the known and usual forms, it being preferably made in the form shown in the drawing. Along the corner-pieces of the upper portion of the lantern, which are inclined substantially in the manner shown, are secured reservoirs A A, in tubular or other suitable form, which reservoirs are connected at or near the bottom by horizontal tubes B having stop-cocks B^1, as shown.

Heretofore, in using reservoirs for gasoline or similar fluid on the lamps it has been customary to place them in a horizontal position, which necessitated a particular construction of the lantern, in so far as to make the horizontal bars strong enough to sustain the weight of the reservoirs and the fluid in them without causing them to sag down. By my arrangement of the reservoirs along the upper inclined bars of the lantern, the reservoirs may be applied to the ordinary lantern without any change in its construction, as the form and position of these inclined bars render them naturally strong enough to sustain all the pressure that will be brought to bear upon them.

One of the reservoirs A is, by a pipe, B^2, connected with the burner, and by means of the connecting-pipes B and their stop-cocks B^1 the oil in one or more of the reservoirs may be made to flow to the burner or shut off from the same, as required.

The burner consists of a horizontal tube, C, and two vertical tubes, E and D. One end of the horizontal tube C connects with the supply-tube B^2, and in said connection is a stop-cock, C′, for admitting or shutting off the supply of oil to the burner.

The body of the tube C is filled with a filling, L, of mixed sand and metal filings, which filling or packing is for the purpose of retarding the flow of oil from the reservoir to the burner. The inner end of the horizontal packed tube C is, by an elbow-joint, G, connected with the upper end of the vertical tube E. In the side near the lower end of this tube E is an aperture, H, which leads into the second vertical tube D, at or near the bottom thereof. The lower portion of this tube forms an enlarged chamber with a small outlet, *a*, leading into the upper part or air-chamber. *b* is the air-inlet into said upper chamber. At the top of this tube D is the tip I, where the gas is lighted. This tip is below the joint G, so that the heat of the flame upon said joint and upon the upper part of the tube E will convert the fluid into gas as it passes through said tube E to the tube D.

The tube D may be held in place at the side of the tube E by a band or any other suitable means.

Instead of three separate tubes, C, E, and D, one tube, bent in proper shape, may be used; but in all cases it should be so made that the flame will heat the tube at a point above where the fluid passes into the air-tube.

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

In a street-lamp, the reservoirs A, attached to the upper inclined bars of the lantern-frame, and connected at their lower ends by the tubes B, having stop-cocks B^1, in combination with the supply-tube and burner, as herein set forth.

JONATHAN S. BUTLER.

Witnesses:

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