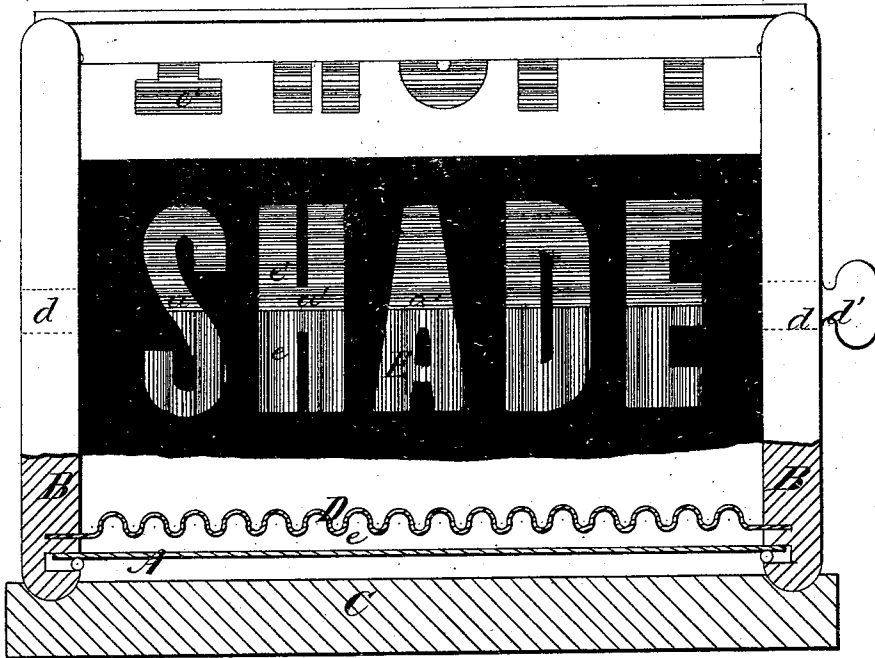


W. DRAPER.
SIGNS.

No. 183,381.

Patented Oct. 17, 1876.



Witnesses

Jos. B. Connolly
A. C. Cassell

William Draper

Inventor

Connolly Bros

Attorneys

UNITED STATES PATENT OFFICE

WILLIAM DRAPER, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN SIGNS.

Specification forming part of Letters Patent No. **183,381**, dated October 17, 1876; application filed August 9, 1876.

To all whom it may concern:

Be it known that I, WILLIAM DRAPER, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Illuminating and Shading Letters and Figures of Signs, &c.; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which is shown a side elevation of a cylinder provided with my improvements.

The object of my invention is to produce both light and shade, or *chiaro-oscuro*, effects on letters and figures of signs or other devices employed for purposes of illustration or display.

My invention, accordingly, consists of a sign, or other device used for similar or equivalent purposes, having an open, transparent, or stencil letter painted on glass, or cut in metal or other material, and a background with a fluted or corrugated surface, the elevations of which will show up light, while the depressions or grooves will appear dark, producing the effects above stated.

Referring to the accompanying drawing, which illustrates one of many modes of applying my invention, A represents a fixed cylinder, mounted in heads B B, which are secured to a base-board, C. D represents a cylinder of smaller diameter than the cylinder A, and located within the latter.

If desired, the cylinder D may be formed or provided with journals or trunnions *d d*, and revolved on the same by handles *d'*.

a a' *a''* represent open or transparent letters or figures painted or otherwise impressed or delineated on the cylinder A, being, by preference, formed on the inner surface of the latter, the ground between said letters or figures being opaque, so as to prevent the transmission of light or view of the background E except through said letters or figures.

Instead of a glass or transparent cylinder, A, the letters and figures may be cut from a cylinder of metal or other opaque material,

which may, if desired, be covered with glass; or glass may be inserted between the metal and the background E.

Said background, which forms the exterior surface of the cylinder D, is fluted, corrugated, or formed with an uneven surface, as shown at *e*, where the corrugations are annularly, and at *e'*, where they are longitudinally arranged. The effect of this uneven background is, that the light shows up on the ridges or projections, while the hollows or grooves appear dark or shaded, and the letters and figures illustrated on the glass or cut out of the equivalent foreground A seem to be illuminated and shaded correspondingly. A still further effect is, that, under some circumstances, the glass itself seems to be corrugated, and the letters formed on a surface of that character.

I have shown and described my improvements as applied to a cylinder or convex surface, though in actual practice the surfaces of both the fore and back ground will be generally flat, (as distinguished from convex or concave,) the flutings or corrugations being, of course, retained.

These improvements, though mainly intended for signs in front of business-houses and the like, are not restricted thereto, as they may be applied to show-cases, dioramic displays, and other means of illustrating letters or figures of various kinds.

In some cases the background may be of colored glass or other transparent or semi-transparent material, through which light will pass outwardly, producing the effect of inward illumination. Generally said background will be made of corrugated metal, though I do not restrict myself to the employment of any particular material therefor.

Sometimes the letters may be shaded inside, or facing corrugated back, in colors differing from the ground on which they are formed, or from which they are cut.

I am well aware that certain effects in letters and figures have been produced by the use of crushed paper or other material. I therefore disclaim, broadly, the employment of an uneven surface or background. My object is principally to produce an imitation of

the well-known corrugated or fluted glass commonly used in windows and doors.

What I claim as my invention is—

The means herein described for producing light and shade on letters or figures, consisting of a corrugated or fluted background, combined with a plate of glass on which transparent letters or figures are delineated, or with an opaque plate of metal or other material from which open letters or figures are cut,

substantially as and for the purposes shown and set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 27th day of July, 1876.

WILLIAM DRAPER.

Witnesses:

GEO. C. SHELMERDINE,
M. DANL. CONNOLLY.