(No Model.) 2 Sheets—Sheet 1.

F. U. ADAMS.

STREET LAMP POST FOR ELECTRIC LAMPS.

No. 414,933. Patented Nov. 12, 1889.

Fig. 1.

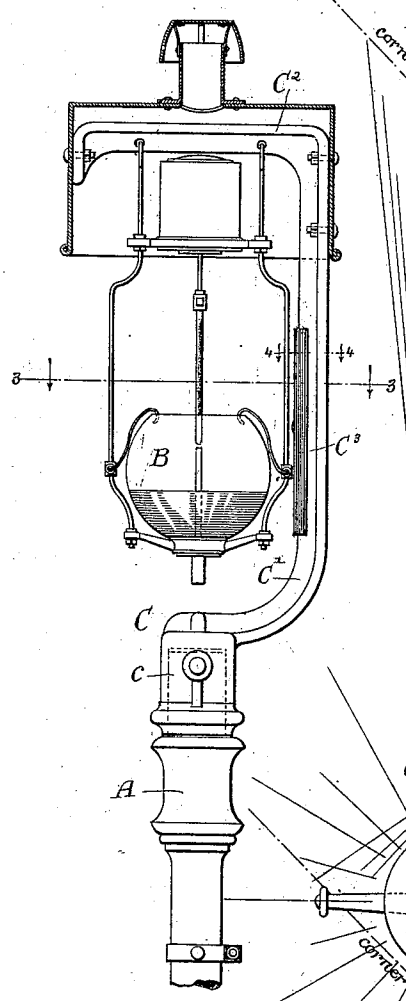
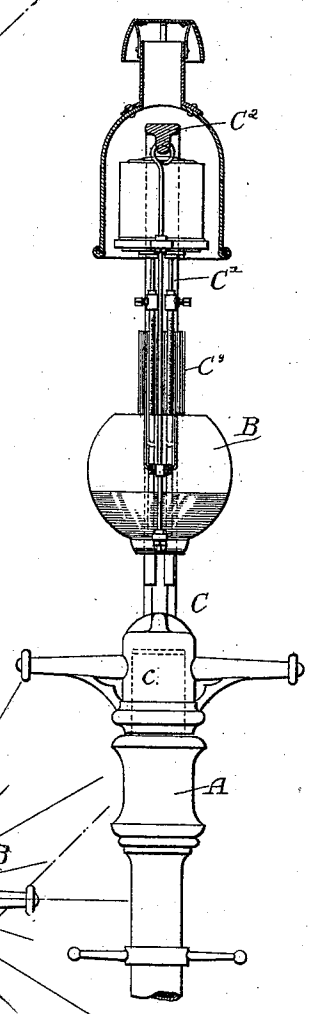


Fig. 2.



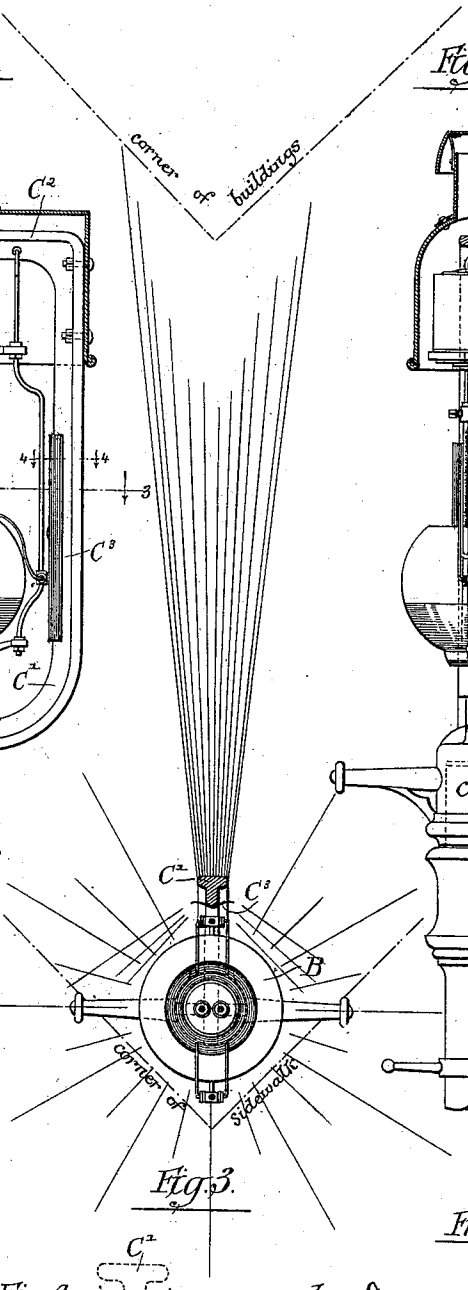
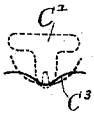


Fig. 3.

Fig. 4.



Witnesses:-
Louis M. V. Whitehead.
Wm. F. Fleming.

Inventor:-
Frederick U. Adams.

by:- Dayton, Poole & Brown
Attorneys.-

N. PETERS, Photo-Lithographer, Washington, D. C.

(No Model.) 2 Sheets—Sheet 2.

F. U. ADAMS.

STREET LAMP POST FOR ELECTRIC LAMPS.

No. 414,933. Patented Nov. 12, 1889.

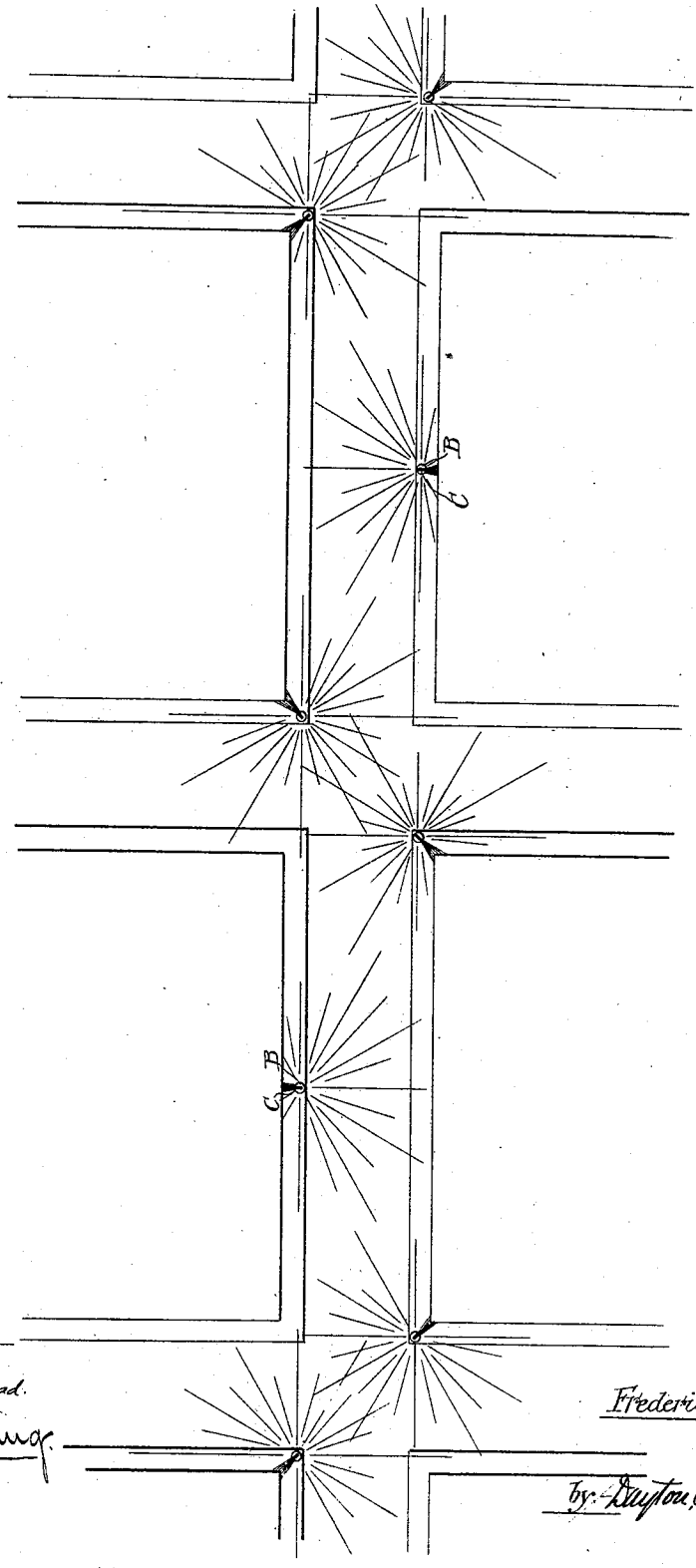


Fig. 2.

Witnesses:-
Louis W. Tobischead.
Wm. T. Fleming.

Inventor:-
Frederick U. Adams.

by: Baxter, Poole & Brown
Attorneys.

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

FREDERICK UPHAM ADAMS, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO LEROY B. FIRMAN, OF SAME PLACE.

STREET-LAMP POST FOR ELECTRIC LAMPS.

SPECIFICATION forming part of Letters Patent No. 414,933, dated November 12, 1889.

Application filed January 8, 1889. Serial No. 295,736. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK UPHAM ADAMS, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Street-Lamp Posts for Electric Lights; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification

Heretofore in lighting streets by means of electric-arc lamps several objections have prevailed against the support of the lamps from ordinary lamp-posts, and they have accordingly been usually suspended centrally over the streets or their intersections and at a considerable elevation. By this means the objectionable effects of the strong shadows cast by the lamp-frame have been reduced to a considerable extent and a more uniform distribution of the light obtained. The system of suspension is, however, attended with many practical difficulties and inconveniences not found in the system of support from ordinarily-placed lamp-posts, and if the more serious objections of the last-mentioned system can be overcome it is certain to be preferred for many and obvious reasons.

The object of this invention is to remove the difficulties attending the use of posts for the support of electric-arc lamps, and, first, to provide a construction in lamp-supports and an arrangement of electric-arc lamps with respect to said supports whereby the light may be sent lengthwise and across the street without material obstruction.

To this end the invention consists, primarily, in a support for the lamp, comprising a single upright which rises from the top of the fixed lamp-post proper at that side of the lamp toward the inside of the walk, and a horizontal arm projecting from the top of said upright toward the street, together with an arc electric lamp suspended non-rotatively from this horizontal arm with the suspension-rods of the lamp arranged in the same plane with the upright of the support.

Secondly, the invention has for its object to increase the quantity of light thrown across the street by each of a series of alternately-placed lamps and to distribute the light so thrown across the street in both directions or over a considerable space between the adjacent opposite lamps.

To this end the invention consists in the provision of a deflector in connection with the construction and arrangement last above described, or deflectors, substantially as shown and hereinafter described.

In the accompanying drawings, Figure 1 is a side elevation of a lamp-support and lamp constructed and combined according to my invention and applied to a fixed street-lamp post. The structure is here viewed in the direction of the street. Fig. 2 is also an elevation of the same parts viewed in the plane passing through the single upright of the lamp-support and the point of light-emission. Fig. 3 is a plan view of the lamp as applied with my improvement at the angle of a street, the lamp-support being shown in horizontal section in the line 3 3 of Fig. 1. Fig. 4 is a horizontal section of the single upright of the lamp-frame and of the double reflector attached thereto in the line 4 4 of Fig. 1. Fig. 5 is a plan of intersecting city streets having my improvement applied to the lamps arranged in alternation on opposite sides of the streets and at the street-corners.

A represents a lamp-post such as are commonly employed in street-lighting.

B is an electric-arc lamp supported by the post A, and C is the frame or support by which the lamp is immediately sustained from the post A. The frame C consists of a single upright C′, provided with a laterally-projecting arm C^2 at the top, from which the lamp B is suspended, said arm being located wholly at one side of the upright. The upright is also provided with an eye *c* or other equivalent form of terminal at its lower end, by which it may be securely attached to the top of the post A. Preferably, the upright C′ is curved or offset in its lower part out of the line of the post A, so as to sustain the lamp directly in line with the post, in order that the entire structure, including the lamp and post, may present a regular and symmetrical appearance. In placing the frame

so constructed with a single upright upon a post said upright and lateral arm will be turned toward the nearest point of the adjacent building, or toward the inside of the sidewalk, and the arm toward the street, as illustrated in Fig. 5, the upright of the lamp-frame at a corner of a street being turned to the angle of the adjacent building or lot at the inside of the walk.

The lamp B, composed of the upper and lower carbon supporting members b and b' and the suspending-rods b^2, connecting said members, is non-rotatively connected with the arm C^2 in such position that one of the rods b^2 stands and is held directly in front of the upright C′ of the lamp-support, so that its shadow falls upon the upright.

By this means but a weak shadow will be cast by the outer suspension-rod of the lamp proper, and no shadow will be cast either across or lengthwise of the street, so that the more remote points to be illuminated will be reached by the full effective power of each lamp. On the other hand, the point within the shadow of the single upright C′ of the lamp-frame is so near to the lamp as to be amply lighted by diffusion from the adjacent strong rays, while at the same time the surface under such shadow is narrower, because nearer, than any other upon which it can be directed. Thus by this construction and arrangement of the lamp-support C and this fixed arrangement of the lamp with respect to the lamp-support the fullest power of the lamp is made available at the points most needing it, and the necessary single shadow of the upright is cast where it is least objectionable.

Another improvement has reference to the more uniform illumination of all points of a street by lamps placed alternately upon opposite sides of the street. To this end the single upright C′, arranged on the inside, as shown, is provided with suitable reflectors C^3 between it and the lamp, so that a greater amount of light is thrown across the street than would otherwise be sent in that direction, and such reflected light is sent to both sides of a point directly opposite the lamp or toward each of the adjacent lamps on the opposite side of the street. By this construction and arrangement employed in connection with rigid supports for the lamps the unequal distribution of light, which forms so serious an objection to the use of electric-arc lamps for street-illumination, is largely obviated and the number of lamps required to suitably light a street is reduced to a minimum.

It follows that by means of my invention street-lighting may be satisfactorily effected by electric-arc lamps.

I claim as my invention—

The combination, with a fixed lamp-post rising from a street-walk, of a single upright connected with the top of the post, an arm projecting from the top of the upright toward the street, an electric-arc lamp suspended non-rotatably from said arm and having the rods which connect the upper and lower members of the lamp in the same plane with the upright.

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

FREDERICK UPHAM ADAMS.

Witnesses:
TAYLOR E. BROWN,
M. E. DAYTON.