C. C. CHARLES.

STREET LAMPS.

No. 181,770. Patented Sept. 5, 1876.

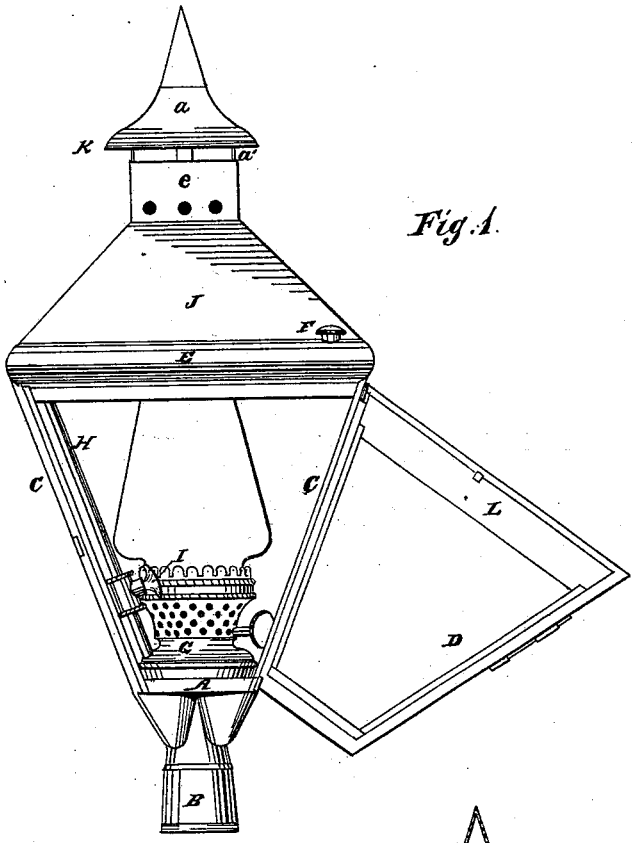

Fig. 1.

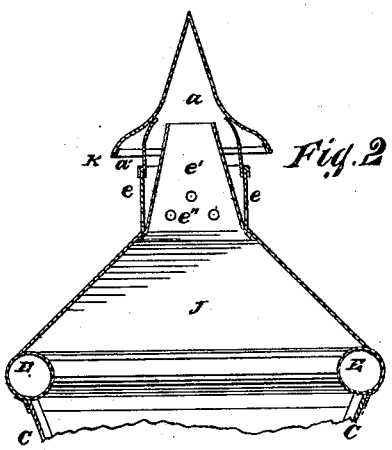

Fig. 2.

Witnesses:
Ulman & Strong.
H. F. Barnes.

Inventor:
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By F. H. Barnes.
(his atty)

UNITED STATES PATENT OFFICE.

CHARLES C. CHARLES, OF ENGLEWOOD, ILLINOIS.

IMPROVEMENT IN STREET-LAMPS.

Specification forming part of Letters Patent No. **181,770**, dated September 5, 1876; application filed June 17, 1876.

To all whom it may concern:

Be it known that I, CHARLES C. CHARLES, of Englewood, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Street-Lamps, of which improvements the following is a full, clear, and exact description, which will enable others skilled in the art to which my invention appertains, to make and use the said improvements, reference being had to the accompanying drawing, forming a part hereof, and in which—

Figure 1 is a side elevation of a street-lamp provided with my improvements; and Fig. 2, a vertical central section through the upper part thereof.

Like letters of reference indicate like parts.

In the drawing, A is the base or bottom of the lamp. B is a socket to receive a lamp-post. C C are the upright parts of the frame, and are adapted to receive the glass or other transparent sheets usually employed to shield and protect the flame. D is the door. E E are the horizontal parts of the frame. These parts are arranged between the upper ends of the parts C C and the upper part, roof, or reflector of the lamp, and are make hollow, and are so united to each other as to make a continuous chamber. F is a filling-nozzle. G is the oil-cup. H is a feed-pipe, entering the chamber or tank formed by the parts E E. This pipe also terminates in the oil-cup; and I is a cock for regulating the flow of oil through the pipe. The burner, chimney, and other parts used in connection with the oil-cups of kerosene-lamps may be used in connection with the cup G. J is the top or roof of the lamp. I make this part tight, and of sheet metal, preferably of tin or other metal having a bright or polished surface, so that the roof will not only protect the flame from wind and rain, but also perform the function of a reflector. K is the ventilator and smoke-escape, arranged in the apex of the roof. This part is also roofed over, as shown at *a*. *e* is an outer perforated shield, and *e'* is an interior flue, also perforated, as shown at *e''* *e''*. The perforations *e''* should not be arranged directly opposite the perforations in the shield *e*, the object being to prevent a direct current of air from entering the lamp. The smoke and products of combustion escape through the upper end of the flue *e'*, which is open for that purpose, a space being left between the roof *a* and the parts below it, as shown at *a'*, so that the smoke may escape freely into the outer air. The flame is supplied with air to support combustion; but this air enters only through the part K, the remaining part of the lamp being tight. L L are transparent or translucent strips arranged within the lamp, as shown. These strips are intended to serve as signs to designate the streets on which the lamps may be arranged, it being understood that the names of the street are painted or otherwise marked on these strips.

The lamp thus constructed is not only cheap and durable, but the oil-cup may be kept filled with facility. For, so long as any oil remains in the tank formed by the parts E E, the cup G may be replenished by turning the cock I for that purpose. An upward current of air entering the bottom of the lamp would, in cold temperatures, not only tend to congeal the oil in the oil-cup and tank, but would also be liable, by producing frost on the strips L L, to injure the letters or signs painted thereon. For these reasons I have made provision for supplying air only through the top of the lamp, in order that the air may thus be heated to some extent before it is consumed.

The chief object of my invention is to adapt the lamp to burn kerosene freely in cold weather, and to prevent the wind from producing a flickering flame. I therefore make the body or case of the lamp as nearly air-tight as may be possible or practicable, excepting at the top, so that the air which enters will be heated, and not liable to produce currents near the flame. The top or roof J, by being made tight and of metal, retains and reflects the heat and light, and thus not only performs the function of a reflector of the light, but also serves to keep the contents of the tank E E from becoming too thick, in cold weather, to flow freely through pipe H. If the oil should become thick during the day, it will soon be sufficiently warm after the lamp is lighted to flow freely.

I am aware that lamps have heretofore been provided with oil-tanks communicating with the oil-cups, and I do not, therefore, here in-

tend to claim, broadly, a lamp when provided with an oil-tank communicating with the oil-cup. I am also aware that lamps have heretofore been provided with reflectors, and with translucent or transparent sign-strips, and I do not here intend to claim such devices, broadly, for the purposes to which they have been already applied; but,

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

The combination, in a street-lamp for burning kerosene-oil, of a body or case made air-tight, or nearly so, excepting at the top, the metallic roof and reflector J, the ventilator and smoke-escape K, arranged in the top of the case, the tank E E, forming a part of the frame, and supporting the roof J, the filling-pipe H, and a cock arranged in the said pipe, substantially as and for the purposes specified.

CHARLES C. CHARLES.

Witnesses:

F. F. WARNER,

ULLMAN STRONG.