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No. 119,355.

Patented Sep. 26, 1871.

JACOB F. HARLY.

STREET LAMP.

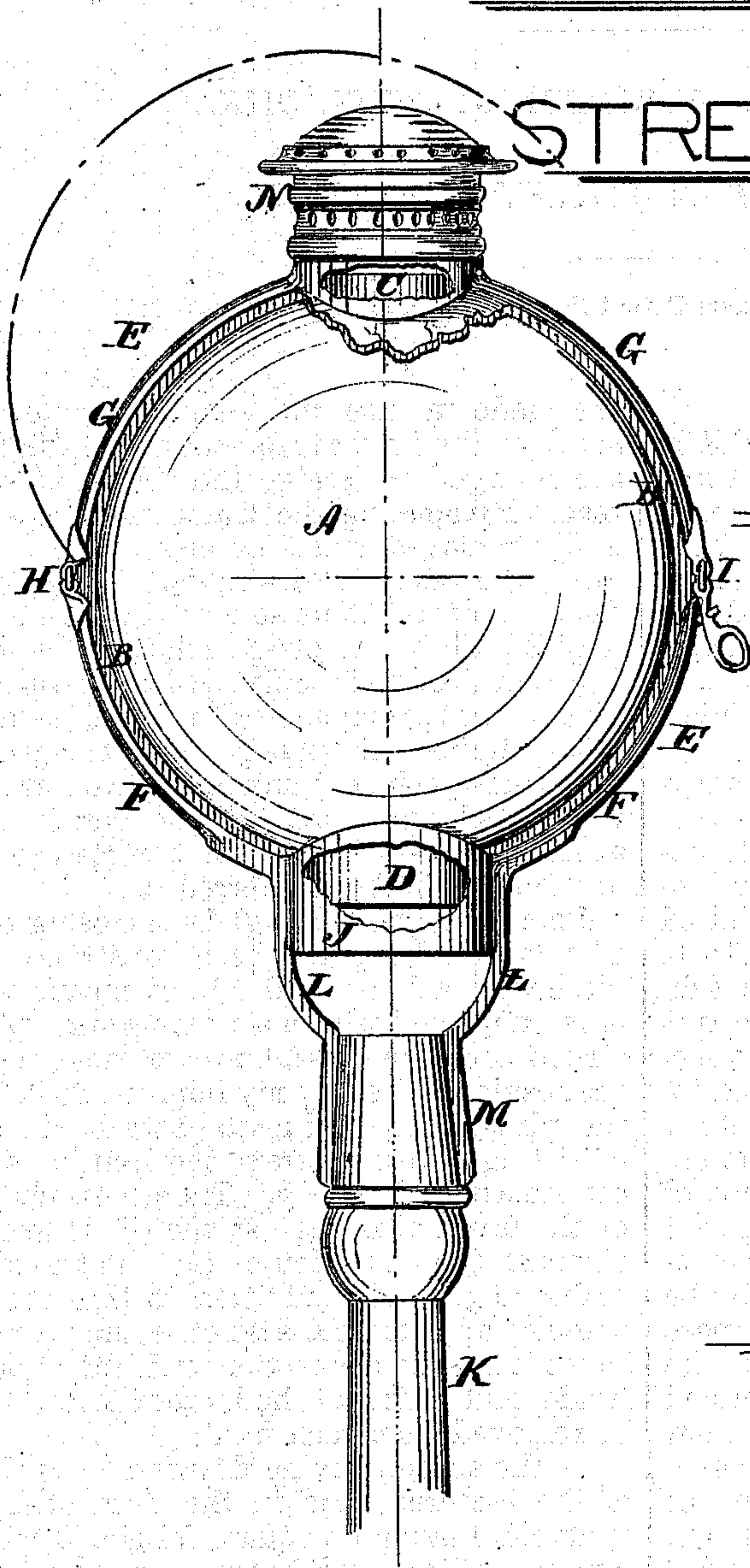
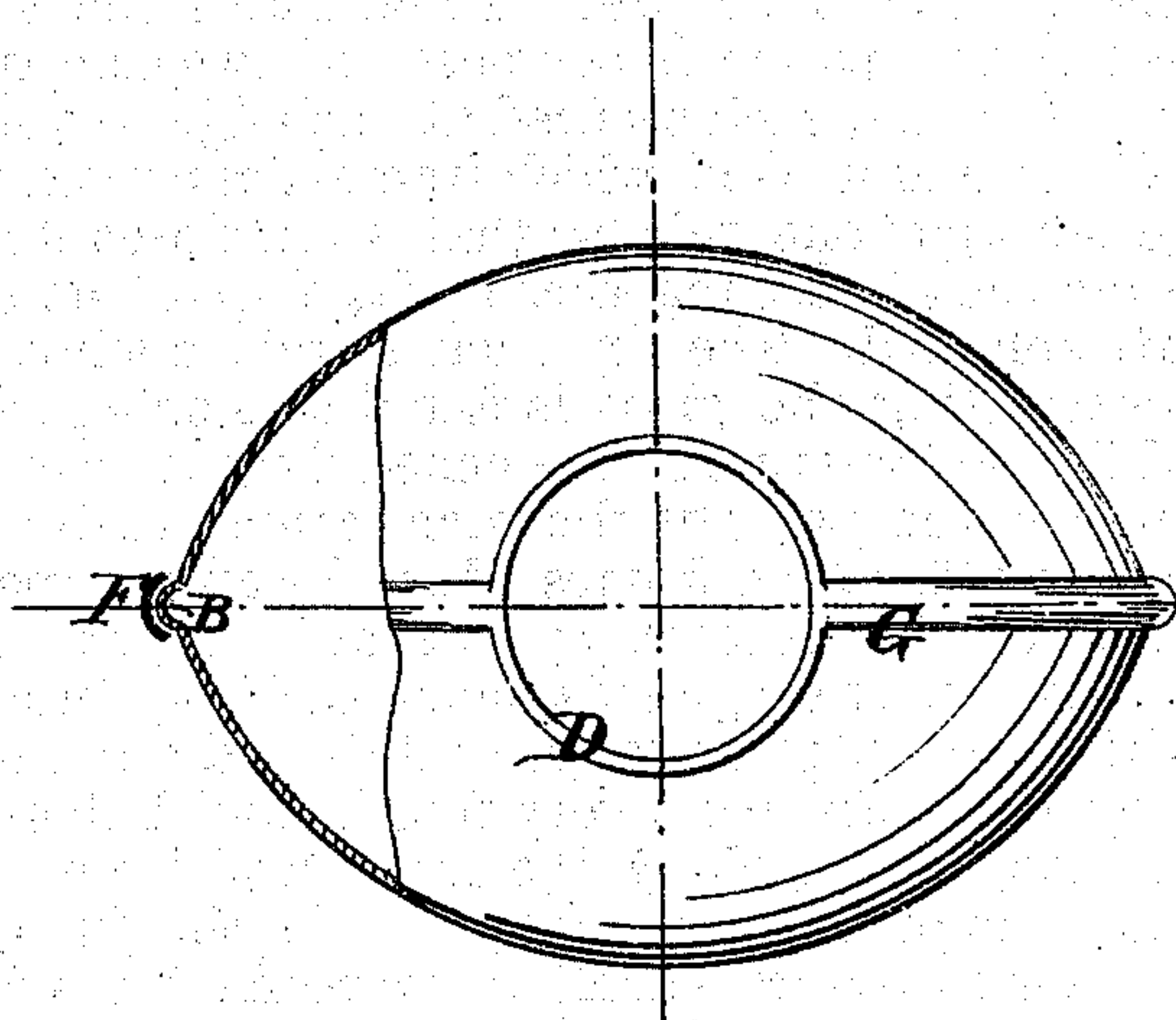


Fig. I.

Fig. II.



WITNESSES :-

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INVENTOR :-

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By

Deane D. Ellsworth  
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# UNITED STATES PATENT OFFICE.

JACOB F. HARLY, OF KIPTON STATION, OHIO.

## IMPROVEMENT IN STREET-LANTERNS.

Specification forming part of Letters Patent No. 119,355, dated September 26, 1871.

*To all whom it may concern:*

Be it known that I, JACOB F. HARLY, of Kipton Station, in Lorain county and State of Ohio, have invented a new and useful Street-Lamp; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a side elevation, showing the lantern in section; and Fig. 2, a bottom plan view of the glass lantern, partly in section.

Similar letters of reference in the accompanying drawing denote corresponding parts.

My present invention has for its object to improve the construction of the street-lamp or lantern for which Letters Patent of the United States were granted to me February 1, 1870. The glass of the lantern which forms the subject of said patent is composed of two concavo-convex parts, each secured at the edge to a metallic frame or band, which frames are hinged together upon one side, so that when closed they bring the glasses together in the form of an oblate spheroid. The objection to this method of constructing the glass is found in the fact that while the lantern can be opened for access to its interior the parts of the glass cannot easily be removed from the frames when for any purpose this becomes necessary; inasmuch, also, as the concavo-convex glasses must each be formed with a thin edge or flange to fit into the frames, they are, necessarily, very fragile, and liable to become broken along the edge, in which event they cannot be securely applied to the frames. My present improvement to overcome these difficulties consists: First, in constructing the glass of the lantern in one piece, in the form of an oblate spheroid with an equatorial rib, terminating at the top and bottom in flanges or collars, the top flange surrounding an opening for the escape of the smoke from the burning light, and the latter surrounding an opening for the reception of the burner or lamp and to afford access to the interior of the glass for the purpose of cleaning the same. It also consists in the combination, with the glass of the lantern, of a hinged metallic frame adapted to fit over the rib of the glass to hold the latter in place, the lower part being capable of attachment to a lamp-post, and the upper part supporting the chimney over the top opening of the glass. The sides of the frame

are made in size and shape to conform to the shape of the lantern-rib, and the top and bottom are enlarged to receive the collars of said lantern. By opening the frame the glass can be easily removed when for any purpose this becomes necessary or desirable. By constructing the sides of the frame so that they shall embrace only the rib of the glass such frame is so far reduced in size and is so situated with respect to the glass as not to impede or interrupt the radiation of the light. The rib greatly strengthens the glass, inasmuch as it unites the two concavo-convex parts by an increased thickness of material at the point where the thin flanges are located in the lantern above referred to.

I am aware that the glass inclosing the light of a lantern-lamp has been constructed in one piece with a horizontal rib, by means of which it is supported within a frame-work. This construction of the glass, however, does not attain the result reached by my improvement, because the rib is so located as to obstruct the passage of the light upward from the lantern, and to a certain extent laterally. The necessary position of the frame also against the rib is such as to obstruct the reflection of the light to a considerable degree. In addition to this the cap or chimney upon the glass is not securely applied because it has no connection with the supporting-frame, and if it had the lantern-glass could not be removed from such frame.

In the accompanying drawing, A is the glass of the lantern, made in the form of an oblate spheroid, having an equatorial rib, B, which terminates at the top and bottom in collars or flanges, C D, respectively. E is the metallic frame, composed of two parts, F G, hinged together at or about the center, as shown at H, and provided with a suitable clasp, I, upon the side opposite the hinge. The lower part F of the frame is formed with a central collar, J, to receive the flange D of the lantern-glass, and is supported upon the lamp-post K by means of the rods L and socket M, the latter fitting upon the end of the post.

I do not intend to confine myself to the precise method shown in connecting the frame to the lamp-post, as it is evident other means may be employed without departing from my invention.

The upper part G of the frame supports centrally the chimney N, which fits over the top



flange C of the lantern-glass and serves to hold the latter in position.

A gas-burner or an ordinary lamp may be placed within the glass, passing through the lower opening, and supported by any suitable means. This opening is made of sufficient size to permit the introduction of the hand for the purpose of cleaning the interior of the glass; but the upper opening may be made somewhat smaller if desired.

By swinging the top G of the frame back upon its hinge the glass can be easily removed from the frame by lifting it from the lower portion F, as will be readily understood.

This adaptation of the frame is of much importance, as it permits the substitution of one glass for another in case of breakage without in the least affecting the frame.

Owing to the shape of the lantern it offers much less resistance to the wind than the ordinary square lantern, and is, consequently, less liable to be blown down. Instead of constructing the glass with an external rib it may be provided with an external groove and the sides F G of the frame made of wire to fit it.

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

1. The glass of a street-lantern constructed in one piece in the form of an oblate spheroid, having an upper and lower opening, and provided with an equatorial rib or groove, B, for the purpose specified.

2. In combination with the glass A the hinged frame E, substantially as described, for the purpose specified.

3. The street-lamp, consisting of the oblate spheroidal glass A, provided with the top and bottom openings formed by the collars C D, and with the equatorial rib or groove B, and the hinged frame E provided with the collar J and chimney N, substantially as described, for the purpose specified.

The above specification signed by me this 18th day of May, 1871.

JACOB F. HARLY.

Witnesses:

GEO. A. GROOT,  
ABNER ROYCE.