

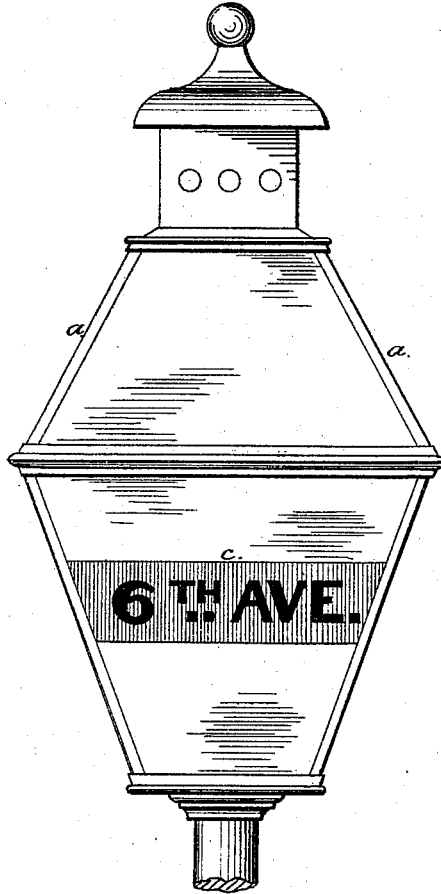
A. W. BILLINGS.

SIGNS.

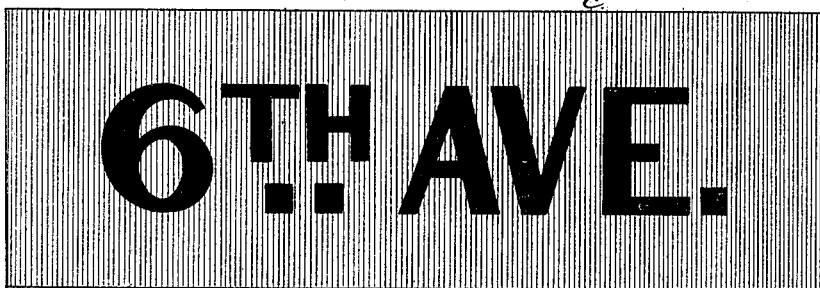
No. 182,794.

Patented Oct. 3, 1876.

*Fig. 1*



*Fig. 2.*



*Witnesses:*

*D. P. Cool*  
*W. Elchaffu*

*Inventor:*

*A. W. Billings*  
*by his attorney*  
*W. S. Henderson*

# UNITED STATES PATENT OFFICE.

ANDREW W. BILLINGS, OF NEW YORK, N. Y.

## IMPROVEMENT IN SIGNS.

Specification forming part of Letters Patent No. 182,794, dated October 3, 1876; application filed March 27, 1876.

*To all whom it may concern:*

Be it known that I, ANDREW W. BILLINGS, of the city of New York, in the county of New York, and State of New York, have invented certain new and useful Improvements in Signs; and I do hereby declare that the following is a full, clear, and exact description thereof, 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.

Heretofore it has been the practice in making signs for lanterns, to make the letters of metal and suspend them within the lantern on rods, or to paint the characters designating the street upon one of the panes of glass of the lantern, or to print the characters on a slip of paper and paste that slip to a sheet of glass, which is supported by the converging sides of the lantern. These methods are good, so far as they go, but still are capable of improvement.

My invention has for its object the formation of a sign for street-lamps and other purposes, which shall be a part and parcel of the pane of the lantern and hold together the pieces of the pane in case of fracture of the glass, and which cannot be displaced by any handling of the lantern. To this end I will now proceed to describe my invention.

In the accompanying drawing, the letter *a* represents a street-lantern, having affixed direct to the pane of glass thereof a slip, *c*, of muslin or other like textile fabric, on which is printed or otherwise marked the character which is to designate the street. This slip is sized with a solution of soluble glass or silicate of soda, and the slip, by means of this sizing, is held securely to the glass from which the sign is to be seen. The silicate of soda, being transparent, permits the rays of light from the burner to be transmitted through the meshes of the fabric, thereby causing the characters marked on the same to stand out boldly, and at the same time renders the sign proof against heat. The solution of silicate of soda should be as nearly

neutral as practicable—that is, there should be but a slight excess of soda.

To render this sign unaffected by the action of hot water, the fabric, after the soluble glass has become thoroughly set and dried, has applied to it a thin solution of clarified glue in skimmed milk. The fabric can be rendered water-proof before the silicate of soda is applied thereto or the sign used.

The slip of fabric, with the designating characters upon it, is affixed, either before or after the glass is set in position, direct to the pane of glass, instead of being attached to a supplemental strip of glass, which is to be supported by the converging sides of the lantern. If a pane of glass of a lantern with a sign so affixed be shattered, as often happens, the fractured parts of the glass will not fall out, but, on the contrary, will be held together, preserving to a great extent the identity of the sign, and not necessitating the substitution of a new pane of glass.

The letters forming a business-sign may be formed of fabric, their faces gilded, and affixed to the window-glass, in the manner already described for affixing them to a street-lantern.

Above I have mentioned the use of soluble glass, and here I may state that soluble quartz, resulting from dialysis of the silicate of soda solution, by means of hydrochloric acid and vegetable parchment, might be used to advantage in some cases where an excess of soda is not a disadvantage.

Having described my invention, what I claim is—

A sign for a street-lantern and other purposes, formed by affixing direct to a pane of glass, by an adhesive composition, a strip of textile fabric, saturated with soluble glass and marked with the designating characters, substantially as set forth.

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

ANDREW W. BILLINGS.

Witnesses:

THOMAS J. RICE,  
JAMES T. BRADY.