

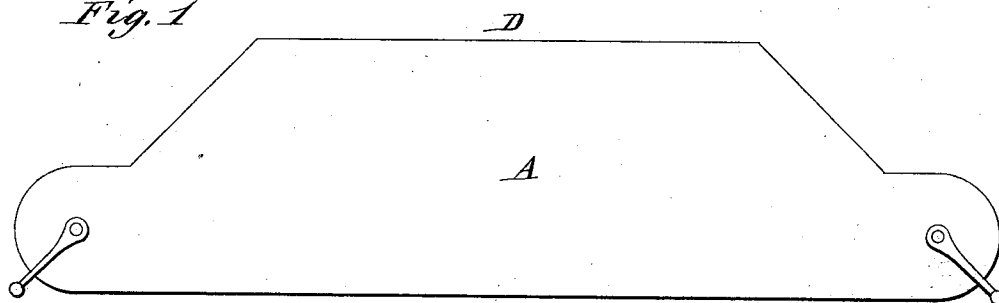
(No Model.)

N. BURGESS.  
ADVERTISING ILLUMINATED SIGN.

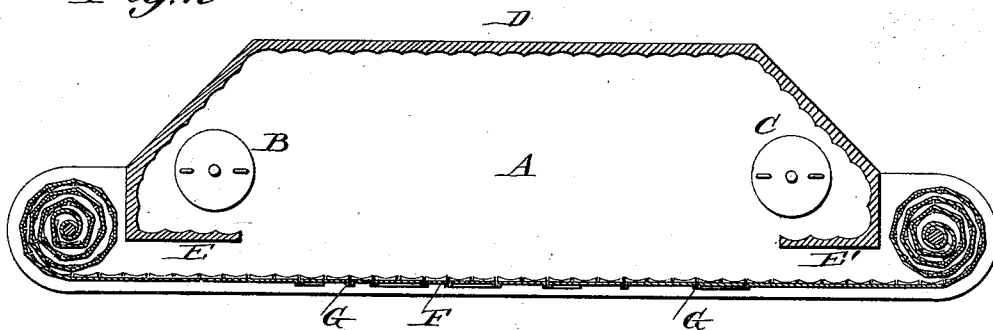
No. 542,793.

Patented July 16, 1895.

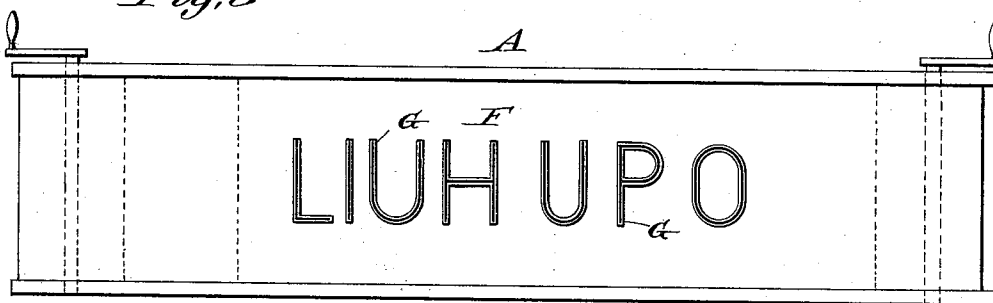
*Fig. 1*



*Fig. 2*



*Fig. 3*



Witnesses;

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# UNITED STATES PATENT OFFICE.

NEILSON BURGESS, OF HIGHLANDS, NEW JERSEY.

## ADVERTISING ILLUMINATED SIGN.

SPECIFICATION forming part of Letters Patent No. 542,793, dated July 16, 1895.

Application filed June 14, 1894. Serial No. 514,533. (No model.)

*To all whom it may concern:*

Be it known that I, NEILSON BURGESS, a citizen of the United States, residing at Highlands, in the county of Monmouth and State of New Jersey, have invented certain new and useful Improvements in Advertising Illuminated Signs; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The object of my invention is to provide an apparatus by means of which an electric-lamp may be utilized as a means for illuminating a sign, the letters or characters of which are preferably formed by openings cut through the substances of a screen, which may comprise either the front wall of a box-like structure or part of a flexible curtain extensible across the front part of the box.

To this end my invention consists in the details of the several parts making up the apparatus as a whole and in the combination of the parts, as more particularly hereinafter described, and pointed out in the claims.

Referring to the drawings, Figure 1 is a detail top or plan view of a box or frame forming part of the apparatus. Fig. 2 is a detail view, in horizontal section, of the box. Fig. 3 is a detail view, in front elevation, of the box.

In the accompanying drawings, A denotes a box or hollow frame, within which lamps B C or like light-producing devices are placed. The rear wall D is preferably formed on several angles, as shown, the corners being cut by short lengths placed at an angle with the front of the box and the front having winged walls E E', forming recesses, in which the lamps are located, so that no direct ray from the lamp will be thrown upon the screens in a direction which will enable it to pass directly outward through the screen F.

The whole interior surface of the walls of the box is provided with a series of curved reflecting surfaces, which may be either concave, as shown, or may be convex, the former presenting a fluted appearance, while the latter would give to the walls a corrugated appearance. The object in both instances,

however, is to break up the rays of light by causing them to be reflected in different directions and so broken as to prevent any appreciable quantity of reflected rays of light to be thrown directly outward in lines at right angles to the screen, which either forms the front of the box or is a strip movable across the front.

The device is particularly adapted for use when an electric-arc lamp forms the luminous body, and its use obviates the objections which have been found to exist when it has been attempted to use such a light in prior structures by breaking up the rays of light, as in the manner stated, and providing simply a box, the whole interior of which when viewed from the front appears to be luminous, so that its interior, seen through very narrow slits formed in the front part, outlines the character formed by the narrow opening or slit in the screens and enables it to be seen from a great distance with such outline clearly defined.

In prior devices of this kind when no precaution has been taken to break up the rays they have been projected through the openings and diffused, so that beyond a slight distance from the apparatus the outlines of the characters have been vague and confused.

It is preferred to use a movable screen, in which the letters are formed by narrow openings cut through the substance of the screen, which is flexible and has its inner surface provided with a series of highly-polished surfaces which are irregular in shape. It is not necessary that the pieces of reflected material shall extend from top to bottom of the screen or to the interior of the box, as small pieces and short lengths may be used, provided they are placed at various angles with the interior surfaces either of the box or of the screen, so as to reflect and rereflect the rays of light within the box and so break them as to cause the interior of the box, as stated, to present a highly-luminous appearance when viewed through an opening in the wall of the box, and yet not allow the rays of light to be directly thrown through such opening.

It has been found by experiment that in some cases it is advantageous to provide the slit with lips G, as illustrated in the drawings.

These lips turn outward, having formed between them the narrow slit, through which the luminous interior of the box is seen.

It is obvious that the invention, as herein described, may be embodied in structures varying in detail from that illustrated and described, and that the special construction of the apparatus so described is not essential to my invention, the main features of which reside in the combination of the highly-luminous lamp or light, as an electric-arc light, with a box having its interior surfaces provided with a multitude of reflecting-surfaces placed at angles each with the other, so as to break up the direct and reflected rays, as described.

I claim as my invention—

1. In combination in an illuminated sign, a box or like hollow receptacle having recesses at the end to receive electric arc lamps, the box provided with an irregular and broken re-

fecting surface, the electric lamps placed in the recesses in the box and a front wall or screen provided with slits formed to the desired outline, all substantially as described. 25

2. In combination in an illuminated sign, a box having an opening in one side, the interior surface covered with irregular reflecting surfaces, a flexible screen adapted to be drawn across the opening in the wall of the box and having narrow openings through the screen formed on the desired outline and the back of the screen provided with irregular reflecting surfaces, and the lights supported in the box, all substantially as described. 30 35

In testimony whereof I affix my signature in presence of two witnesses.

NEILSON BURGESS.

Witnesses:

L. D. SMITH,  
R. T. DUNLOP.